



REPORT TO THE CONGRESS

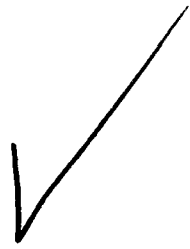
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Charges For Use Of Federal Electrical Power Transmission Lines Should Be Reevaluated

B-174858

Department of the Interior



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

~~715707~~ 092257 SEPT. 29, 1971



COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

B-114858

To the President of the Senate and the
Speaker of the House of Representatives

This is our report on the need for a reevaluation of charges for use of Federal electrical power transmission lines by the Department of the Interior.

Our review 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).

Copies of this report are being sent to the Director, Office of Management and Budget, and to the Secretary of the Interior.

A handwritten signature in cursive script, reading "Thomas B. Staats".

Comptroller General
of the United States

D I G E S T

WHY THE REVIEW WAS MADE

"Wheeling" is the trade term for transmitting electricity generated by one party over transmission lines owned by another party. A charge for the service is made by the owner of the transmission facilities.

The Bonneville Power Administration and the Bureau of Reclamation--two agencies of the Department of the Interior--wheel power generated by non-Federal producers. The amount of power wheeled by them has increased significantly in recent years.

Because the two agencies have developed policies for determining wheeling charges independently of one another, the General Accounting Office (GAO) examined into the methods followed by each.

FINDINGS AND CONCLUSIONS

Bonneville's revenues from wheeling non-Federal power over its main and secondary transmission systems were inadequate to recover the cost of providing the services.

- The charges were based on standard wheeling rates which had not been revised after 1956 and which did not reflect the current operating costs. (See p. 5.)
- The standard wheeling rates had not been applied consistently in establishing charges. (See p. 7.)
- Inappropriate adjustments had been made to reduce wheeling charges to customers who purchased Federal power and to customers who provided lines connecting their generators to Bonneville's transmission system. (See pp. 7 and 10.)

As a result of a GAO recommendation, Bonneville increased its standard wheeling rates, effective January 1, 1971, to recover additional revenues of about \$200,000. The rates in effect during fiscal year 1970, however, were not adequate to recover the cost of providing the services.

Bonneville's revenues from providing wheeling services to non-Federal entities in fiscal year 1970 were further reduced by about \$1.4 million because of inconsistent application of the standard wheeling rates and because of inappropriate adjustments.

At its Missouri River Basin Project, the Bureau of Reclamation generally pays for Federal power transmitted over private transmission systems at a standard rate and charges the same rate for non-Federal power transmitted over the Federal system.

GAO was unable to determine the basis on which the standard rate had been established or whether the rate was intended to recover the Government's costs of providing the wheeling services. (See p. 13.)

RECOMMENDATIONS OR SUGGESTIONS

The Secretary of the Interior should

- establish a policy providing specific criteria as to the cost elements or other factors to be considered by the power agencies in developing wheeling rates,
- require the power agencies to periodically reevaluate the adequacy of wheeling rates,
- require the power agencies to apply the rates consistently in establishing charges for wheeling services, and
- require the Bonneville Power Administration to amend its existing contracts at the earliest possible date to eliminate the reduction in wheeling charges to customers who purchase Federal power and to customers who provide lines connecting their generators to Bonneville's transmission system. (See p. 18.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Department of the Interior generally disagreed with GAO's recommendations and stated that

- the Department had approved established criteria for determining wheeling rates (see p. 18),
- the Department's power agencies were continuously involved in the determination of the adequacy of the standard wheeling rates (see p. 19),

--it would be "all but impossible" to establish standard wheeling rates covering all possible contractual arrangements (see p. 20), and

--it would not be advantageous to amend the contracts to eliminate the provisions for adjusting wheeling charges to those customers who purchase Federal power (see p. 20).

The Department did not comment on GAO's recommendation regarding the adjustments allowed for connecting transmission lines provided by certain customers.

MATTERS FOR CONSIDERATION BY THE CONGRESS

GAO evaluated the Department's comments and continues to believe that the actions recommended are necessary to recover from wheeling customers the full cost of providing wheeling services and therefore should be implemented. GAO is bringing these matters to the attention of the Congress for its consideration in future dealings with the Department that involve the Federal transmission system.

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CHAPTER 1

INTRODUCTION

The Bonneville Power Administration and the Bureau of Reclamation, Department of the Interior, have independently evolved procedures and practices for determining the charges for transmitting non-Federal power over their transmission systems. The transmission of power generated by one party over the transmission facilities of another party is a service which is generally referred to as wheeling.

Bonneville constructs transmission facilities and markets the Federal power generated by the hydroelectric projects in the Pacific Northwest. The Bureau constructs transmission facilities and markets the Federal power generated by the hydroelectric facilities in the Missouri River Basin.

Bonneville markets Federal power in the States of Washington, Oregon, Idaho, Montana, and California. The Bureau markets Federal power in the States of North and South Dakota, Nebraska, Montana, Colorado, Wyoming, New Mexico, Utah, Arizona, Nevada, California, Minnesota, and Iowa. The amount of power wheeled has increased significantly during the past 10 years because of the increased generating capacity by both Federal and non-Federal entities and because of the increased number of interconnections between the transmission lines of these entities.

