

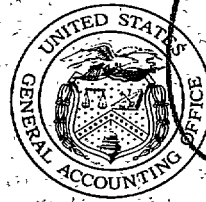
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**REPORT TO**  
**THE CONGRESS OF THE UNITED STATES**  
*Report on*  
**AUDIT OF**  
**HYDROELECTRIC POWER AND RELATED ACTIVITIES,**  
**MISSOURI RIVER BASIN PROJECT,**  
**CORPS OF ENGINEERS (CIVIL FUNCTIONS)**  
**DEPARTMENT OF THE ARMY**  
**AND**  
**BUREAU OF RECLAMATION**  
**DEPARTMENT OF THE INTERIOR,**  
**FISCAL YEARS 1959 AND 1960**

*Not Complete*



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

**APRIL 1962**

745681/087877

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THE CONGRESS OF THE UNITED STATES  
AUDIT OF  
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MISSOURI RIVER BASIN PROJECT  
CORPS OF ENGINEERS (CIVIL FUNCTIONS)  
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AND  
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DEPARTMENT OF THE INTERIOR  
FISCAL YEARS 1959 AND 1960**



**BY  
THE COMPTROLLER GENERAL OF THE UNITED STATES  
APRIL 1962**



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON 25

B-125042

APR 30 1962

Honorable John W. McCormack  
Speaker of the House of Representatives

Dear Mr. Speaker:

Herewith is our report on the audit of hydroelectric power and related activities of the Corps of Engineers (Civil Functions), Department of the Army, and the Bureau of Reclamation, Department of the Interior, in the Missouri River Basin Project for the fiscal years 1959 and 1960,

The report includes a matter for consideration by the Congress concerning certain recent unfavorable developments in repayment aspects of the Missouri River Basin Project. The report also presents a summary of the current status of the principal recommendations contained in our prior audit report to the Congress dated August 1, 1957. We are repeating a recommendation to the Secretary of the Interior and the Chief of Engineers relative to the establishment and consistent application of comparable accounting and financial policies and practices which we believe are necessary to fairly present the financial position and the results of Missouri River Basin Project operations,

This report is also being sent today to the President of the Senate. Copies are being sent to the President of the United States, the Chief of Engineers, and the Secretary of the Interior.

Sincerely yours ,

  
Comptroller General  
of the United States

Enclosure

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REPORT ON AUDIT  
OF  
HYDROELECTRIC POWER AND RELATED ACTIVITIES  
MISSOURI RIVER BASIN PROJECT  
CORPS OF ENGINEERS (CIVIL FUNCTIONS)  
DEPARTMENT OF THE ARMY  
AND  
BUREAU OF RECLAMATION  
DEPARTMENT OF THE INTERIOR  
FISCAL YEARS 1959 AND 1960

The General Accounting Office has made an audit of hydroelectric power and related activities of the Corps of Engineers (Civil Functions), Department of the Army, and the Bureau of Reclamation, Department of the Interior, in the Missouri River Basin Project for the fiscal years 1959 and 1960. This audit was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67). The scope of the audit work performed is described on page 54 of this report.

GENERAL COMMENTS

The Missouri River basin consists of those parts of the States of Montana, Wyoming, North Dakota, South Dakota, Nebraska, Kansas, Colorado, Missouri, Iowa, and Minnesota within and from which waters drain into the Missouri River. The principal Federal water resources development activities in the **basin** are being conducted under a comprehensive plan approved by the Flood Control

Act of 1944 (58 Stat. 891). The term "Missouri River Basin Project" is used to identify Federal water resources development activities conducted pursuant to the comprehensive plan.

This report deals principally with the hydroelectric **power aspects** of the Missouri River Basin Project; generally, other Federal water resources development projects and activities in the Missouri River basin are not included in this report,

The Missouri River Basin Project consists of numerous single- and multiple-purpose facilities designed primarily to provide benefits from flood control, hydroelectric power, navigation, and irrigation. Other benefits provided include municipal and industrial water supply, recreation, and wildlife conservation. Generally, the Corps of Engineers constructs the multiple-purpose and flood control facilities on the Missouri River and the flood control facilities on tributary streams; the Bureau of Reclamation constructs the irrigation facilities on the Missouri River and multiple-purpose and irrigation facilities on tributary streams. Each agency operates the facilities it constructs. The Bureau of Reclamation also constructs power transmission lines and markets the power not needed for operation of the facilities.

The construction cost of the Missouri River Basin Project when completed is estimated to total about \$6 billion, of which about \$4 billion has been allocated to irrigation, commercial power, **and** other purposes for which the law requires repayment to the United States Treasury. Commercial **power** revenues are expected to repay about 89 percent of all construction costs

allocated to reimbursable purposes, The hydroelectric power program provides for the construction of power plants with an ultimate installed capacity of about 2,700,000 kilowatts. At June 30, 1960, the installed capacity at plants in operation totaled 871,200 kilowatts and construction work was in progress on additional facilities having a planned ultimate installed capacity of 1,351,000 kilowatts.

The activities of the Corps of Engineers in the Missouri River basin are carried out by district offices at Omaha, Nebraska, and Kansas City, Missouri, in the Missouri River Division headquartered at Omaha, Nebraska. The district offices of the Corps are operating offices headed by Army engineer officers, **as** district engineers, and generally carry out both military **and** civil works activities within defined areas under the general direction of division engineers. The division engineers are responsible to the Chief of Engineers, Washington, D.C.

The activities of the Bureau of Reclamation in the Missouri River basin are carried out by regional offices at Billings, Montana, and Denver, Colorado, and project offices located at Huron, South Dakota, Bismarck, North Dakota, Casper, Wyoming, and McCook, Nebraska. Under authority delegated by the Secretary of the Interior, the management of the Bureau is vested in the Commissioner of Reclamation under the supervision of the Assistant Secretary of the Interior for Water and Power Development,

During the period covered by this report and at present the principal policy-making officials of the agencies carrying out the activities discussed in this report were and are **as** follows:



	<u>Date appointed</u>
<b>Department of the Army:</b>	
Secretary of the Army:	
Wilber M. Brucker	July 21, 1955
Elvis J. Stahr, Jr.	Jan. 23, 1961
Chief of Engineers:	
Lieutenant General Emerson C. Itsehner	Oct. 1, 1956
Lieutenant General Walter K. Wilson, Jr.	May 19, 1961
<b>Department of the Interior:</b>	
Secretary of the Interior:	
Fred A. Seaton	June 8, 1956
Stewart L. Udall	Jan. 21, 1961
Assistant Secretary—Water and Power Development:	
Fred G. Aandahl	Feb. 10, 1953
Kenneth Holum	Jan. 30, 1961
Commissioner, Bureau of Reclamation:	
Wilbur A. Dexheimer	July 1, 1953
Floyd El. Dominy	May 1, 1959

STATUS OF PRINCIPAL RECOMMENDATIONS IN PRIOR REPORT

Our report to the Congress dated August 1, 1957, on the audit of the Missouri River Basin Water Resources Development Program, for fiscal year 1956, included several recommendations relating to the Missouri River Basin Project. The current status of these recommendations is summarized as follows:

1. Need for firm allocation of construction costs of multiple-purpose projects

In our prior report we pointed out that, although certain of the multiple-purpose facilities in the Missouri River basin had been in operation for several years, none of the construction cost allocations were firm. Firm allocations of construction costs are necessary because the allocated amounts are principal factors considered in establishing rates for the sale of commercial power. The laws forming the basis for Federal water resources programs do not provide policies or criteria for allocating construction costs of multiple-purpose projects. The resulting allocated costs are used in establishing rates for sale of commercial power. Also, the laws seldom specifically designate the agency responsible for making the cost allocation in cases where one agency constructs a project and another agency markets the commercial power or other products of the project, and the role of the Federal Power Commission in the making or approving of cost allocations of Corps projects is not clearly defined. Our report contained several recommendations and suggestions to the Congress which were designed to resolve these long-standing problems.

At June 30, 1960, the Corps of Engineers and the Department of the Interior had reached agreement on firm allocations of costs of Corps of Engineers projects in operation in the Missouri River basin. These allocations are considered firm by the Corps of Engineers unless future significant changes are made in the scope of the projects or the method of operation, in which case adjustments in the allocations of the costs may be justified.

Although legislative action to establish criteria for the allocation of construction costs of multiple-purpose projects **would** be desirable, in view of the agreement reached in the Missouri River basin, we are **not** repeating our recommendations in this report.

2. Need for specific legislative authority for inclusion of the Fort Peck Project as part of the Missouri River Basin Project

The Flood Control Act of 1944 does not provide specifically for inclusion of the Fort Peck Project as a part of the Missouri River Basin Project. Nevertheless the project has been included by the Bureau of Reclamation **as** an integral part of the Missouri River Basin Project for determining Missouri River Basin Project feasibility and repayment.

In our previous report to the Congress on the audit of the Missouri River Basin Water Resources Development Program, we recommended that, if the Bureau desired to continue to include the earnings to be derived from the Fort Peck Project in determining the feasibility and repayment of the Missouri River Basin Project, specific legislative authorization to do so be obtained from the Congress. In letters dated November 26, 1956, and April 22, 1957, the Department of the Interior cited references to the plans presented in Senate Document 191, Seventy-eighth Congress, incorporating the Fort Peck Project **as** an integral part of the Missouri River Basin Project and commented on the status of the Fort Peck Project in relation to over-all Missouri River basin economic studies, payout analyses, and average rate studies. Based upon these

citations, the Department's opinion was that no congressional action was necessary. The letters dated November 26, 1956, and April 22, 1957, which express the Department's position on this matter, were printed in the Joint Hearings before the Committee on Interior and Insular Affairs and the Committee on Public Works, United States Senate, on Problems of Operation of Multiple-Purpose Projects in the Missouri River Basin, May 1, 2, and 3, 1957. In view of these circumstances, we are not repeating our recommendation.

3. Role of Federal Power Commission  
in approving rate schedules, not clear

In our prior report, we pointed out that applicable laws do not clearly designate the authority of the Secretary of the Interior and the responsibility of the Federal Power Commission in fixing and approving **rakes** for the **sale** of power from the units constructed by the Corps of Engineers **in** the Missouri River basin under the Flood Control Act of 1944. Section 9 of the act (58 Stat. 891) provided that:

"(c) Subject to the basin-wide findings and recommendations regarding the benefits, the allocations of costs and the repayments by water users, made in said House and Senate documents, the reclamation and power developments to be undertaken by the Secretary of the Interior under said plans shall be governed by the Federal Reclamation Laws. \*\*\*"

The Bureau of Reclamation has been exempted in reclamation laws from rate regulation and approval by the Federal Power Commission.

However, the Flood Control Act also provided for **sale** of **elec-**  
tric power from projects, constructed by the Corps, in section 5,  
**as** follows:

"Electric power and energy generated at reservoir proj~~ect~~s  
ects under the control of the Department of the Army ~~shall~~  
not required in the operation of such projects ~~shall~~ shall be  
delivered to the Secretary of the Interior, the rate  
schedules to become effective upon confirmation and ap-  
proval by the Federal Power Commission. \*\*\*"

The Bureau of Reclamation considers section 5 of the act in-  
applicable to those facilities authorized for construction by the  
Corps and by the Bureau in the Missouri River basin under sec-  
tion 9 of the act. The Bureau has interpreted section 9(c) to **be**  
applicable in establishing rate schedules **for** power produced by  
these facilities.

As stated in our prior report, the Congress may wish to clar-  
ify the role of the Federal Power Commission in approving rate  
schedules for the sale of power generated at Corps projects in the  
Missouri River basin.

4. Lack of agreement on allocation  
of power revenues between  
Corps of Engineers and Bureau of Reclamation

In our previous report to the Congress, we recommended that  
the Corps of Engineers and the Bureau of Reclamation negotiate  
agreement on the amount of receipts from sale of power allocable  
to the several generating plants **as** a return of the reimbursable  
power costs of the Corps plants. Until this is done, computations  
of interest on the unrepaid investment in power will not be **cor-**  
rect and the financial results of power operations will not be ac-  
curately presented.

During fiscal year 1959, the Bureau of Reclamation developed procedures and principles which were used to calculate the amounts to be deposited into the general fund of the Treasury as revenues from the sale of power generated at Corps plants. (See p. 16.) However, the Corps neither agreed to the procedures and principles developed by the Bureau of Reclamation nor was the Corps advised of the amounts of revenues allocated to its plants. Therefore the revenues so allocated have not been recorded in the Corps records nor taken into consideration in determining annual interest expense on the unrepaid investment in Corps power plants.

While our current audit disclosed that agreement on allocation of power revenues had not been reached, both agencies advised us that the problem was under review. The problem is complex; however, it has existed for several years and we believe that accelerated efforts should be made toward its early resolution.

5. Leasing revenues returned to States improperly treated as reductions of Federal investment

Revenues are derived by the Corps of Engineers from reservoir projects, principally by the leasing of lands. The Flood Control Act of 1941 (33 U.S.C. 701c-3) provides that 75 percent of such moneys received and deposited into the Treasury of the United States is to be paid to the State in which the lands are located.

Under former Corps accounting procedures, the total of the revenues collected from lessees was recorded by the district offices as reduction of expenses for operating and maintaining the facilities and as credits to construction costs. However, amounts

paid to States were not recorded in the project records, and operation and maintenance and construction costs were understated by the amounts of such payments.

In our prior report we recommended that payments made or to be made to States from revenues for leasing of reservoir lands, under the provisions of the Flood Control Act of 1941, be recorded in the accounts of the projects at district offices.

Our recommendation was adopted, and in December 1958 the Chief of Engineers issued instructions for correcting prior years' accounts and established procedures for recording payments to States from lease revenues in project accounts at district offices. At June 30, 1960, payments to States amounting to \$2,195,553 had been recorded in the accounts for the multiple-purpose projects included in this report.

6. Costs incurred by Corps of Engineers in preliminary investigations and surveys not included in project costs

Under former Corps accounting procedures, costs incurred in conducting preliminary investigations and surveys of proposed projects to determine the advisability of their construction were not included in total project costs. In our prior report we recommended that the Corps of Engineers (1) allocate an appropriate share of the costs of basin investigations to projects or units authorized for construction and (2) classify the costs of surveys and investigations of authorized projects as construction costs at the time the projects are programmed for construction, limited to the costs of the surveys and investigations that may reasonably be



determined to contribute directly and without duplication to the construction of the projects.

On August 25, 1958, the Corps issued instructions requiring preliminary investigation and survey costs to be budgeted for authorized projects or for project modifications for which it will or may be necessary to budget for fiscal year 1960 and beyond. Under these instructions, upon receipt of advance design or construction funds for a project or project modification, the total cost of the related study is charged to construction work in progress. During our current audit we noted that preliminary investigation and survey costs are included in new construction work.

7. Misleading classification of preconstruction costs of Bureau of Reclamation as construction work in progress

Costs of surveys and investigations are classified by the Bureau of Reclamation as construction, work in progress in some instances although no physical construction has taken place or is contemplated in the near future. In our prior report we recommended to the Secretary of the Interior and the Commissioner of Reclamation that, to provide accurate financial information, all preconstruction costs be retained in the general investigations accounts until the year in which funds are made available for construction of the facilities through appropriations by the Congress,

Our current audit disclosed that the Bureau has partially adopted our prior recommendation. However, we found that survey and investigation costs amounting to \$456,000 were improperly classified as construction work in progress at June 30, 1960.

Although this amount is not material in relation to total construction costs, we believe that separate classification of survey and investigation costs would be desirable in all cases.

8. Financial integration of power operations in the western division of the Missouri River basin power system

The Bureau of Reclamation is operating the power facilities of the individually authorized Colorado-Big Thompson, Rendrick, Riverton, North Platte, and Shoshone projects, and certain power facilities of the Missouri River Basin Project as an integrated power system referred to as the western division. Western division power revenues are allocated to the individually authorized projects on a basis which is designed to meet the repayment requirements of those projects; the remaining revenues are allocated to the Missouri River Basin Project.

In our prior report we pointed out that there has **been** no specific legislative authorization for the integrated power operations and that the allocation of revenues did not, in our opinion, result in an equitable distribution of revenues among projects. Our report included recommendations to the Secretary of the Interior regarding these matters.

The Department of the Interior believes that specific legislative authorization for the integrated power operations is not necessary because over the years complete disclosure to the Congress has been made of the initial plans and subsequent administrative steps which were taken to accomplish power system integration.

The Department believes also that the allocation of revenues among projects is equitable.

In view of the disclosure made to the Congress relating to the integrated power operations, and after further consideration of the merits of the basis used to distribute revenues among projects, we are not repeating our recommendations in this report.

9. Expenditures at Fort Peck Project not subject to annual congressional approval

Revenues from the sale of electric energy at the **Fort** Peck Project, Montana, are available for operation and maintenance and emergency expenditures on a permanent basis without annual appropriation by the Congress. In fiscal year 1960, the accrued expenditures, principally for operations and maintenance, amounted to \$916,182 and power revenue collections totaled \$2,627,622. Cumulative collections and expenditures of the continuing fund amounted to \$21,428,844 and \$8,388,927, respectively, at June 30, 1960.

In our prior report we suggested that the Congress may wish to consider providing annual appropriations to the Bureau of Reclamation and the Corps of Engineers for operation and maintenance of the power facilities of the Fort Peck Project, **as** is done for other power operations, rather than continuing the present arrangement of using the receipts for this purpose without annual congressional appropriation action. We suggested that, in this case, the Congress may also want to provide a reasonable amount from receipts as a continuing fund to defray emergency expenses and to insure continuous operations.

The Department of the Interior believes that adequate data on the program and the financial status are set out in the President's budget each year. However, we are of the opinion that, if annual appropriations were provided for operation and maintenance, the Congress could exercise closer control over operation of the Fort Peck Project.

10. Lack of clear presentation of power revenues applicable to Participating projects of western division

Receipts from the sale of power by the integrated power system of the western division are shown by the Bureau as funds returned to the United States Treasury by the Missouri River Basin Project. The share of revenues allocated to individually authorized projects is recorded in the investment accounts as cost of property transferred to or from projects instead of as funds returned to the United States Treasury.

In our prior report we recommended to the Secretary of the Interior and the Commissioner of Reclamation that the amounts of revenues allocated to each individually authorized project be recorded as funds returned to United States Treasury in order to clearly present the financial status of the individual projects that are included in the power operations of the western division. The Department of the Interior believes that the financial status of individual projects is clearly presented under existing procedures. We do not agree because we believe that the accounts should show directly the funds returned to the Treasury for each project and, accordingly, we repeat our recommendation.

11. Revenues from sale of power generated at Corps plants to be deposited into the Treasury as miscellaneous receipts

In our prior report we expressed the opinion that revenues collected by the Bureau of Reclamation from sale of power generated at certain Corps plants should **be** deposited into the Treasury of the United States as miscellaneous receipts rather than be deposited to the credit of the Reclamation Fund.

During fiscal year 1959, the Bureau of Reclamation developed procedures and principles which were used to calculate the amounts to be deposited into the general fund of the Treasury **as revenues** from sale of power generated at Corps plants. **Deposits totaling** about \$29,000,000 were made into the general fund during fiscal years 1959 and 1960. Bureau records show that additional deposits of about \$3,600,000 were required at June 30, 1960. Bureau officials advised us that the required additional deposits were scheduled to be made during fiscal years 1961 and 1962.

12. Certain accounting and financial policies, and practices not comparable and not consistently applied

The financial statements included in this report have been prepared by the General Accounting Office from the records of the Corps of Engineers and the Bureau of Reclamation. However, until these agencies adopt comparable accounting and financial policies and practices and apply them consistently, the financial statements cannot fairly show the financial position and results of operations of **the** Missouri River Basin Project.

In our prior report we recommended that the Chief of **Engi-**  
neers and the Secretary of the Interior establish comparable ac-  
counting and financial policies and apply practices thereunder mi-  
formly and consistently with respect to:

1. Allocation to power and nonpower purposes of joint **ex-**  
penses of operating and maintaining multiple-purpose proj-  
ects.
2. Provisions for depreciation on plant in service, and allo-  
cation of the provision on multiple-purpose plant to pur-  
poses.
3. Computation and recording of interest on the Federal in-  
vestment in commercial power and municipal and industrial  
water supply facilities,

Progress has **been** made in resolving some aspects of the prob-  
lems involved, but the basic inconsistencies still exist. For ex-  
ample, on the Missouri River Basin Project:

1. The Bureau of Reclamation allocates joint use operation  
and maintenance expenses on the basis of current use of the facili-  
ties whereas the Corps of Engineers allocates these costs and ex-  
penses on the basis of the expected ultimate use of the facilities.  
In our prior report we recommended that depreciation and interest  
costs of joint use facilities be allocated on the **basis** of the cap-  
ital cost allocation and that operation and maintenance expenses  
be allocated on the basis of the current use **of** the facilities.

2. Except for movable equipment and certain **other** items, the  
Bureau of Reclamation does not record depreciation on plant in  
service. The Corps of Engineers records depreciation on plant in  
service; however, it has not used uniform depreciation rates for

like units of property and has not followed consistent practices with respect to depreciation or amortization of land rights and relocation costs.

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

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

In view of this clear requirement, the need to produce financial reports which will clearly and fully disclose all significant

financial aspects of these water resource operations, and the related responsibilities of the Secretary of the Interior under the law, we have strongly recommended that the Commissioner of Reclamation be instructed to revise the official accounting system of the Bureau of Reclamation to incorporate appropriate accounting for depreciation of fixed assets applicable to commercial power operations.

In a letter dated February 26, 1962, the Secretary of the Interior informed us that he is, now willing to include depreciation charges in the accounts and financial statements of the power bureaus covering that part of the Federal plant investment allocated to power. The Secretary advised us that action would be taken promptly to develop procedures for bringing depreciation charges into the accounts of the Bureau of Reclamation based on the balances of major plant accounts, rather than on individual units of property, and that depreciation rates applied to each major plant account would be based on the best available information as to the expected service life of the composite group. He stated further that if time permitted these charges would be reflected in the Bureau's financial statements for the fiscal year ending June 30, 1962.

3. The Bureau records interest at the rate of 3 percent a year on the Federal investment in power facilities. The Corps records interest at the rate of 2.5 percent a year on the entire Federal investment in its multiple-purpose plants with power



facilities. Procedures used by the Corps in computing interest on the Federal Investment have not been consistent among projects.

Interest during construction is not recorded in the accounting records of the Bureau but is recorded in the Corps records. In our prior report we recommended that interest during construction be recorded by the Bureau of Reclamation on its investment in power and municipal and industrial water supply facilities.

4. The Corps has not adjusted prior years' depreciation and interest expenses in accordance with the 1958 revised cost allocations. Also, the Corps has not adjusted prior years' interest expenses to reflect the retroactive recording of payments to States for leasing of reservoir lands. Adjustments for these types of changes have been made at Corps projects located in other river basins.

The Department and the Corps advised us that they are continuing their efforts toward developing mutually acceptable accounting policies and practices. The Corps also advised us that it will examine the accounting deficiencies which are largely internal in nature and make such adjustments as are practicable in advance of an interagency agreement.

- - - -

The lack of comparable and consistently applied accounting and financial policies and practices has existed for several years. In prior paragraphs we refer to corrective action that has been promised regarding certain of these matters, but we repeat our prior recommendation with respect to allocation of joint expenses

of operating and maintaining multiple-purpose projects, and computing and recording interest on the Federal investment in commercial power and municipal and industrial water supply facilities, and. urge that the agencies accelerate their efforts toward resolving these problems.