During fiscal year 1970 Bonneville had revenues of about \$9.65 million for wheeling about 20.4 billion kilowatt-hours of non-Federal power and was charged about \$1.95 million by non-Federal entities for wheeling about 3.79 billion kilowatt-hours of Federal power. During the same period the Bureau's Missouri River Basin Project had revenues of about \$1.9 million for wheeling about 1.8 billion kilowatt-hours of non-Federal power and was charged about \$5.6 million by non-Federal entities for wheeling about 5.9 billion kilowatt-hours of Federal power.

CHAPTER 2

NEED FOR ACTION TO ENSURE EQUITABLE RECOVERY OF WHEELING COSTS OF THE BONNEVILLE POWER ADMINISTRATION

Bonneville's revenues from wheeling non-Federal power over its main and secondary transmission systems were not adequate to recover the cost of providing the services in fiscal year 1970 because (1) the standard wheeling rates on which the charges were based had not been revised after 1956 and did not reflect the current costs of operating the systems, (2) the standard rates had not been applied consistently in establishing the wheeling charges, and (3) inappropriate adjustments, in our opinion, had been made to reduce the charges to certain customers.

BONNEVILLE'S METHOD FOR ESTABLISHING WHEELING CHARGES

Most of the non-Federal power wheeled by Bonneville is transmitted over its main and secondary transmission systems (115-kilovolt lines and above). Since Federal power is also transmitted over this system, in 1956 Bonneville developed a plan which provided for the sharing of the costs of operating the transmission system between Federal and non-Federal entities.

The objective of Bonneville's plan was the recovery of its transmission costs from its wholesale power customers and its wheeling customers in such a manner that each group would bear a fair share of the costs and neither would subsidize the other. Under the plan the costs of operating that portion of Bonneville's main or secondary transmission system (1) needed to transmit Federal power were to be recovered from its wholesale power customers through wholesale power rates and (2) needed to wheel non-Federal power were to be recovered through charges based on standard wheeling rates.

Bonneville's standard wheeling rates in effect in 1970 were established in 1956 on the basis of estimated 1961 costs of operating the main and secondary transmission systems that would be in existence in 1961 and the estimated maximum kilowatts of Federal and non-Federal power that could be generated and available in 1961 for transmission over the system.

The average standard rates for transmitting power over each of the major components of the transmission system (115-kilovolt lines, 230-kilovolt lines, terminals, etc.) were computed by dividing the estimated 1961 cost of operating each of the components by the estimated 1961 maximum kilowatts of Federal and non-Federal power that would be transmitted over each of the components.

The standard wheeling rates included in Bonneville's long-term wheeling contracts are applied to a wheeling customer's maximum power-generating capacity--which is referred to as the contract-billing demand--in computing the monthly wheeling charges. A wheeling contract, in effect, represents a lease of a specific capacity in Bonneville's main and secondary transmission systems for transmitting power to specific load centers, regardless of whether the capacity is used at all times. Such contracts provide that the standard wheeling rates may be changed at 3-year intervals to reflect any changes in the cost of operating the major system components.

When Bonneville wheels non-Federal power over lines that are not part of its main and secondary transmission systems, the customer is usually charged on a "use of facilities" basis. Wheeling contracts which provide for charges on this basis generally are for the use of the excess capacity of such lines for transmitting small amounts of power. Such contracts may be canceled on 1 year's notice by either party.

The wheeling charge for transmitting such power is computed by dividing the cost of operating the transmission facilities used by the kilowatt capacity of the facilities and applying the resulting rate to the greatest amount of kilowatts that is wheeled during any 60-minute period in the previous year. The amount of power wheeled on a use-of-facilities basis is relatively insignificant.

STANDARD WHEELING RATES
NOT BASED ON CURRENT INFORMATION

Bonneville's standard wheeling rates in effect in fiscal year 1970 had not been adjusted for changes in costs and other factors that had occurred after the rates were established in 1956 and therefore did not represent the 1970 cost of providing the wheeling services. For example, the rates did not give effect to Bonneville's increased investment in its main and secondary transmission systems from about \$381 million in 1961 to about \$802 million at June 30, 1970.

Bonneville's expansion of the systems was necessitated by the increase during that period in the Federal power-generating capacity in the Pacific Northwest from 7,120 megawatts to 9,036 megawatts and by the increase in its firm wheeling commitments from 1,440 megawatts to 5,301 megawatts. Also the rates, which were based on an interest factor of 2.5 percent on the Government's unrepaid investment in the transmission facilities, did not give effect to the 1970 interest rate. In addition, all other operating costs had increased after the rates were established.

In 1963 Bonneville made a study of the adequacy of the standard wheeling rates and concluded that annual revenues at that time were about \$500,000 less than the related wheeling costs. As a result of that study, a recommendation was made to the Assistant Administrator of Bonneville that the wheeling rates be revised. This recommendation, however, was not adopted.