TENTATIVE ALLOCATION AND REPAYMENT OF TOTAL ESTIMATED  
CONSTRUCTION COSTS OF MISSOURI RIVER BASIN PROJECT

Estimates of the total construction costs of the various facilities of the Missouri River Basin Project are prepared periodically by the Bureau of Reclamation and the Corps of Engineers. Each agency prepares estimates of the construction costs of facilities which it is responsible for constructing. Annually, the latest estimates are combined by the Bureau of Reclamation and shown in its Power System Average Rate and Repayment Study for the Missouri River Basin Project. At June 30, 1960, the latest Average Rate and Repayment Study was dated January 1960. The information shown in this section is based upon the data used in the preparation of that study.

TOTAL ESTIMATED CONSTRUCTION COSTS  
AND TENTATIVE ALLOCATION TO PURPOSES

The following table shows, by agency, the total estimated construction costs and the tentative allocation of these costs to the various reimbursable and nonreimbursable purposes served.

	<u>Total</u>	Bureau of Reclamation	Corps of Engineers
		(000 omitted)	
Reimbursable allocations:			
Irrigation	\$2,664,713	52,486,141	\$ 178,572
Commercial power	1,221,067	429,207	791,860
Municipal water	32,904	31,125	1,779
Fish and wildlife	10	10	
Recreation	1,912	1,912	
Investigation costs	<u>77,504</u>	<u>77,504</u>	<u>-</u>
Total	<u>3,998,110</u>	<u>3,025,899</u>	<u>972,211</u>
Nonreimbursable allocations:			
Flood control and navigation	1,754,751	175,667	1,579,084
Fish and wildlife	77,331	77,331	
Recreation	9,580	2,365	7,214
Ellsworth Air Base water supply	<u>1,000</u>	<u>1,000</u>	<u>-</u>
Total	<u>1,842,662</u>	<u>256,367</u>	<u>1,586,298</u>
Total estimated construction costs	<u>\$5,840,772</u>	<u>\$3,282,266</u>	<u>\$2,558,509</u>

Note: On May 23, 1961, the Bureau of Reclamation issued an Average Rate and Repayment Study dated January 1961, showing total estimated construction costs of \$6,090,469,000, an increase of \$249,964,000 over the estimate included in the 1960 study.

**Amounts** for the Bureau of Reclamation include estimated costs of active units under construction or proposed for construction, and the costs incurred on completed, inactive, abandoned, and other potential units, **Also** included is \$32,449,000 representing the estimated reimbursable cost of investigation work by other agencies of the Department of the Interior. The Bureau anticipates that the periodic studies will be continued and, with the approval of the Secretary of the Interior, changes in the physical plan of development will be made, consistent with applicable law and policy. The amounts for the Corps of Engineers consist of \$1,251,560,000 for the Main Stem Reservoir **System** (Fort Peck, Garrison, Oake, Big Bend, Fort Randall, and Gavins Point plants) and \$1,306,949,000 for other Corps units authorized in the Missouri River basin. The allocation of costs of the Main Stem Reservoir System and the other Corps units in the Missouri River basin is as follows:

	<u>Total</u>	<u>Main Stem Reservoir System</u>	<u>Other Missouri River basin units</u>
	(000 omitted)		
Reimbursable allocations:			
Irrigation	\$ 178,572	\$ 160,100	\$ 18,472
Commercial power	791,860	791,860	-
Municipal water	<u>1,779</u>	<u>-</u>	<u>1,779</u>
Total	<u>972,211</u>	<u>951,960</u>	<u>20,251</u>
Nonreimbursable allocations:			
Flood control and navigation	1,579,084	295,900	1,283,184
Recreation	<u>7,214</u>	<u>7,700</u>	<u>3,514</u>
Total	<u>1,586,298</u>	<u>299,600</u>	<u>1,286,698</u>
Total estimated construction costs	<u>\$2,558,509</u>	<u>\$1,251,560</u>	<u>\$1,306,949</u>

The costs of most multiple-purpose facilities were allocated to purposes by the separable costs--remaining benefits method by the Corps of Engineers and the Bureau of Reclamation, For those facilities where separable costs were not available, the alternative-justifiable-expenditure method was used. Both methods have the objective of equitably distributing costs by limiting the costs allocated to any purpose to the value of corresponding benefits and simultaneously providing for each project purpose to share proportionately in the savings from multiple-purpose construction. Allocations to recreation were generally limited to specific costs, Twenty percent of the costs initially allocated to power has been suballocated to irrigation as representing the cost of installed power capacity required for irrigation pumping.

Construction costs allocated to commercial power and municipal water include interest during construction amounting to \$62,046,377 and \$1,507,000, respectively, Interest during construction is not included in the allocations to other project purposes. At June 30, 1960, construction costs totaling \$2,051,618,600 were recorded for the Missouri River Basin Project, consisting of \$529,026,600, by the Bureau of Reclamation, and \$1,522,592,000, by the Corps of Engineers. The Corps costs consisted of \$957,613,700 for the Main Stem Reservoir System and \$564,978,300 for other units in the Missouri River basin,

REPAYMENT OF CONSTRUCTION COSTS  
ALLOCATED TO REIMBURSABLE PURPOSES

The following table shows the expected sources of repayment of construction costs of the Missouri River Basin Project allocated to reimbursable purposes.

	<u>Amount</u>	<u>Percent</u>
	(000 omitted)	
Commercial power	\$3,564,416	89.2
Irrigation	400,790	10.0
Municipal water	<u>32,904</u>	<u>.8</u>
Total repayment	<u>\$3,998,110</u>	<u>100.0</u>

Note: Repayment data in the January 1961 Average Rate and Repayment Schedule referred to in the footnote on page 22 shows total expected repayment of \$3,974,285,000, a decrease of \$23,825,000 from expected repayment shown in the 1960 study because of increased allocations of costs to nonreimbursable purposes.

A comparison of the construction cost allocations on page 22 with the repayment estimates above shows that commercial power revenues are expected to repay the entire allocation to commercial power, to subsidize irrigation to the extent of \$2,263,923,000 or 85 percent of the costs allocated to irrigation, and to repay \$79,426,000 of fish and wildlife, recreation, and investigation costs.

Unfavorable developments in repayment aspects  
of Missouri River Basin Project'

During our audit we noted that unfavorable developments in repayment aspects of the Missouri River Basin Project had occurred in recent years. These developments are discussed in the following subsections.

Significant increase in estimate of  
time required to repay reimbursable  
construction costs from power revenues

In recent years the estimated period of time required to re-  
pay into the Treasury reimbursable construction costs from power  
revenues of the Missouri River Basin Project has been increased  
significantly, As a result, no repayment of the non-interest-  
bearing construction cost subsidy to irrigation is expected to be  
made until fiscal year 2027 and full repayment of reimbursable con-  
struction costs is not expected to be completed until fiscal year  
2093.

Authorizing legislation for the Missouri River Basin Project  
does not fix a specific period of time for repayment of either con-  
struction costs allocated to power or the construction cost sub-  
sidy to irrigation which is to be repaid from power revenues. In  
the absence of specific legislative requirements, the Secretary of  
the Interior established a general administrative policy calling  
for repayment of the Government's investment in **power** within  
50 years from the date each power facility is placed in service,  
Repayment of the non-interest-bearing construction cost subsidy to  
irrigation is scheduled to be made from net power revenues after  
the interest-bearing power investment has been repaid in full.

The estimated period of time required to repay reimbursable  
construction costs from power revenues is redetermined annually by  
the Bureau of Reclamation and is shown in its Average Rate and Re-  
payment Studies. In recent years these studies have shown signifi-  
cant increases in the period of time required to repay

reimbursable construction costs from power revenues of the Missouri River Basin Project, The following table shows pertinent data relating to the increases in the repayment period.

<u>Year of study</u>	<u>Fiscal year repayment estimated to be completed</u>		
	<u>Total repayment</u>	<u>Irrigation construction cost subsidy</u>	<u>power investment</u>
1953	2047	2047	2001
1956	2070	2068	2012
1960	2093	2090	2027
Increase 1953-60.	46 years	43 years	26 years

The increases in the repayment period result from the composite effect of several complex factors which include changes in the timing of project additions and cost allocation concepts, reductions in anticipated repayment by irrigators, increases in construction costs, and limitations on power production due to the near drought conditions that have existed for several years. We have not attempted to analyze the effect of each factor.

The 43-year increase in the period required for repayment of the \$2,263,923,000 construction cost subsidy to irrigation is of particular significance because, while interest at the rate of 3 percent a year on the unrepaid balance of the power investment is expected to be repaid, under Reclamation law no interest is to be repaid on construction costs allocated to irrigation. Since Federal activities are financed largely through the issuance of interest-bearing obligations or from revenues which could otherwise be used to redeem interest-bearing obligations, the expenditure of Federal funds generally has the effect of increasing



interest costs of the United States Treasury. We have not attempted to estimate the total nonreimbursable interest cost to the United States Treasury which will result if the irrigation facilities of the Missouri River Basin Project are constructed as planned. However, using the estimates shown in the Bureau's 1960 Average Rate and Repayment Study and the 3-percent interest rate that is applied to the unrepaid investment in power, we estimate that interest costs borne by the Federal Government will be increased by more than 1 billion dollars because of the 43-year increase in the period required to repay the irrigation construction cost subsidy.

No repayment of construction costs  
has been made

The Bureau's 1960 Average Rate and Repayment Study shows that at June 30, 1959, after deduction for operating expenses (exclusive of depreciation and provision for replacement of facilities), cumulative power revenues of the Missouri River Basin Project fell \$1,912,000 short of meeting interest requirements and that no repayment of construction costs had been made.

The Bureau of Reclamation does not prepare schedules comparing annual and cumulative actual repayment performance with scheduled repayment requirements or with theoretical return of funds which would be sufficient to repay the Federal investment in power within the established repayment period. Instead, in the Average Rate and Repayment Studies, the Bureau reschedules the entire unrepaid balance each year for repayment during the remaining years of

the repayment period. The Bureau has taken the position that project repayment requirements are being met so long as its studies indicate **that** repayment will be made within the 50-year period regardless of the annual or cumulative actual repayment performance.

To determine the status of repayment on a scheduled repayment basis, we used the data shown in the Bureau's 1960 Average Rate and Repayment Study and computed the principal component of the annual payment required to repay the construction costs allocated to power, with interest at 3 percent a year on the unrepaid balance, over 50-year periods from the date power facilities were recorded as being in service. This computation shows that at June 30, 1959, scheduled repayment of construction costs amounted to \$14,466,000. On this basis at June 30, 1959, the Missouri River Basin Project was deficient in repayment by \$24,068,000, consisting of \$14,466,000 for construction costs, \$7,690,000 for provision for replacement of facilities, and the \$1,912,000 deficit in repayment of interest. In evaluating the status of repayment, consideration must be given to (1) low water flows in past years with consequent low revenues, (2) **development** time required to attain ultimate utilization of the capacity of power facilities, and (3) other factors resulting in variations between scheduled and actual repayment. We have not attempted to evaluate the effects of these factors.

#### Matter for consideration by the Congress

In our prior report to the Congress on the audit of the Missouri River Basin Project, we expressed the opinion that the

Federal. water resources development program could be more effectively administered if the Congress enacted legislation to provide policies and criteria for determining (1) periods for repayment of reimbursable construction costs, (2) rates of interest, and (3) subsidies to nonpower programs.

In this connection it should be noted that the legislative authorizations for some of the newer projects contain provisions relating to these matters. For example, the Colorado River Storage Project Act, approved April 11, 1956 (43 U.S.C. 620), provides specific maximum periods for repayment of reimbursable construction costs, including irrigation subsidies, and also provides a method for determining rates of interest at the Colorado River Storage Project.