In 1969 we recommended to the Administrator of Bonneville that a review be made to determine the adequacy of the wheeling rates. As a result of our suggestion, Bonneville undertook a comprehensive study of its transmission system costs.

In a letter dated July 27, 1970, the Administrator of Bonneville advised the Assistant Secretary, Water and Power Development, Department of the Interior, that Bonneville had completed the study and that an increase in the standard wheeling rates appeared to be needed to ensure that the rates would provide for equitably compensating the Government for furnishing wheeling services.

The Administrator, in view of the increasing operation and maintenance costs including interest rates on the investment in new construction, proposed the adoption, effective January 1, 1971, of revised wheeling rates. He estimated that the new rates would result in an increase in wheeling revenues of \$200,000 annually. On July 31, 1970, the Assistant Secretary concurred with the proposal of the Administrator, and, effective January 1, 1971, revised wheeling charges were adopted.

WHEELING CHARGES NOT BASED ON STANDARD WHEELING RATES

Since Bonneville's standard wheeling rates are based on the average cost of operating its main and secondary transmission systems and on the maximum Federal and non-Federal power that could be generated and be available for transmission over the systems, it follows that, to recover

the cost of providing the wheeling services, the wheeling charges must be based on a consistent application of the standard rates to the maximum non-Federal power-generating capability of its wheeling customers.

We noted that Bonneville had entered into contracts for wheeling non-Federal power over its main transmission system that provided for (1) basing the wheeling charges to the customers on a use-of-facilities basis rather than on the applicable standard wheeling rates and (2) allowing the customers annual credits against the charges for the cost of constructing transmission lines connecting their generating units to Bonneville's transmission system.

Bonneville's establishment of wheeling charges for the transmission of non-Federal power over its main transmission system on a use-of-facilities basis and allowance of annual credits against such charges are inconsistent with its policy of having each wheeling customer bear its fair share of the cost of operating the main transmission system.

An example of such contracts is a 15-year contract to wheel 270,000 kilowatts of non-Federal power each year over Bonneville's main transmission system to three delivery points. The charges specified in the contract were computed on the use of facilities and provided for the allowance of annual credits against the wheeling charges totaling \$315,000--\$225,000 for the customer's cost of providing a 26-mile, 230-kilovolt line to connect its generating facilities to Bonneville's transmission system and \$90,000 for the Government's reduced power losses resulting from reverse power flows.

These credits, in our opinion, were inappropriate because they did not provide for recovering the cost of providing the wheeling services to the customer. The contract should have provided for basing the wheeling charges on the standard wheeling rates applicable to non-Federal power wheeled over Bonneville's main transmission system.

Also the customer should not have been allowed an annual credit for the cost of constructing its transmission line connecting its generating facilities to Bonneville's transmission system, since Bonneville's charge to the customer was based only on the cost of that portion of Bonneville's existing transmission facilities that was necessary to wheel the customer's power and did not include the cost of the line provided by the customer. Further, the allowance of the annual credit of \$90,000 for reverse power flows was inconsistent with Bonneville's usual practice of not providing for such reverse power flows in its standard wheeling contracts.

Bonneville's wheeling revenue from this customer in fiscal year 1970 was \$346,000 less than the revenue that would have been received had wheeling charges been based on the applicable standard wheeling rates. This reduction in revenue consisted of a reduction in wheeling charges of \$31,000 as a result of basing the charges on the use of facilities rather than on the standard wheeling rates and of inappropriate allowances of \$315,000, as summarized below.

Reduced wheeling charges:

Charges based on applicable standard wheeling rates		\$468,000
Actual charges based on use of facilities		<u>437,000</u>
		31,000

Inappropriate allowances:

For customer's cost of constructing transmission lines connecting its generating facilities to Bonneville's transmission system	\$225,000	
For reduced power losses	<u>90,000</u>	<u>315,000</u>

Total reduction in revenues from wheeling services		<u>\$346,000</u>
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The revenues in fiscal year 1970 were further reduced by \$6,000 resulting from errors in computing the charges.

Bonneville officials advised us that the contract provided that the wheeling charges be based on the use of facilities because the customer believed that charges based on the standard wheeling rates would be excessive. They also stated that the cost of the specific portion of Bonneville's main transmission system used to deliver the customer's power was being recovered under the use-of-facilities charges.

Although Bonneville's wheeling charges to this customer, exclusive of the inappropriate allowances, may have been adequate to recover the actual cost of operating the portion of Bonneville's main transmission system that was used to wheel the customer's power, the wheeling costs associated with the entire main transmission system would not have been recovered because the standard wheeling rates were developed on the premise that their consistent application in establishing wheeling charges for non-Federal power wheeled over the system would result in recovering the cost of operating the portion of the system used for wheeling.