We remain of the opinion that the Federal water resources development program could be more effectively administered if the Congress enacted legislation to provide policies and criteria for repayment of reimbursable construction **costs** of the Missouri River Basin Project.

ELECTRIC PLANT CONSTRUCTION AND OPERATION

The Corps of Engineers and the Bureau of Reclamation have been authorized to construct hydroelectric power plants as a part of the Missouri River Basin Project. Although by law the power program is generally subordinate to other purposes of multiple-purpose developments, it has developed into a major activity, from a construction and operating point of view, and it is also the major revenue-producing program. Operation of power plants is generally governed by the need for storage and for releases of water for other purposes, with the generation of hydroelectric energy being a product derived from the water releases for the other purposes. A part of the power generated is used for pumping water for irrigation and municipal water supply purposes.

The power program for the Missouri River Basin Project provides for construction of 20 power plants with a total ultimate installed capacity of 2,692,700 kilowatts (kw). The status of the authorized hydroelectric power plant construction program at June 30, 1960, is summarized as follows:

<u>Status of plants</u>	<u>Number of plants</u>	<u>Number of generating units</u>	<u>Ultimate installed capacity (kilowatts)</u>
In operation	9	28	871,200
Under construction:			
At plants in operation	-	4	240,000
New plants	3	17	1,111,000
Authorized for construction	<u>8</u>	<u>22</u>	<u>470,500</u>
	<u>20</u>	<u>71</u>	<u>2,692,700</u>

Included as authorized for construction is the Yellowtail Dam and Reservoir of the Bureau of Reclamation. The prime contract for constructing this dam and power plant was awarded in April 1961. This unit includes a power plant with an installed capacity of 200,000 kilowatts. The site of the Yellowtail Dam and Reservoir is located on Crow Indian lands, and the initiation of construction was delayed because the necessary rights of way had not been secured from the Crow Tribe. The act of July 15, 1958 (72 Stat, 361), authorized transfer in the Treasury of the United States to the credit of the Crow Tribe of Indians, Montana, the sum of \$2,500,000 for the acquisition of the necessary rights of way. The act also provided that the Crow Tribe could go to court for a determination as to whether an additional amount should be paid. The Crow Tribe has filed suit against the United States for an additional \$5,000,000. At June 30, 1961, the suit had not been brought to trial.

GENERATING PLANTS IN OPERATION  
AND UNDER CONSTRUCTION

At June 30, 1960, 9 power plants with 28 generating units were in operation as part of the Missouri River Basin Project. Pertinent information relating to these completed plants follows.

<u>Agency responsible for construction and operation, and plant</u>	<u>Initial operation of first units</u>	<u>Number of generating units</u>	<u>Installed capacity (kilowatts)</u>
Bureau of Reclamation:			
Angostura	1951	1	1,200
Boysen	1952	2	15,000
Canyon Ferry	1953	3	50,000
Glendo	1958	2	24,000
Kortes	1950	<u>3</u>	<u>36,000</u>
Total, Bureau of Reclamation		11	<u>126,200</u>
Corps of Engineers:			
Fort Peck	1943	3	85,000
Fort Randall	1954	8	320,000
Garrison	1956	3	240,000
Gavins Point	1956	<u>3</u>	<u>100,000</u>
Total, Corps of Engineers		<u>17</u>	<u>745,000</u>
Total, Missouri River Basin Project		<u>28</u>	<u>871,200</u>

During the period July 1, 1956, to June 30, 1960, six generating units were placed in operation, increasing the installed capacity by 204,000 kilowatts. Information on these units follows.

<u>Plant</u>	<u>Generating unit number designation</u>	<u>Installed capacity (kilowatts)</u>	<u>In service date</u>
Garrison (Corps)	3	80,000	August 1956
Gavins Point (Corps)	1	33,333	September 1956
	2	33,333	October 1956
	3	33,333	January 1957
Glendo (Bureau)	1	12,000	December 1958
	2	12,000	April 1959

At June 30, 1960, three new power plants having a planned ultimate installed capacity of 1,111,060 kilowatts were under construction. Also under construction were additional generating units totaling 80,000 kilowatts and 160,000 kilowatts at Fort Peck

and Garrison, respectively. Data on the generating units under construction follows.

<u>Agency and plant</u>	<u>Estimated initial operation of first unit</u>	<u>Ultimate number of units</u>	<u>Installed capacity (kilowatts)</u>
Bureau of Reclamations Fremont Canyon	1960	<u>2</u>	<u>48,000</u>
Corps of Engineers:			
Oahe	1962	7	595,000
Big Bend	1964	8	468,000
Additional capacity:			
Fort Peck		2	80,000
Garrison		<u>2</u>	<u>160,000</u>
Total, Corps of Engineers		<u>19</u>	<u>1,303,000</u>
Total		<u>21</u>	<u>1,351,000</u>

The foregoing power plants are all considered as parts of the Missouri River Basin Project. In addition, the Bureau of Reclamation has constructed and is operating the following power plants at other individually authorized projects in the Missouri River basin.

<u>Project</u>	<u>Number of plants</u>	<u>Number of generat- ing units</u>	<u>Installed capacity (kilowatts)</u>
Colorado-Big Thompson	6	11	183,950
Kendrick	2	5	68,400
Riverton	1	2	1,600
Shoshone	2	4	10,600
North Platte	<u>1</u>	<u>2</u>	<u>4,800</u>
	<u>12</u>	<u>24</u>	<u>269,350</u>

As discussed in the following section, power generated at these projects is integrated with power generated at Missouri River Basin Project power plants and the combined generation is marketed on a system basis,

## POWER-MARKETING OPERATIONS

The Bureau of Reclamation is the marketing agent for Federal hydroelectric power generated in the Missouri River basin. The marketing operation is performed on a system basis for power generated at Corps of Engineers and Bureau of Reclamation power plants which are a part of the Missouri River Basin Project and at other Bureau of Reclamation power plants at the individually authorized projects listed above.

### Transmission facilities

To enable marketing of power not needed for project operations, the Bureau constructs, operates, and maintains transmission lines, switchyards, and substations for transmitting power to load centers. At June 30, 1960, the Bureau was operating about 6,800 miles of transmission lines and 182 switchyards and substations in the Missouri River basin. The Bureau's investment in transmission facilities totaled about \$181,300,000, consisting of plant in service (\$160,700,000) and under construction (\$20,600,000). About \$130,500,000 of the investment represents costs charged to the Missouri River Basin Project; about \$50,800,000 represents costs charged to individually authorized projects. The Bureau of Reclamation estimates that the ultimate cost of transmission facilities of the Missouri River Basin Project will be about \$342,000,000.

### Marketing areas

Marketing areas, called the western and eastern divisions, have been established for marketing the energy generated by



Federal hydroelectric power plants in the Missouri River basin. The marketing areas are based on geographic boundaries, and energy from plants in each area is generally marketed within that area. In the western division, Bureau power plants, including power plants at the separately authorized reclamation projects in Wyoming, Colorado, and western Nebraska, are operated as an integrated system. The eastern division is comprised of Montana east of the divide, North and South Dakota, central and eastern Nebraska, western Minnesota, and western Iowa. The Federal power plants in the eastern division, except Angostura, are interconnected either by federally owned transmission lines or by use of non-Federal transmission lines under contracts with private electric utility companies in the area. Use of the transmission lines of private companies under these arrangements is known as wheeling,

Marketing policies are similar for both divisions, but there are distinguishing characteristics between the two divisions. The more important of these characteristics are:

1. The eastern and western divisions use different rate schedules for the sale of firm power.<sup>1</sup> The western division received an average return on firm sales of about 6.47 mills per kilowatt-hour (kwh) and the eastern division received about 4.34 mills per kwh during fiscal year 1960.

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<sup>1</sup>Generally, firm power (energy) is continuously available to meet a customer's load requirements; nonfirm power is classified as secondary or dump power based upon the period of time it is available.

2. Firm power capability in the western division is adequate to meet the requirements of preference customers; firm power capability is not sufficient in the eastern division for preference customers' needs.

3. The power plants in the western division generate and market power as an integrated system through an interconnecting network of transmission lines. The plants in the eastern division operate as an integrated system but the Canyon Ferry and Angostura plants are not interconnected with the system by Federal transmission lines.

At June 30, 1960, both the western and eastern divisions were operating under the revised operating rules which were announced publicly on January 25, 1954, and were explained in our report to the Congress dated August 1, 1957.

Additional power will become available in the eastern division with the completion of the Oahe power plant; the second power plant at Fort Peck, and two additional units at Garrison Dam.

The Bureau of Reclamation has determined that, with the additional generating capacity, a total of 990,000 kilowatts of firm power will be available by 1965 for allocation to the preference customers in the eastern division marketing area. The amount of firm power applied for by the preference customers in their 1957 applications was substantially in excess of the 990,000 kilowatts available. The requests for firm power for the year 1963, after adjustment for load duplication and loads outside the marketing area, totaled 1,170,722 kilowatts.

The Committee on Study of Allocation of Missouri River Basin Power appointed by the Secretary of the Interior recommended in its report of September 14, 1959, that the available firm power be allocated on the smaller of the two following bases:

1. The allotment requested by the applicant for the year 1963.
2. The estimated 1963-64 winter peak load reduced by:
  - a. Load duplications.
  - b. Loads outside the marketing area.

The application of this formula results in an allotment of 83 percent of the lesser base.

An allocation of available firm power to preference customers in accordance with the recommended formula was prepared by the Bureau of Reclamation and was approved by the Secretary of the Interior on November 27, 1959.

Subsequent to June 30, 1960, the Bureau entered into negotiations with public utility companies for additional power to serve the needs of preference customers through 1963.

#### Integrated operation of Bureau power plants in the western division

An extensive Federal transmission system has been constructed by the Bureau of Reclamation in the western division interconnecting three units (Kortes, Glendo, and Boysen) of the Missouri River Basin Project and the separately authorized Colorado-Big Thompson, North Platte, Kendrick, Riverton, and Shoshone projects.

The interconnection of these facilities makes it possible and logical to operate the power plants and transmission system as an integrated power pool. The power generated by individual plants

loses its identity when it enters the transmission system., **The** power pool is used for supplying energy to the system's customers. By operating the western division as an integrated system, overall benefits are realized by minimizing transmission losses, achieving maximum generation from the available water for all plants, and providing energy for eligible customers located within transmission distance of the system. This integration has allowed the Bureau to consolidate the marketing of power from all projects under one marketing agent with only one set of standard power rates.

Energy generated and available for sale at individual power projects in the western division for the fiscal year ended June 30, 1960, follows :

<u>Project</u>	<u>Generation in kilowatt-hours</u>	
	(000 omitted)	
Missouri River Basin Project:		
Boysen	49,054	
Kortes	152,689	
Glendo	<u>71,572</u>	273,315
Colorado-Big Thompson	715,092	
Kendrick	249,443	
Riverton	14,810	
Shoshone	77,308	
North Platte	<u>20,628</u>	<u>1,077,281</u>
Total		<u>1,350,596</u>

Association of power Plants  
In the eastern division

There were **six** Federal power plants in operation during the fiscal years 1959 and 1960 in the eastern division of the Missouri

River basin. The energy generated and available for sale during the period at each of these plants follows:

<u>Plant</u>	<u>Generation in kilowatt-hours</u>	
	<u>1959</u>	<u>1960</u>
	(000 omitted)	
Bureau of Reclamation:		
Angostura	2,135	12
Canyon Ferry	<u>283,710</u>	<u>167,157</u>
Total, Bureau	<u>285,845</u>	<u>167,169</u>
Corps of Engineers:		
Fort Randall, Gavins Point, and Garrison	2,934,589	2,732,795
Fort Peck	<u>639,929</u>	<u>706,254</u>
Total, Corps	<u>3,574,518</u>	<u>3,439,049</u>
Total, eastern division	<u>3,860,363</u>	<u>3,606,218</u>

The decreased generation in 1960 was due to decreased sales of nonfirm energy at Canyon Ferry and in the eastern area. Sales of dump energy at Canyon Ferry were reduced because 1960 was a high water year which reduced the need of the only customer for dump energy. In the eastern area flood conditions on the Missouri River below Gavins Point in the spring of 1960 precluded the release of water above the normal streamflow. This condition reduced the amount of nonfirm energy available for sale during a period of several months.

While the western division is physically integrated, the eastern division is physically split into two areas with three systems:

1. The western area of the eastern division comprises the Canyon Ferry plant and one unit of the Fort Peck plant.
2. The eastern area of the eastern division comprises the Garrison, Fort Randall, and Gavins Point plants and two units of the Fort Peck plant.

Transformer and other equipment limitations in the Fort Peck switchyard have precluded the transfer of surplus power in the western area to the eastern area. The Bureau expects that new facilities being installed at Fort Peck will permit the connection of the two areas by the spring of 1962.

3. The third system consists of the Angostura power plant, While Angostura is located within the eastern area of the eastern division, it is not served by Bureau of Reclamation transmission facilities.

Although the above described physical division exists, the power operations are financially integrated into one system, For accounting purposes, the eastern division is divided into the Missouri River Basin Project and the Fort Peck Project with each being accounted for separately.

#### Marketing of energy from Canyon Ferry

The marketing of energy from Canyon Ferry during fiscal year 1959 and previous years consisted primarily of sales to the Montana Power Company at dump rates (2.5 mills). A large block of this energy was firm energy. Canyon Ferry is not served by Bureau transmission facilities, Energy generated at Canyon Ferry generally has been sold either to the Montana Power Company or to the Fort Peck plant by wheeling energy over the transmission facilities of the Montana Power Company. The execution of a contract in 1956 for delivery of firm energy to the Montana Power Company and for delivery to rural cooperatives in 1960 has succeeded in selling a large portion of Canyon Ferry generation at firm rates as illustratedx

Fiscal year	Canyon Ferry sales in kilowatt-hours				
	Total	Montana Power Co.		Interdepartmental	Rural co-operatives
		Dump	Firm		
1955	233,457,386 100%	232,044,526 99.4%	-	1,412,860 0.6%	-
1958	283,037,937 100%	212,816,558 75.2%	65,028,451 23.0%	5,192,928 1.8%	-
1960	182,175,815 100%	59,709,586 32.8%	87,750,395 48.2%	5,265,390 2.9%	29,450,444 16.1%

The above table excludes interproject sales from Canyon Ferry to Fort Peck. The reduction in total sales in fiscal year 1960 was due to high water conditions on the Missouri River which reduced Montana Power Company's need for dump energy. The physical integration of the eastern and western areas of the eastern division in 1962 will permit further utilization of the firm capability of the Canyon Ferry plant.

Marketing of energy from Angostura power plant

The Angostura power plant, located in southwestern South Dakota, has an installed capacity of 1,200 kilowatts. The plant is not served by Bureau of Reclamation transmission facilities. Most of the energy generated is sold to the Black Hills Power and Light Company, a privately owned electric utility company which has transmission facilities that are connected with the plant. The average rate return for energy sales made to this company during the past 6 years has been as follows:

<u>Fiscal year</u>	<u>Average rate (mills per kilowatt-hour)</u>
1955	4.27
1956	4.49
1957	4.18
1958	4.37
1959	4.32
1960	4.44

After considering transmission expenses, the above rates compare favorably with the average rates received from eastern division energy sales.



FINANCIAL RESULTS OF POWER OPERATIONS

The financial results of power operations of the Missouri River Basin Project for fiscal year 1960, based upon the accounting records of the Bureau of Reclamation and the Corps of Engineers, are summarized below.

	<u>Combined</u>	<u>Eastern division</u>	<u>Western division</u>
Operating revenues:			
Sales of electric energy to others	\$21,248,258	\$12,992,231	\$8,256,027
Rents and other revenues	<u>1,053,091</u>	<u>384,941</u>	<u>,668,150</u>
Total operating revenues	22,301,349	13,377,172	8,924,177
Allocation of revenues to other projects	<u>5,534,784</u>	<u>-</u>	<u>5,534,784</u>
Net operating revenues	<u>16,766,565</u>	<u>13,377,172</u>	<u>3,389,393</u>
Operating revenue deductions:			
Purchased power	360,779	6,881	353,898
Production, operation, and maintenance expenses	1,982,159	1,787,894	194,265
Transmission expenses	3,368,719	2,125,053	1,243,666
Administrative, sales, and general expenses	1,194,921	618,284	576,437
Provision for depreciation or replacement	7,762,047	7,942,574	332,473
Credits to operations	<u>-148,184</u>	<u>-148,184</u>	<u>-</u>
Total operating revenue deductions	<u>14,520,241</u>	<u>11,819,502</u>	<u>2,700,739</u>
Excess of operating revenues over operating revenue deductions	<u>2,246,324</u>	<u>1,557,670</u>	<u>688,654</u>
Less:			
Interest expense on the Federal investment	12,038,382	10,746,525	1,291,857
Nonoperating income, net	<u>-1,581</u>	<u>-1,581</u>	<u>-</u>
	<u>12,036,801</u>	<u>10,744,944</u>	<u>1,291,857</u>
Excess of deductions over revenues, fiscal year 1960	<u>\$ 9,790,477</u>	<u>\$ 9,187,274</u>	<u>\$ 603,203</u>

The opinion of the General Accounting Office on the financial statements appears on pages 56 and 57.

Financial statements on power operations are included in schedules 2 and 3 on pages 60 and 61 of this report.

The amount of \$9,790,477, shown as excess of deductions over revenues for fiscal year 1960, was obtained by combining the financial records of the Bureau of Reclamation and the Corps of Engineers. On pages 16 to 21 and 56, we comment on the principal accounting deficiencies requiring corrective action by the agencies before the financial statements can fairly indicate the financial results of power operations.

### ENERGY PRODUCTION AND DISPOSITION

Energy generated, purchased, and interchanged, and its disposition for all projects in the Missouri River basin during fiscal year 1960 are summarized below.

	In kilowatt-hours		
	Combined	Western Division	Eastern Division
		(000 omitted)	
Energy generated at Bureau of Reclamation power plants:			
Missouri River Basin Project	445,245	276,540	168,705
Individually authorized projects	<u>1,083,728</u>	<u>1,083,728</u>	<u>-</u>
Total energy generated at Bureau plants	1,528,973	1,360,268	168,705
Energy generated at Corps of Engineers power plants	3,535,854	-	3,535,854
Purchased energy	84,104	83,136	968
Energy from interchange with other systems	<u>156,021</u>	<u>52,333</u>	<u>103,688</u>
Total input	<u>5,304,952</u>	<u>1,495,737</u>	<u>3,809,215</u>
Deduct:			
Energy for plant use:			
Bureau of Reclamation	28,958	9,671	19,287
Corps of Engineers	<u>79,052</u>	-	<u>79,052</u>
Interdepartmental sales	28,251	21,871	6,380
Interchange energy to others	110,244	42,937	67,307
Transmission and other losses	464,482	130,133	334,352
Interproject sales	<u>17,975</u>	-	-
Total deductions	<u>728,966</u>	<u>222,587</u>	<u>506,379</u>
Sales of electric energy to others	<u>4,575,986</u>	<u>1,273,150</u>	<u>3,302,836</u>

### CUSTOMERS SERVED

Sales of electric energy by the Bureau for the fiscal year 1960 to the various classes of customers are presented in the following summary.

Missouri River basin sales - fiscal year 1960

Class of customer	Total number of customers	Total			Firm			Nonfirm		
		Thousands of kilowatt-hours	Dollar amounts	Average rate per kilowatt-hour (mills)	Thousands of kilowatt-hours	Dollar amounts	Average rate per kilowatt-hour (mills)	Thousands of kilowatt-hours	Dollar amounts	Average rate per kilowatt-hour (mills)
Electric utilities.	14	962,597	\$ 3,649,634	3.79	264,431	\$ 1,768,072	6.69	698,166	\$1,881,562	2.70
State agencies	2	493,524	1,821,525	3.69	463,865	1,753,800	3.78	29,659	67,725	2.28
Municipal utilities	98	708,024	3,694,474	5.22	645,341	3,492,222	5.41	62,683	202,252	3.23
Cooperative utilities.	48	2,245,714	11,207,538	4.99	2,189,693	11,023,931	5.03	56,021	183,607	3.28
Public authorities	37	101,863	483,279	4.74	99,371	474,713	4.78	2,492	8,566	3.44
Commercial and industrial	12	61,807	372,344	6.02	59,679	365,331	6.12	2,128	7,013	3.30
All other sales	<u>131</u>	<u>2,457</u>	<u>14,839</u>	<u>6.04</u>	<u>2,457</u>	<u>14,839</u>	<u>6.04</u>	<u>-</u>	<u>-</u>	<u>-</u>
Sale of electric energy to others (note a)	342	4,575,986	21,243,633 <sup>b</sup>	4.64	3,724,837	18,892,908	5.07	851,149	2,350,725	2.76
Interproject sales (note c)	<u>16</u>	<u>25,597</u>	<u>131,285</u>	<u>5.13</u>	<u>25,597</u>	<u>131,285</u>	<u>5.13</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total sales	<u>358</u>	<u>4,601,583</u>	<u>\$21,374,918</u>	<u>4.65</u>	<u>3,750,434</u>	<u>\$19,024,193</u>	<u>5.07</u>	<u>851,149</u>	<u>\$2,350,725</u>	<u>2.76</u>

<sup>a</sup>Amounts are net after allowances and discounts.

<sup>b</sup>Excludes \$4,625 for reconciling items between the Yearly Report of Power Operations and the financial statements.

<sup>c</sup>Excludes Corps of Engineers sales of 14,474 thousands of kilowatt-hours, amounting to \$30,773.

Sales by the Bureau to electric utilities for fiscal year 1960 accounted for about 17 percent of the revenues and about 21 percent of the energy delivered, compared with about 26 percent of the revenues and about 32 percent of the energy delivered for fiscal year 1959. Sales to preference customers (state agencies, municipal utilities; cooperative utilities, and public authorities) for fiscal year 1960 accounted for about 81 percent of the revenues and about 78 percent of the energy delivered, compared with about 73 percent of the revenues and about 67 percent of the energy delivered for fiscal year 1959.

Service to preference customers

All power plants in the Missouri River basin operated by the Corps of Engineers or the Bureau of Reclamation are subject to either the Reclamation Project Act of 1939 (43 U.S.C. 485h(c)), or the Flood Control Act of 1944 (16 U.S.C. 825s), or the Fort Peck Project Act of 1938 (16 U.S.C. 833c), which provide that, in disposing of electric energy, preference and priority be given to public bodies, cooperatives, and other nonprofit organizations.

**The preference requirements in** the Missouri River basin are met by giving priority to applications of preferred customers. Power in excess of the current needs of preferred customers is reserved for them as a class but until needed by them it is sold under interim contracts to other customers.

The Bureau's marketing criteria provide for dump energy Sales to be made with the objective of obtaining the maximum revenue for the Federal Government. Rate blocks have been created for this

class of energy which begin at from 3.5 to 3.01 mills per kilowatt-hour for the eastern division and from 4.5 to 4.01 per kilowatt-hour for the western division. These rates decrease at intervals of one half mill. The marketing criteria provide that, when the revenue from such sales from several classes of customers falls within the same rate block, the preference in delivery of dump energy will be given to the preference-class customer.

The major classes of energy sold to Missouri River basin customers during fiscal year 1960 are summarized below.