We noted, in addition to the contract discussed above, two other Bonneville wheeling contracts which (1) did not provide for basing the wheeling charges to the customers on the established standard rates for wheeling non-Federal power over Bonneville's main transmission system and (2) provided for annual allowances to the customers for the cost of constructing connecting transmission lines--a cost, as previously stated, which should not be borne by Bonneville. We estimated that, as a result, the revenues under these two contracts in fiscal year 1970 were reduced by about \$218,000.

ADJUSTMENTS TO CONTRACT-BILLING DEMAND

Our review showed that each of several wheeling contracts negotiated by Bonneville during the early development of the major non-Federal hydroelectric projects on the main stem of the Columbia River and its tributaries provided for an adjustment to the customer's monthly contract-billing demands. This adjustment, which is commonly referred to by Bonneville as the Z-factor adjustment, resulted in a reduction in Bonneville's wheeling revenues of about \$867,000 under six of these contracts in fiscal year 1970.

The Z-factor adjustment relates to long-term, firm wheeling contracts--some of which will remain in effect until the year 2017--and is applicable only where the wheeling customer also purchases Federal power from Bonneville.

Bonneville's monthly wheeling charges to a wheeling customer are computed by applying the standard rates to the customer's contract-billing demand which is reduced by the difference--the Z factor--between Bonneville's load factor for the preceding year and the customer's monthly load factor in those months in which Bonneville's load factor is the higher. The load factor is the ratio of the actual power generated to the maximum power-generating capacity.

Bonneville's justification for making the Z-factor adjustment is based on the premises that (1) when a wheeling customer purchases power from Bonneville to meet its own power demands, Bonneville's wholesale power rates are sufficient to recover its cost of generating and transmitting power to its customers, (2) the transmission capacity used to deliver the supplemental power to the wheeling customer is essentially the same as that which the customer has leased under the wheeling contract, and (3) such adjustment is necessary to avoid a duplicate charge for the transmission capacity.

In our opinion, reducing a wheeling customer's contract-billing demand by the Z factor is not a proper adjustment because it is inconsistent with the basic principle on which

the standard wheeling rates were developed. The standard wheeling rates were based on Bonneville's estimated annual cost of operating that portion of the transmission system capable of transmitting the maximum amount of power that could be generated by the plants of its wheeling customers. Thus the standard wheeling rates represent the estimated cost to transmit the estimated non-Federal power that could be generated without regard to the actual use made of the transmission system.

The wheeling contracts, in effect, represent leases by the wheeling customers of a specific capacity of the transmission system. For Bonneville to recover the cost of operating its transmission system, its wheeling customers must pay wheeling charges based on the standard wheeling rates, regardless of whether they make use of the leased capacity at all times.

The wheeling customer contracting with Bonneville for the transmission of non-Federal power over the Federal transmission system is in about the same position that it would be if it had constructed a transmission system capable of transmitting the maximum power it generated. In such case the customer's cost of operating the system would have been fixed, regardless of the use it made of the system.

The overriding objective of Bonneville's plan for recovering the cost of operating its transmission system was the establishment of rates for transmitting power for its wheeling customers in such a manner that its wholesale power customers and its wheeling customers would bear a fair share of the costs and neither group would subsidize the other.

In summary, the adjustment of a wheeling customer's contract-billing demand results in charging the customer on the basis of actual use made of the transmission system rather than on the basis on which the wheeling rates were developed, that is, the recovery of the cost of operating a transmission system capable of transmitting the maximum power that would be generated by Bonneville and by its wheeling customers.

Bonneville's reducing the contract-billing demand of six of its wheeling customers by the Z-factor adjustment resulted in reducing the wheeling charges to the customers by about \$867,000 in fiscal year 1970. In our opinion, the Z-factor adjustment is inconsistent with the principle on which Bonneville developed the standard wheeling rates and results in a failure to equitably compensate the Government for providing wheeling services.

Our conclusions and recommendations and the comments of the Department of the Interior on the matters presented in this chapter are contained in chapter 4.

CHAPTER 3

BUREAU RATES FOR WHEELING SERVICES

At the Missouri River Basin Project, the Bureau generally pays for power transmitted over private transmission systems at a standard rate of 1 mill per kilowatt-hour and charges the same rate for non-Federal power transmitted over the Federal system. We were unable to determine from the available records of the Bureau the basis for development of the 1-mill rate or to what extent, if any, the rate was intended to cover the Federal cost of providing the wheeling services.

A Department power policy statement issued in 1950 stated that compensation payable by the Bureau for use of non-Federal transmission facilities must be reasonable and that the compensation in money or other values would be limited to what the Bureau's cost would be for constructing the necessary facilities. The statement further provided that:

"Based on cost studies on the Missouri River Basin Project, the Bureau is justified in paying a fee not exceeding one mill per kilowatt-hour for the transmission of Bureau energy over transmission facilities of a third party ***."

A 1954 power-marketing criterion for the Missouri River Basin Project provided that the Bureau would not absorb more than 1 mill per kilowatt-hour for Federal power wheeled over the transmission facilities of other parties but that care must be taken to hold wheeling commitments to less than 1 mill per kilowatt-hour if, because of the short distance involved or other reasons, compensation at a lower rate would be adequate.