	<u>Total</u>	<u>Division</u>	
		<u>Western</u>	<u>Eastern</u>
Energy sales:			
Thousand kilowatt-hours	4,575,986	1,273,150	3,302,836
Percentage distribution:			
Preference customers	77.6	82.7	75.7
Nonpreference customers	22.4	17.3	24.3
Firm energy:			
Thousand kilowatt-hours	3,972,483	1,273,150	2,451,687
Percentage distribution:			
Preference customers	91.3	82.7	95.8
Nonpreference customers	8.7	17.3	4.2
Nonfirm energy:			
Thousand kilowatt-hours	851,149	-	851,149
Percentage distribution:			
Preference customers	17.7	-	17.7
Nonpreference customers	82.3	-	82.3

Sales to nonpreference customers

Energy sold to nonpreference customers in fiscal year 1960 is summarized as follows:

<u>Division</u>	<u>Total</u>	<u>Thousand kilowatt-hours of nonpreference sales</u>			
		<u>Private electric utilities</u>		<u>Commercial and industrial customers</u>	
		<u>Firm</u>	<u>Nonfirm</u>	<u>Firm</u>	<u>Nonfirm</u>
Western	220,375	160,696	-	59,679	-
Eastern	804,029	103,735	698,166	-	2,128
Total	<u>1,024,404</u>	<u>264,431</u>	<u>698,166</u>	<u>59,679</u>	<u>2,128</u>

The major portion of firm energy sales to nonpreference customers was made in the western division. This division has sufficient capability at the present time to meet the requirements of preference customers within the division area and also to make some firm sales to nonpreference customers. Most of the eastern division firm sales to nonpreference customers were made to the Montana Power Company at Canyon Ferry; there are no Federal transmission facilities for delivering power from this plant. This contract with the Montana Power Company will terminate April 30, 1962.

The sale of nonfirm energy is restricted by the Bureau to customers having a sufficient alternative source of generation in the event the nonfirm Federal energy is withdrawn. This limitation precludes the purchase **of nonfirm energy by many preference customers\***

The Bureau has contracted with several private utilities, State agencies, and cooperatives to transmit energy over their transmission systems to preference customers. Wheeling supplements the Bureau's transmission system by transmitting Federal energy to many preference customers who otherwise would be inaccessible.

Principal wheeling contracts have been executed with large public and private utilities, such as the Montana-Dakota Utilities Co., Pacific Power and Light Company, Nebraska Public Power System, and East River Electric Power Cooperative, Inc.

It is the Bureau's policy in marketing firm power to absorb wheeling charges up to 1 mill per kilowatt-hour plus losses of

energy in the transmission of Federal energy over private lines to customers. Charges and energy losses that exceed the limit which the Bureau assumes are borne by the customers,

#### RATE SCHEDULES

Rates for the sale of power in the Missouri River basin are established by the Secretary of the Interior under authority of the Reclamation Project Act of 1939 (43 U.S.C. 485h), the Flood Control Act of 1944 (16 U.S.C. 825s), and the Fort Peck Project Act of May 18, 1938 (16 U.S.C. 833d).

The Reclamation Project Act of 1939 governs for power units of the Missouri River Basin Project and individually authorized projects constructed by the Bureau of Reclamation, and section 9(c) of this act provides as to power rates as follows:

\*\*\* sale of electric power \*\*\* shall be \*\*\* at such rates as in his judgment [the Secretary of the Interior] will produce power revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than 3 per centum per annum, and such other fixed charges as the Secretary deems proper \*\*\*."

Section 5 of the Flood Control Act of 1944 and the Fort Peck Project Act of May 18, 1938, provide for rate schedules to be drawn having regard to the recovery of the cost of producing and transmitting the electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years. Rates for power in the Missouri River basin are designed to result in average operating revenues of 5.5 mills per kilowatt-hour for firm energy, 3.0 mills for nonfirm energy, and 2.5 mills for irrigation pumping energy, before allowances and discounts.,

The average operating revenues in mills per kilowatt-hour, by class of energy, after allowances and discounts, are shown below:

	<u>Mills per kilowatt-hour</u>			
	<u>1960</u>	<u>1959</u>	<u>1958</u>	<u>1957</u>
Firm	5.07	5.03	5.13	5.22
Nonfirm	2.76	2.74	2.83	2.81
Irrigation pumping	2.55	2.53	2.50	2.50

The average rate charged for camp light and other uses was about 4 mills per kilowatt-hour in fiscal year 1960.

Separate rate schedules apply for the eastern and western divisions, but the schedules are basically alike. They differ only in respect to market area and state levels. The eastern division offers lower rates because of its lower development cost,

Four different kinds of wholesale service are furnished in the Missouri River basin by the Bureau. These are termed (1) firm power, (2) secondary energy, (3) dump energy, and (4) irrigation and drainage pumping. The rate schedules for each of these services normally underlie and limit the scope of contractual obligations. However, individual negotiation constitutes an essential element in settling on the obligations finally assumed by the contractor and the United States.



## ACCOUNTING POLICIES

The accounting system of the Corps of Engineers (Civil Functions) has been approved by the Comptroller General. Accounts for power operations are maintained, to the extent practicable, in accordance with the uniform system of accounts prescribed for public utilities by the Federal Power Commission under the Federal Power Act (16 U.S.C. 825b). The Bureau of Reclamation's accounts are generally maintained on a similar basis except that the Bureau does not record depreciation on its water resources projects. The Bureau's accounting system has been approved by the Comptroller General subject to qualifications. The principal qualification relates to the absence of depreciation accounting,

## COST ACCOUNTING PRACTICES

The Corps of Engineers and the Bureau of Reclamation do not record certain costs, applicable to their activities, of administrative and other services furnished by other Federal agencies. For example, the Corps of Engineers has not recorded payments, amounting to \$7,500,000, made to Indian tribes by the Bureau of Indian Affairs, Department of the Interior, resulting from the acquisition of land for the Corps Garrison Dam and Reservoir. Other Federal agency costs not recorded include amounts for rentals and other services furnished without charge by the General Services Administration and other Federal agencies and death and disability claims on account of the Corps and Bureau employees paid by the Bureau of Employees' Compensation, Department of Labor.

The administrative costs of the Office of the Chief of Engineers **and** of division offices are paid from the appropriations to the corps for general expenses (and are not distributed to construction, operation **and** maintenance, **and** other programs. Likewise, the costs of the Commissioner's Office, Washington, D.C., a part of the **costs of the Commissioner's Office, Denver,** and a part of the costs of the regional offices of the Bureau of Reclamation are paid from **an** appropriation to the Bureau for general administrative expenses and are not distributed to projects as costs because these costs **are** nonreimbursable under the act of December 5, 1924, **as** amended (43 U.S.C. 377).

Provisions for costs of accrued annual **and** sick leave of employees are included in property costs **and** operating expenses by the Corps of Engineers. Such provisions have not been made by the Bureau of Reclamation, but the **amounts** of salaries and wages paid to employees while on annual or sick leave are charged to property **or** operating expense accounts.

### SCOPE OF AUDIT,

Our audit of hydroelectric power and related activities of the Corps of Engineers (Civil Functions), Department of the Army, and of the Bureau of Reclamation, Department of the Interior, in the Missouri River Basin Project included reviews of activities and selected examinations of financial transactions in the following manner:

1. We reviewed the basic laws authorizing the activities, and the pertinent Legislative history, to ascertain the purposes of the activities and their intended scope.

2. We ascertained the policies and procedures adopted by the Corps and the Bureau and examined into their adequacy and effectiveness.

3. We examined selected transactions to the extent we deemed appropriate with due regard to the nature and volume of transactions and the effectiveness of internal control including internal audits. Our examination of transactions was conducted at the Omaha, Nebraska, district office of the Corps of Engineers, at the Billings, Montana (Region 6), and Denver, Colorado (Region 7), regional offices, and the Casper, Wyoming, and McCook, Nebraska, project offices of the Bureau of Reclamation.

Our verification work and the accompanying financial statements relate to the Missouri River Basin Project (including the Fort Peck Project) of the Bureau of Reclamation and the Fort Peck, Garrison, Oahe, Big Bend, Fort Randall, and Gavins Point projects of the Corps of Engineers. For power rate and repayment studies

and other purposes, these Bureau and Corps projects are considered as parts of one comprehensive plan, which is referred to as the Missouri River Basin Project. Other projects of the Corps of Engineers which are considered as part of the comprehensive Missouri River Basin Project, but do not include power as a purpose, were excluded from our verification work and the accompanying financial statements.

## OPINION OF FINANCIAL STATEMENTS

The accompanying statement of assets and liabilities and statements of power operations (schedules 1 through 4) were prepared by us from the accounts and records of the Corps of Engineers and the Bureau of Reclamation.

In our opinion, the accompanying financial statements do not present fairly the financial position at June 30, 1960, and the financial results of power operations for the fiscal year then ended, mainly because of the conditions set forth below, the full effect of which cannot now be determined.

1. The Corps and the Bureau do not use comparable policies in recording depreciation on plant and equipment. While the Corps uses generally accepted depreciation accounting procedures, these procedures were not applied consistently among projects. Except for movable equipment and service facilities, the Bureau does not record depreciation in its accounts.

2. Agreement has not been reached between the Corps of Engineers and the Department of the Interior on the allocation of power revenues to the Corps projects. Amounts deposited by the Bureau of Reclamation for the account of the Corps have not been recorded in the Corps accounts or considered in the computations of interest on the Federal investment in power.

3. Interest during construction has not been recorded in the Bureau's accounting records. The Corps has not used consistent procedures in computing interest on the Federal investment in the several Missouri River Basin Project facilities. Incorrect bases

have been used by the Corps to compute interest on the Fort Peck and Garrison facilities.

4. The Corps has not adjusted the prior years' depreciation and interest expenses in accordance with the allocations to purposes established by the 1958 firm construction cost allocation. Also the Corps has not adjusted prior years' interest expenses to give effect to the recording of payments to States for leasing of reservoir lands .

5. The Bureau and the Corps use different methods of allocating joint use operation and maintenance expenses.

FIWANCIAL STATEMENTS

CORPS OF ENGINEERS (CIVIL FUNCTIONS) AND BUREAU OF RECLAMATION

HYDROELECTRIC POWER AND RELATED ACTIVITIES

MISSOURI RIVER BASIN PROJECT (note 1)