Although the 1-mill rate was adopted as the maximum payment for having Federal power wheeled over the transmission systems of private parties, it appears that it was adopted also as a reasonable charge for transmitting non-Federal power over the Federal system, regardless of the distance the power was wheeled.

The wheeling contracts for the Missouri River Basin Project, for the most part, provide that wheeling charges be based on 1 mill per kilowatt-hour for non-Federal power transmitted over the Federal system. The contracts also establish 1 mill as the rate at which the Bureau will pay for transmitting Federal power over the systems of others.

Discussions with regional officials and a review of available records indicate that the 1-mill rate is an arbitrary rate originally established as a maximum payment. Generalized statements offered in justification of the rate include:

1. The rate is reciprocal and therefore offsetting in that, if wheeling for the Government and wheeling by the Government are balanced, no charge results.
2. Wheeling generally involves several delivery points and the short-distance deliveries are offset by the long-distance deliveries so that they average out.

We found, however, that the amount of Federal power transmitted over the lines of others and the amount of non-Federal power transmitted over the Federal lines were not balanced. For example, during fiscal year 1970, the Bureau paid about \$5.6 million for transmitting about 5.9 billion kilowatt-hours of power over the systems of others and received revenues of about \$1.9 million for transmitting about 1.8 billion kilowatt-hours of non-Federal power over the Federal system. In the absence of cost studies demonstrating that the cost of the unbalanced transmission of power is offset by the short and long distances involved, there is no assurance that the payments or revenues represent proper compensation for the transmission services.

As previously indicated, information was not available to show whether the rate of 1 mill per kilowatt-hour for transmitting non-Federal power had been developed on the basis of recovering the cost of providing the wheeling services. In our opinion, wheeling customers should bear their fair share of the Bureau's cost of operating its transmission system. A failure to charge the Bureau's wheeling customers for their share of such costs results in a disproportionate share of the costs being passed on to the Bureau's wholesale power customers.

Even if the 1-mill rate, when established in the early 1950's, was considered by the Bureau to be adequate to recover the cost of providing the wheeling services, we question its adequacy as a basis to recover the current cost of providing the services. We believe that the Bureau should initiate a comprehensive study to determine whether the rate is adequate to recover the costs involved in providing the wheeling services. We believe also that any rate established should be periodically reevaluated to determine its adequacy.

Although the Bureau's wheeling contracts provide that, for the most part, wheeling charges be based on the rate of 1 mill per kilowatt-hour for transmitting non-Federal power over the Federal system, we noted that certain contracts provided that charges be computed on other bases. One of these contracts provided for wheeling charges for transmitting non-Federal power over the Federal system on the basis of a capacity charge computed in accordance with the provisions of the Missouri Basin Systems Group Pooling Agreement of January 1963.

Under this agreement, an annual wheeling charge of \$4.90 per kilowatt was established for transmitting non-Federal power over those Federal transmission facilities set forth in the pooling agreement that were in service or under construction within the Eastern Division of the Missouri River Basin Project in December 1965. This rate was based on the total estimated annual cost of operating the Federal transmission system and the total Federal and non-Federal power that could be generated and transmitted over the system. In April 1969 the rate was increased to \$5.05 per kilowatt per year on the basis of estimated fiscal year 1970 operating costs.

The basis for computing the wheeling charge under this agreement is somewhat similar to Bonneville's method for computing its standard wheeling rates and, in our opinion, provides more adequately for the recovery of the current costs of providing the wheeling services than does the 1-mill rate included in most Bureau contracts.

It appears that the need for consistency in the development of wheeling rates was recognized as early as 1957 when the Bureau's Regional Director of Region 6 inquired of Bonneville regarding its policy and procedures for establishing wheeling charges for transmitting non-Federal power over its transmission system. In February 1957 the Administrator of Bonneville advised the Regional Director that Bonneville had not established an overall comprehensive policy applicable to all wheeling situations that might arise but had attempted to meet each situation as it arose.

For long-term contracts, he advised also that wheeling charges were uniform for all wheeling customers, regardless of whether the existing facilities were adequate to transmit the non-Federal power or whether additional facilities had to be constructed. He stated that Bonneville also transmitted non-Federal power on a short-term, excess-capacity basis for which the charge was based on the cost of operating the facilities actually used. Correspondence between the Bureau's Region 6 and Bonneville in 1962 showed that Region 6 had

requested and received a detailed explanation of how Bonneville computed its standard wheeling rates.

Our conclusions and recommendations and the comments of the Department of the Interior on the matters presented in this chapter are contained in chapter 4.

CHAPTER 4

CONCLUSIONS, RECOMMENDATIONS, AND

MATTERS FOR CONSIDERATION BY THE CONGRESS

CONCLUSIONS

Bonneville's standard wheeling rates for transmitting non-Federal power over its transmission system were not adequate to cover the cost of providing the wheeling services in fiscal year 1970 because the rates had not been revised after 1956, the rates had not been applied consistently, and inappropriate adjustments had been made to reduce the charges to certain wheeling customers. Bonneville revised its wheeling rates effective January 1, 1971, to reflect the current cost of operating the transmission system. The revised rates provide for an increase in wheeling revenues of about \$200,000 annually.

Bonneville has not, however, made any changes to the contracts to eliminate the deficiencies noted during our review that resulted in reduced revenues in fiscal year 1970 of about \$1.4 million--\$570,000 from failure to base the wheeling charges on the standard wheeling rates and the allowance of inappropriate credits (see pp. 9 and 10) and \$867,000 from inappropriate adjustments to wheeling customers' contract-billing demands (see p. 10).

Bonneville's annual revenues will continue to be similarly reduced until its wheeling contracts are revised to provide for wheeling charges based on the standard wheeling rates and to eliminate the allowances for the inappropriate adjustments.

At the Missouri River Basin Project, the Bureau generally pays for Federal power transmitted over private transmission lines at the rate of 1 mill per kilowatt-hour and charges the same rate for non-Federal power transmitted over the Federal transmission lines. We were unable to determine, from Bureau records and discussions with Bureau officials, the basis for the development of the rate of 1 mill or the extent, if any, to which the rate was intended to result in the recovery of the cost of providing the wheeling services.

Because wheeling services are becoming a more significant factor in the Federal power program, we believe that procedures should be adopted to provide assurances that the wheeling customers bear a fair share of the cost of the Federal transmission system and that they are not being subsidized by the wholesale power customers.

RECOMMENDATIONS AND AGENCY COMMENTS

We recommend that the Department of the Interior

- establish a policy which will provide specific criteria for the guidance of the power agencies as to the cost elements or other factors to be considered in developing wheeling rates,
- require the power agencies to periodically reevaluate the adequacy of the wheeling rates,
- require the power agencies to apply the wheeling rates consistently in establishing charges for wheeling services, and
- require Bonneville to initiate action toward amending its existing contracts to eliminate the provision for reducing wheeling charges to customers for the Z-factor adjustment and the adjustment for transmission facilities provided by the customers.

In commenting on our first recommendation, the Director of Survey and Review, Department of the Interior, in a letter dated March 17, 1971 (see app. I), stated that the Department had, within general principles, approved established criteria and guidelines for determining wheeling rates that provided that non-Federal power would be transmitted at rates that would recover its predetermined proportionate share of the total transmission system cost. He stated, however, that specific criteria had not been established because of (1) the complexities which were involved due to varying circumstances and (2) the advantages in system management of retaining flexibility of criteria in determining specific wheeling charges applicable to individual projects.

Department officials did not furnish us with any Department-approved criteria or guidelines which required that wheeling rates be adequate to recover the cost of providing wheeling services. Further, we were unable to determine whether the rates used at the Missouri River Basin Project for charging wheeling customers for power transmitted over the Federal transmission system were intended to recover the cost of providing the wheeling services.

The varying circumstances involved in wheeling power and the advantages of having flexible criteria do not, in our opinion, overcome the need for a policy which clearly

defines the elements of cost to be considered in developing wheeling rates.

Since the Director's comments indicate that it is the intention of the Department that each wheeling customer be assessed its fair share of the cost of operating the transmission system, we believe that a departmental policy should be established, together with the necessary implementing procedures, which will require power-marketing agencies to establish wheeling rates based on the agencies' cost of providing the wheeling services. In the absence of such a policy and such procedures, it appears to us that significant variances will continue to exist between and within the agencies relative to the establishment of wheeling rates.

In commenting on our recommendation that the adequacy of the wheeling rates be periodically reevaluated, the Director stated that the power agencies were continually involved in the determination of the adequacy of the wheeling rates and that each established wheeling rate was reviewed at least once every 5 years.

The Department did not, however, furnish us with any evidence that periodic reviews of the adequacy of the wheeling rates had been made by the power agencies. Also Bonneville had not adopted procedures requiring that studies be made of the adequacy of the wheeling rates. Although Bonneville did make a study in 1963 which disclosed that the wheeling rates were not sufficient to recover the cost of providing the wheeling services, no action resulted from that study. The only other study was made as the result of our recommendation in 1969, which resulted in an increase in the standard wheeling rates effective January 1, 1971.

With respect to the wheeling rates at the Missouri River Basin Project, Bureau officials advised us that periodic reviews had not been made of their adequacy. Bureau officials believed that the rates, which had been in effect from the time that the project started, were reasonable and that any inequities would be offsetting since non-Federal entities also charged the same rates for wheeling Federal power. As indicated on page 14, we believe this not to be a valid position.

In our opinion, the wheeling rates and the costs associated with providing wheeling services should be periodically reviewed to determine whether the factors on which the rates were based have changed to the extent that the costs of providing the wheeling services are not being recovered. In the absence of such reviews, there are no assurances that the wheeling costs are being recovered.