STATEMENT OF ASSETS AND LIABILITIES

JUNE 30, 1960

	A S S E T S			L I A B I L I T I E S		
	Combined	Corps of Engineers	Bureau of Reclamation	Combined	Corps of Engineers	Bureau of Reclamation
<b>PLANT, PROPERTY, AND EQUIPMENT:</b>						
Plant in service and under construction, including interest, during construction of \$72,609,250 (note 2)	\$1,486,640,293	\$957,613,691	\$529,026,602			
Service facilities, Less depreciation of \$3,303,674 (note 3)	1,985,975	-	1,985,975			
Abandoned and retired property	127,107	9,776	117,331			
Other physical property	406,853	-	406,853			
	<u>1,489,160,228</u>	<u>957,623,467</u>	<u>531,536,761</u>			
Less accumulated depreciation (note 4)	<u>114,021,962</u>	<u>113,579,728</u>	<u>442,294</u>			
Plant, property, and equipment, net	<u>1,375,138,266</u>	<u>844,043,739</u>	<u>531,094,527</u>			
<b>EXAMINATIONS AND SURVEYS, INCLUDING ADVANCE PLANNING (note 5)</b>	<u>53,032,578</u>	<u>-</u>	<u>53,032,578</u>			
<b>CASH AND OTHER ASSETS:</b>						
Unexpended funds in U.S. Treasury	22,817,376	6,758,104	16,059,272			
Deposit funds	2,334,842	-	2,334,842			
Accounts receivable due from water users for operation of facilities	2,339,315	59,401	2,279,914			
Materials and supplies	41,714	-	41,714			
Prepayments and advances, principally to other Government agencies	528,571	2,250	526,321			
	<u>23,151</u>	<u>23,151</u>	<u>-</u>			
Total cash and other assets	<u>29,237,089</u>	<u>6,842,906</u>	<u>22,394,183</u>			
<b>OTHER DEBITS:</b>						
Other work in progress	12,971	3,532	9,439			
Transitional development costs	865,883	-	865,883			
Deferred and unmatured receivables	876,563	-	876,563			
Other deferred debits	420,731	39,517	381,214			
Total other debits	<u>2,176,148</u>	<u>43,049</u>	<u>2,133,099</u>			
Total assets	<u>\$1,459,584,081</u>	<u>\$850,929,694</u>	<u>\$608,654,387</u>			
<b>INVESTMENT OF U.S. GOVERNMENT AND ACCUMULATED EXCESS OF DEDUCTIONS OVER REVENUES:</b>						
Congressional appropriations net (note 6)	\$1,525,622,846	\$ 901,660,483	\$623,962,363			
Cost of property and service furnished by other Government agencies, net (note 7)	42,012,200	4,240,213	37,771,987			
Interest on the Federal investment (note 8)	219,947,738	197,869,428	22,078,310			
	<u>1,787,582,784</u>	<u>1,103,770,124</u>	<u>683,812,660</u>			
<b>Less:</b>						
Bonds returned to the U.S. Treasury (note 9)	120,977,709	3,459,718	117,517,991			
Cumulative net costs of non-revenue-producing operations	173,383,028	172,297,303	1,085,725			
	<u>294,360,737</u>	<u>175,757,021</u>	<u>118,603,716</u>			
Net investment of U.S. Government	<u>1,493,221,355</u>	<u>927,915,103</u>	<u>565,106,252</u>			
Less accumulated excess of deductions over revenues:						
Power (schedule 2)	51,778,089	81,571,227	-29,793,138			
Water	-398,558	-	-398,558			
Miscellaneous and nonoperating	-544,124	-	-544,124			
Total excess of deductions over revenues	<u>50,835,407</u>	<u>81,571,227</u>	<u>-30,735,820</u>			
Total	<u>1,442,385,948</u>	<u>846,343,876</u>	<u>595,042,072</u>			
<b>PAYMENTS BY WATER USERS:</b>						
Water users' equity	10,150	-	10,150			
Matured installments of fixed obligations for use of facilities	1,259	-	1,259			
Total payments by water users	<u>11,409</u>	<u>-</u>	<u>11,409</u>			
<b>CURRENT AND ACCRUED LIABILITIES:</b>						
Accounts payable, including accrued payroll and contractors' earnings	10,228,403	4,585,818	5,642,585			
Other current and accrued liabilities	1,401,216	-	1,401,216			
Total current and accrued liabilities	<u>11,629,619</u>	<u>4,585,818</u>	<u>7,043,801</u>			
<b>ADVANCE COLLECTIONS AND OTHER DEFERRED CREDITS</b>	<u>611,689</u>	<u>-</u>	<u>611,689</u>			
<b>ACCUMULATED PROVISIONS FOR REPLACEMENTS (note 10)</b>	<u>4,897,464</u>	<u>-</u>	<u>4,897,464</u>			
<b>CONTRIBUTIONS IN AID OF PROJECT DEVELOPMENT AND CONSTRUCTION</b>	<u>247,952</u>	<u>-</u>	<u>247,952</u>			
Total liabilities and investment of U.S. Government	<u>\$1,459,584,081</u>	<u>\$ 850,929,694</u>	<u>\$608,654,387</u>			

The notes on pages 63 to 70 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on pages 56 and 57.



CORPS OF ENGINEERS (CIVIL FUNCTIONS) AND BUREAU OF RECLAMATION  
HYDROELECTRIC POWER AND RELATED ACTIVITIES

MISSOURI RIVER BASIN PROJECT (note 1)

STATEMENT OF RESULTS OF POWER OPERATIONS

FOR FISCAL YEAR 1960

AND CUMULATIVE TO JUNE 30, 1960

	<u>Combined</u>	<u>Eastern Division</u>	<u>Western Division</u>
OPERATING REVENUES:			
Sales of electric energy:			
Private electric utilities,	\$ 3,649,949	\$ 2,422,222	\$1,227,677
State agencies	1,821,055	1,776,411	44,614
Municipal utilities	3,694,298	2,263,017	1,431,281
Cooperative utilities	11,212,464	6,194,842	5,017,622
Public authorities	483,279	328,646	154,633
Commercial and industrial	372,390	7,013	365,377
Interproject	162,058	49,125	112,933
All other	14,823	-	14,823
	<u>21,410,316</u>	<u>13,041,356</u>	<u>8,368,960</u>
Total sales of electric energy			
Rents and other revenues	<u>891,033</u>	<u>335,816</u>	<u>555,217</u>
Total operating revenues	22,301,349	13,377,172	8,924,177
Less allocation of revenues to other projects (note 12)	<u>5,534,784</u>	<u>                    </u>	<u>5,534,784</u>
Net operating revenues	<u>16,766,565</u>	<u>13,377,172</u>	<u>3,389,393</u>
OPERATING REVENUE DEDUCTIONS:			
Production expenses	1,982,159	1,787,894	194,265
Purchased power	360,779	6,881	353,898
Transmission expenses	3,311,891	2,125,053	1,243,666
Customers' accounting and collecting expenses	16,855	145,697	66,194
Power-marketing expenses	965,975	2,285	14,570
Administrative and general expenses	969,583	470,302	495,673
Provision for replacements (note 10)	6,792,464	650,860	318,723
" " depreciation ( " 4)	<u>6,792,464</u>	<u>6,778,714</u>	<u>13,750</u>
Total operating revenue deductions	14,668,425	11,967,686	2,700,739
Less credits to operations	<u>148,184</u>	<u>148,184</u>	<u>                    </u>
Net operating revenue deductions	<u>14,520,241</u>	<u>11,819,502</u>	<u>2,700,739</u>
EXCESS OF OPERATING REVENUES OVER OPERATING REVENUE DEDUCTIONS	<u>2,246,324</u>	<u>1,557,670</u>	<u>688,654</u>
Less:			
Interest expense (note 8)	12,038,382	10,746,525	1,291,857
Nonoperating expense or income (-), net	<u>-1,581</u>	<u>-1,581</u>	<u>                    </u>
	<u>12,036,801</u>	<u>10,744,944</u>	<u>1,291,857</u>
EXCESS OF DEDUCTIONS OVER REVENUES, FISCAL YEAR 1960	9,790,477	\$ 9,187,274	\$ 603,203
EXCESS OF DEDUCTIONS OVER REVENUES TO JUNE 30, 1959	41,987,926		
PRIOR YEAR ADJUSTMENTS'	<u>-314</u>		
CUMULATIVE EXCESS OF DEDUCTIONS OVER REVENUES TO JUNE 30, 1960	<u>\$51,778,089</u>		

The notes on pages 63 to 70 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on pages 56 and 57.

CORPS OF ENGINEERS (CIVIL FUNCTIONS) AND BUREAU OF RECLAMATION

HYDROELECTRIC POWER AND RELATED ACTIVITIES

MISSOURI RIVER BASIN PROJECT (note 1)

STATEMENT OF RESULTS OF POWER OPERATIONS—EASTERN DIVISION  
FOR FISCAL YEAR 1960

	Total	Interproject eliminations	Corps of Engineers				Bureau of Reclamation	
			Fort Peck Project	Garrison Project	Fort Randall Project	Gavins Point Project	Fort Peck Project	Missouri River Basin Project
<b>OPERATING REVENUES:</b>								
Sales of electric energy:								
Private electric utilities	\$ 2,422,272	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 283	\$ 2,421,989
State agencies	1,776,441	-	-	-	-	-	-	1,776,441
Municipal utilities	2,263,017	-	-	-	-	-	-	2,263,017
Cooperative utilities	6,194,842	-	-	-	-	-	602,470	5,592,372
Public authorities	328,646	-	-	-	-	-	46,655	281,991
Commercial and industrial	7,013	-	-	-	-	-	-	7,013
Project use and interproject sales	49,125	1,899,989	10,659	17,090	3,024	-	1,879,719	38,622
All other sales	-	-	-	-	-	-	-	-
Total sales of electric energy	13,041,356	1,899,989	10,659	17,090	3,024	-	2,529,127	12,381,445
Rents and other revenues	335,816	-	-	-	-	-	6,035	329,781
Total operating revenues	13,377,172	1,899,989	10,659	17,090	3,024	-	2,535,162	12,711,226
<b>OPERATING REVENUE DEDUCTIONS:</b>								
Production expenses	1,787,894	292,103	351,739	438,349	489,362	279,188	298,191	223,168
Purchased power	6,881	1,899,989	-	-	-	-	21,848	1,885,022
Transmission expenses	2,125,053	-	-	-	-	-	438,808	1,686,245
Customers' accounting and collecting expenses	145,697	-	-	-	-	-	14,620	131,077
Power-marketing expenses	2,285	-	-	-	-	-	-	2,285
Administrative and general expenses	470,302	-	20,781	15,073	29,833	20,101	92,759	291,755
Provision for replacements (note 10)	650,860	-	-	-	-	-	116,582	534,278
Provision for depreciation (note 4)	6,778,714	-	477,703	2,792,341	2,734,251	774,419	-	-
Total operating revenue deductions	11,967,686	2,192,092	850,223	3,245,763	3,253,446	1,073,708	982,808	4,753,830
Less credits to operations	148,184	292,103	312,285	87,060	36,277	4,665	-	-
Net operating revenue deductions	11,819,502	1,899,989	537,938	3,158,703	3,217,169	1,069,043	982,808	4,753,830
<b>EXCESS OF OPERATING REVENUES OVER OPERATING REVENUE DEDUCTIONS</b>	<b>1,557,670</b>	<b>-</b>	<b>-527,279</b>	<b>-3,141,613</b>	<b>-3,214,145</b>	<b>-1,069,043</b>	<b>1,552,354</b>	<b>7,957,396</b>
<b>Less:</b>								
Interest expense (note 8)	10,746,525	-	535,076	2,912,077	3,489,627	941,988	233,546	2,634,211
Nonoperating expense or income (-), net	-1,581	-	-	-86	-1,459	-36	-	-
	10,744,944	-	535,076	2,911,991	3,488,168	941,952	233,546	2,634,211
<b>EXCESS OF DEDUCTIONS OVER REVENUES, fiscal year 1960</b>	<b>\$ 9,187,274</b>	<b>\$ -</b>	<b>\$1,062,355</b>	<b>\$6,053,604</b>	<b>\$6,702,313</b>	<b>\$2,010,995</b>	<b>-\$1,318,808</b>	<b>\$-5,323,185</b>

The notes on pages 63 to 70 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on pages 56 and 57.