The Director stated that, although he agreed, in principle, with our recommendation that the power agencies be required to consistently apply the standard wheeling rates in determining wheeling charges, it would be all but impossible to establish rates covering all possible contractual arrangements.

Bonneville's standard wheeling rates are based on the average costs of operating its main and secondary transmission systems and on the maximum Federal and non-Federal power that could be generated. Therefore, to recover the cost of providing wheeling services, the charges to the wheeling customers must be based on the application of the standard rates to the customers' maximum power that could be generated and wheeled over Bonneville's main and secondary transmission systems. Any deviation from establishing wheeling charges on that basis will result in not fully recovering from wheeling customers the costs of providing wheeling services.

If the Director's comment regarding the impossibility of establishing standard rates to cover all possible contractual arrangements is valid, it appears that the concept of attempting to recover wheeling costs through the application of standard rates is impracticable. The Director stated that wheeling rates per se might become obsolete in certain situations because the power-marketing agencies were moving into complex integrated operations involving joint planning and construction of facilities.

In our opinion, the use of standard rates, even under complex operations, if properly developed and implemented, appears to be the most equitable basis for recovering wheeling costs. If situations develop where the use of standard rates becomes impracticable, it would be necessary for the power agencies to establish a different methodology to ensure the equitable recovery of the costs of providing wheeling services to their wheeling customers.

Regarding our recommendation that Bonneville amend its existing contracts to eliminate certain rate adjustments, the Director stated that, although our report presented a valid description of the Z factor, our conclusion that the adjustment was not proper "indicates a lack of understanding of the principles incorporated in the negotiations of the *** contracts." Although he did not elaborate on this point, he stated that the present management agreed that (1) the same contracts, if negotiated today, would not provide for the Z-factor adjustment and (2) the factor would not be included in any future contracts.

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He stated further that, although certain operational revisions had been made on the basis of Bonneville's review of its contracts, it would not be advantageous to eliminate the Z factor from existing contracts because of the long-term characteristic of the contracts and because of the necessity for good contractual relationships. The Director indicated that any delay in Bonneville's repayment of the Government's investment that was created by the Z-factor adjustment could be met by increasing the power rates to its wholesale power customers.

In our opinion, contractual relationships would not be unduly jeopardized because Bonneville's standard contracts contain a provision that authorizes the Administrator of Bonneville to change the Z-factor adjustment when he determines that the Government's wheeling costs are not being fully recovered. The language generally contained in each wheeling contract specifically provides that:

"The level of transmission charges, and the formula set forth in said Exhibit B for the determination of the factor "Z", may be changed by the Administrator, upon three (3) months' prior written notice and not more frequently than once every three (3) years, if the Administrator determines that a change is necessary to provide proper compensation to the Government for the services of the Government and the use of the facilities as provided hereunder. When the level of transmission charges is so changed the transmission charges and the compensation factor will be changed correspondingly. Any increase in the level of transmission charges shall be based on increase in costs of the Government."

In view of the above, we believe that the Director's statements concerning the long-term characteristics of the contracts and the danger of weakening contractual relationships are not sufficient justification for failing to recover from certain wheeling customers the full costs of providing wheeling services. In fiscal year 1970 unrecovered revenues amounted to about \$867,000.

The Director's statement that Bonneville's power rates to its wholesale power customers could be increased if the Z-factor adjustment created a delay in repayment of the Government's investment was, in our opinion, inconsistent with (1) his statement that the Department had approved guidelines which provided that rates for wheeling non-Federal power were designed to recover a proportionate share of the

total costs of the transmission systems and (2) Bonneville's objective of establishing standard wheeling rates in such a manner that its wheeling customers and wholesale power customers would bear a fair share of the cost of operating the transmission systems and that neither group would subsidize the other.

In our opinion, it is not appropriate to assess the wholesale power customers of the Government for costs that are not being recovered from its wheeling customers due to the Z-factor adjustment.

The Director did not comment on our recommendation regarding the elimination of the adjustment allowed for transmission facilities provided by customers.

MATTERS FOR CONSIDERATION BY THE CONGRESS

Although the Department of the Interior generally disagreed with our recommendations, we continue to believe that the actions suggested are necessary to recover from wheeling customers the full cost of providing wheeling services and therefore should be implemented. In view of the Department's decision not to act on our recommendations, we are bringing these matters to the attention of the Congress for its consideration in future dealings with the Department that involve the Federal transmission system.

CHAPTER 5

SCOPE OF REVIEW

Our review was conducted at the Office of the Commissioner of Reclamation in Washington, D.C.; at the Bonneville Power Administration's offices in Portland, Oregon; and at Regions 4, 6, and 7 of the Bureau of Reclamation. The regional offices are headquartered in Salt Lake City, Utah; Billings, Montana; and Denver, Colorado; respectively. Our review included an examination of pertinent legislation, the policies and procedures of the agencies, contracts with non-Federal entities for wheeling, and related records and correspondence.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and transparency of the financial system. The document outlines the various methods used to collect and analyze data, highlighting the role of technology in streamlining these processes. It also addresses the challenges associated with data management and the need for robust security protocols to protect sensitive information. The second part of the document focuses on the implementation of these practices, providing detailed guidelines for data collection, storage, and analysis. It discusses the importance of regular audits and the role of external auditors in verifying the accuracy of the records. The document concludes by emphasizing the need for continuous improvement and the adoption of best practices to ensure the long-term success of the financial system.

APPENDIXES



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 17 1971

Dear Mr. Hirschhorn:

The Department of the Interior has reviewed with interest the GAO Draft Report, "Reevaluation Needed of Rates Charged Non-Federal Users of Federal Electrical Power Transmission Systems." We appreciate the opportunity to comment on the factuality of the report and the specific recommendations contained therein.

With respect to the four recommendations, we offer the following:

"(1) The Secretary of the Interior establish specific criteria for the guidance of Federal power agencies as to the elements of cost or other factors to be considered in determining wheeling rates."

Within general principles, the Department has approved established criteria and guidelines for determining wheeling rates; namely that non-Federal power will be transmitted at rates that will recover its predetermined proportionate share of the total transmission system cost. However, specific criteria as recommended by the GAO has not been established because of the complexities which are involved due to varying circumstances, i.e., displacement, integrated operations, etc. Accordingly, the Federal power agencies have advantages in system management by retaining flexibility of criteria in determining specific wheeling charges applicable to individual projects.

"(2) The Secretary require Federal power agencies to periodically reevaluate the adequacy of the wheeling rates."

The power agencies of the Department are continuously involved in the determination of the adequacy of wheeling rates and because of contract review procedures, each established wheeling rate is reviewed at least once every five years.

"(3) The Secretary require Federal power agencies to develop policies for the consistent application of the standard rates."

While agreeing in principle to the desirability of standard rates, the fact is that in the power marketing area we are moving into complex, integrated operations involving joint planning and construction of facilities which may bring about situations whereby wheeling rates per se will become obsolete. Systems are becoming more and more interconnected through joint planning, particularly in the determination of the facilities to be constructed. Increasing contractual arrangements for facilities, including individual rights, uses and benefits to be derived therefrom

APPENDIX I

are being entered into. Under these conditions, standard rates covering all possible arrangements would be all but impossible to establish or enforce.

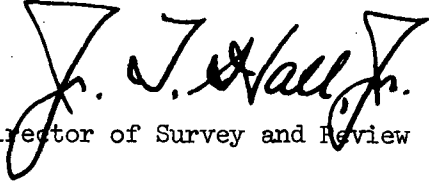
"(4) Require BPA to initiate action to amend its existing contracts to eliminate the reduction in revenues resulting from the "Z" factor adjustment and the adjustment allowed for transmission facilities provided by the customer."

The GAO report presents a valid description of the operation of the billings demand adjustment known as the "Z" factor. However, the conclusion that the adjustment is neither reasonable nor proper is not valid. This conclusion indicates a lack of understanding of the principles incorporated in the negotiation of the eight contracts containing the "Z" factor clause. Present management agrees generally that with today's circumstances, the same contracts would be negotiated without the "Z" factor by other methods of interchange arrangements. We are further advised that the Bonneville Power Administration does not intend to incorporate the "Z" factor clause in any contract commitments in the future. Subsequent to the GAO auditors' review, the Bonneville Power Administration has reviewed its contracts including this factor and have made necessary revisions to preclude the misapplication on the part of the private utility to their advantage by scheduling loads through other transmission facilities. As to the concern that this factor will create pay-out delays, Bonneville Power Administration and the Federal Columbia River Power System is protected by contract clauses providing for negotiation increases in the wholesale rates for power. There currently exists eight contracts with this clause, six of which utilize the "Z" factor and two not using it because they are not presently purchasing Federal power. It is predicted that one of these due to changes in purchasing agreements will qualify for use of the "Z" factor for the period 1971-1973.

Because of the long-term nature of the contracts and the continuing necessity for good contractual relationships, it is not to the advantage of the Federal Government to seek elimination of this clause from the existing contracts.

We appreciate the opportunity to have commented on this draft report.

Sincerely yours,


Director of Survey and Review

Mr. Max Hirschhorn
Associate Director
Civil Division
U.S. General Accounting Office
Washington, D.C. 20548

APPENDIX II

PRINCIPAL OFFICIALS OF
THE DEPARTMENT OF THE INTERIOR
RESPONSIBLE FOR THE ACTIVITIES
DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
SECRETARY OF THE INTERIOR:		
Rogers C. B. Morton	Jan. 1971	Present
Fred J. Russell (acting)	Nov. 1970	Dec. 1970
Walter J. Hickel	Jan. 1969	Nov. 1970
ASSISTANT SECRETARY--WATER AND POWER DEVELOPMENT:		
James R. Smith	Mar. 1969	Present
COMMISSIONER OF RECLAMATION:		
Ellis L. Armstrong	Nov. 1969	Present
ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION:		
Henry R. Richmond	Sept. 1967	Present