CORPS OF ENGINEERS (CIVIL FUNCTIONS) AND BUREAU OF RECLAMATION

HYDROELECTRIC POWER AND RELATED ACTIVITIES

MISSOURI RIVER BASIN PROJECT (note 1)

STATEMENT SHOWING PLANT IN SERVICE AND UNDER CONSTRUCTIONS

ACCUMULATED DEPRECIATION, AND RESERVE FOR REPLACEMENT

AT JUNE 30, 1960

Agency and plant	Plant in service and under construction			Total	Accumulated depreciation	Reserve for replacement
	Plant In service	Construction work in progress	Undistributed interest during construction			
BUREAU OF RECLAMATION:						
Missouri River basin	\$ 437,545,393	\$ 74,737,071	\$ -	\$ 512,282,464	\$ 333,834	\$4,361,550
Fort Peck	<u>12,269,214</u>	<u>4,474,924</u>	<u>-</u>	<u>16,744,138</u>	<u>108,400</u>	<u>535,914</u>
Total, Bureau	<u>449,814,607</u>	<u>79,211,995</u>	<u>-</u>	<u>529,026,602</u>	<u>442,234</u>	<u>4,897,464</u>
CORPS OF ENGINEERS:						
Fort Peck	144,575,015	18,992,114	630,339	164,197,468	62,680,406	-
Garrison	258,287,160	50,604,801	5,671,718	314,563,679	23,925,865	-
Fort Randall	199,281,833	692,194	6,838	199,980,865	23,311,938	-
Gavins Point	48,908,402	708,004	8,745	49,625,151	3,661,519	-
Oahe	-	210,387,933	15,459,237	225,847,170	-	-
Big Bend	-	3,333,614	65,744	3,399,358	-	-
Total, corps	<u>651,052,410</u>	<u>284,718,660</u>	<u>21,842,621</u>	<u>957,613,691</u>	<u>113,579,728</u>	<u>-</u>
Total	<u>\$1,100,867,017</u>	<u>\$363,930,655</u>	<u>\$21,842,621</u>	<u>\$1,486,640,293</u>	<u>\$114,023,962</u>	<u>\$4,897,464</u>

The notes on pages 63 to 70 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on pages 56 and 57.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)  
AND BUREAU OF RECLAMATION  
HYDROELECTRIC POWER AND RELATED ACTIVITIES  
MISSOURI RIVER BASIN PROJECT  
EXPLANATORY NOTES AND COMMENTS ON THE FINANCIAL STATEMENTS

1. Basis for preparation

The financial statements include the amounts recorded by the Corps of Engineers (Civil Functions) for the Missouri River Main Stem Reservoir System and by the Bureau of Reclamation for the Missouri River Basin Project. Also included are the transactions for the marketing operations of Fort Peck Project recorded in separate accounts by the Bureau of Reclamation but considered by the Bureau as part of the Missouri River Basin Project.

The Main Stem Reservoir System of the Corps of Engineers is a coordinated system of 6 major multiple-purpose plants, including power, located along 1,200 miles of the Missouri River from Montana to Nebraska; namely, the Fort Peck, Garrison, Oahe, Big Bend, Fort Randall, and Gavins Point plants. The Corps of Engineers constructed and operates the Fort Peck plant. The Bureau of Reclamation constructed and operates the Fort Peck transmission lines and markets power not needed in operation of the plant.

2. Plant in service and under construction

Costs for completed works and construction work in progress are classified in the accounting records of the Corps of Engineers and the Bureau of Reclamation as follows:

	<u>Combined</u>	<u>Completed works</u>	<u>Construction work in progress</u>
Corps of Engineers:			
Multiple-purpose plant	\$ 935,771,070	\$ 651,052,410	\$284,718,660
Undistributed in- terest during construction	<u>21,842,621</u>	<u>-</u>	<u>21,842,621</u>
Total, Corps	<u>957,613,691</u>	<u>651,052,410</u>	<u>306,561,281</u>
Bureau of Reclamation:			
Multiple-purpose plant	226,601,971	221,362,608	5,239,343
Electric plant	201,441,503	157,291,520	44,149,983
Irrigation plant	100,888,424	71,065,775	29,822,649
Other plant	<u>94,704</u>	<u>94,704</u>	<u>-</u>
Total, Bureau	<u>529,026,602</u>	<u>449,814,607</u>	<u>79,211,995</u>
Total	<u>\$1,486,640,293</u>	<u>\$1,100,867,017</u>	<u>\$385,773,276</u>

At June 30, 1960, interest during construction had been recorded by the Corps of Engineers in the total amount of \$72,609,260, of which \$50,766,639 has been distributed to completed works and \$21,842,621 has not been distributed. Interest during construction has not been recorded by the Bureau of Reclamation.

Amounts for completed works and construction work in progress are generally stated at acquisition cost to the respective agencies.

### 3. Service facilities, less accumulated depreciation

Service facilities consist of construction camps, cranes, trucks, warehouses, and similar equipment and facilities used primarily for carrying out construction activities. Depreciation is provided on most of these assets and is distributed to construction work in progress and other cost accounts.

#### 4. Accumulated depreciation

Depreciation has been recorded by the Corps of Engineers using the straight-line method with no salvage value based on the estimated service life of each class of property including land and relocation costs representing acquisition of rights only. A maximum service life of 50 years has been established. Composite depreciation rates contained in Bureau of Internal Revenue Bulletin "F," or rates determined by engineering studies, were used for Gavins Point and Fort Randall. Composite depreciation rates were also used for Fort Peck and Garrison; however, for several accounts there were significant differences in rates between projects for similar-type property.

Depreciation is recorded by the Bureau of Reclamation only on construction facilities, movable equipment in plant-in-service accounts, and certain other equipment. Electric facilities having an estimated service life of less than 50 years are amortized through a replacement provision allowance. See note 10.

#### 5. Examinations and surveys including advance planning

Funds appropriated to the Corps of Engineers for planning and design in advance of actual construction are included as a part of the property costs of the plants. Expenditures for such planning and design at June 30, 1960, for the Corps plants included in this report amounted to \$667,866.

Investigation costs by the Bureau were incurred for formulating plans, preparing designs and specifications, and conducting

preliminary studies prior to the appropriation of construction funds for the particular plant. **Investigation costs identifiable** to a specific facility are transferred to construction work-in-progress when a construction allotment is made. Costs not yet transferred are classified in the Bureau's records as follows:

Basin investigations	\$ 5,454,655
Project investigations	4,261,584
Missouri River basin investigations	34,193,016
Investigations on abandoned and unprogramed works	<u>9,123,323</u>
Total	<u>\$53,032,578</u>

6. Congressional appropriations, net

Corps activities in the Missouri River basin are financed through appropriations by the Congress. The allotments (net) by the Office, Chief of Engineers, for multiple-purpose plants, including power, in the Missouri River basin, fiscal year 1960, from the Public Works Appropriation Act, 1960 (73 Stat. 491), amounted to \$64,112,000 for construction and \$2,258,000 for operation and maintenance. To June 30, 1960, allotments (net) by the Corps of Engineers for these plants were as follows:

<u>Plant</u>	<u>Combined</u>	<u>Construction</u>	<u>Operation and maintenance</u>
Fort Peck	\$159,217,144	\$151,706,168	\$ 7,510,976
Garrison	286,650,240	284,231,700	2,418,540
Oahe	211,560,284	211,313,014	247,270
Fort Randall	191,933,100	188,279,600	3,653,500
Gavins Point	48,874,715	47,407,785	1,466,930
Big Bend	<u>3,425,000</u>	<u>3,425,000</u>	<u>-</u>
Total	<u>\$901,660,483</u>	<u>\$886,363,267</u>	<u>\$15,297,216</u>

Appropriations to the Corps of Engineers (Civil Functions) for construction, including advance planning, and for operation and maintenance are available until expended.

Congressional appropriations (net) to the Bureau of Reclamation have been allotted to the Missouri River Basin Project, including the Fort Peck Project, as follows:

<u>Source and purpose</u>	<u>Fiscal year 1960 (note a)</u>	<u>Cumulative to June 30, 1960</u>
Construction and rehabilitation	\$34,115,982	\$594,037,204
Operation and maintenance	<u>5,198,846</u>	<u>29,925,159</u>
Congressional appropriations (net)	<u>\$39,314,828</u>	<u>\$623,962,363</u>

<sup>a</sup>Public Works Appropriation Act, 1960 (73 Stat. 494) .

Congressional appropriations (net) as shown above do not include appropriations to the continuing fund of the Fort Peck Project amounting to \$8,754,212 at June 30, 1960. This amount represents appropriations from power revenues of the Fort Peck Project for operating and emergency expenses. Cumulative expenditures from the continuing fund at June 30, 1960, totaled \$8,388,927.

7. Cost of property and services furnished  
by other Government agencies, net

Costs of equipment, materials, supplies, and services transferred to or from other projects within the Corps of Engineers or the Bureau of Reclamation, or other Federal or State agencies and individuals without a transfer of funds are recorded by the Corps and the Bureau as a part of the investment of the United States Government .



Corps transfers include preauthorization costs in the amount of \$667,866.

The cost of property and services transferred (net) to the Bureau of Reclamation comprises:

Appropriation transfer warrants:			
Transfers from other Bureau projects and other Government agencies			\$ 4,868,842
Nonappropriation property transfers (net):			
Transfers from other Bureau projects	\$31,904,160		
Transfers from other governmental agencies		<u>896,293</u>	<u>32,800,453</u>
Total			<u>\$37,669,295</u>

8. Interest on the Federal investment

Amounts recorded by the Corps of Engineers as interest on the Federal investment at June 30, 1960, have been allocated as follows:

	<u>Total</u>	<u>Interest during construction</u>	<u>Allocated to</u>		
			<u>Combined</u>	<u>Operations of Power programs</u>	<u>Nonpower programs</u>
Fort Peck	\$ 80,696,544	\$12,500,148	\$ 68,196,396	\$ 5,153,660	\$63,042,736
Garrison	53,000,516	30,299,238	22,701,278	11,356,895	11,344,383
Oahe	15,459,237	15,459,237	-	-	-
Fort Randall	41,935,714	12,084,248	29,851,466	20,527,698	9,323,768
Gavins Point	6,711,674	2,200,646	4,511,028	3,452,897	1,058,131
Big Bend	65,743	65,743	-	-	-
Total	<u>\$197,869,428</u>	<u>\$72,609,260</u>	<u>\$125,260,168</u>	<u>\$40,491,150</u>	<u>\$84,769,018</u>

The computations by the Corps of Engineers for interest during construction were based on simple interest at 2.5 percent per annum on accrued expenditures charged to construction accounts, Interest charged to expense was computed at a rate of 2.5 percent based on the unrecovered investment. Revenues from the sale of power

marketed by the Bureau of Reclamation have not been considered in determining the unrecovered investment.

Interest amounting to \$22,078,310 on the Federal investment in power has been recorded by the Bureau of Reclamation for the Missouri River Basin Project. The Bureau computes interest at a rate of 3 percent per annum on a base which included the valuation of electric plant in actual service, plus the interest during construction and prior years' repayment deficits. However, interest during construction used in the above base is not recorded in the accounting records.

9. Funds returned to the United States Treasury

Funds returned to the United States Treasury on the records of the Corps of Engineers at June 30, 1960, for multiple-purpose plants totaled \$3,459,718. These amounts consisted principally of receipts from leasing of reservoir areas.

Funds returned to the United States Treasury by the Bureau of Reclamation as shown by the accounting records for the Missouri River Basin Project, June 30, 1960, comprised:

	Net funds re- turned fiscal year 1960	Cumulative to June 30, 1960
Reclamation fund:		
Collections., exclusive of power revenues	\$ 393,689	\$ 4,249,675
Power revenues	<u>11,911,274</u>	<u>76,909,283</u>
	12,304,963	<u>81,158,958</u>
General fund:		
Power revenues, Fort Peck Project	1,770,000	12,335,543
Other power revenues from the Missouri River Basin Project	8,586,400	24,013,800
Other collections	<u>-</u>	<u>10,290</u>
	<u>10,356,400</u>	<u>36,359,033</u>
Total funds returned to the U.S. Treasury	<u>\$22,661,363</u>	<u>\$117,517,991</u>

10. Accumulated provisions for replacements

Provisions for amounts that will be written off from electric plant-in-service accounts as a result of replacements during the repayment period have been made by the Bureau of Reclamation. At June 30, 1960, these provisions, less charges, totaled \$4,897,464.

11. Costs not recorded

As discussed on pages 52 and 53, neither the Bureau nor the Corps records certain costs incurred by other Federal agencies; certain administrative costs of the Bureau and the Corps are not distributed to power and other operating program accounting entities.

12. Allocation of revenues to other projects

The western division integrated power system consists of the individually authorized Colorado-Big Thompson, Kendrick, Riverton, North Platte, and Shoshone projects, and certain units of the Missouri River Basin Project. Western division power revenues are allocated to the individually authorized projects on a basis which is designed to meet the repayment requirements of those projects; the remaining revenues are allocated to the Missouri River Basin Project.

**APPENDIX**

