
**SECOND ANNUAL
REPORT OF THE ADMINISTRATOR
OF THE
BONNEVILLE POWER
ADMINISTRATION**

1952

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SECOND ANNUAL REPORT OF THE
ADMINISTRATOR OF THE
BONNEVILLE POWER ADMINISTRATION

LETTER

FROM

THE SECRETARY OF THE INTERIOR

TRANSMITTING

A LETTER FROM THE ADMINISTRATOR OF THE BONNEVILLE
POWER ADMINISTRATION SUBMITTING, PURSUANT TO THE
"ACT TO AUTHORIZE THE COMPLETION, MAINTENANCE, AND
OPERATION OF THE BONNEVILLE PROJECT FOR NAVIGA-
TION, AND FOR OTHER PURPOSES" (50 STAT. 731), APPROVED
AUGUST 20, 1937, THE SECOND ANNUAL REPORT
OF THE ADMINISTRATOR OF THE BONNE-
VILLE POWER ADMINISTRATION

MAY 1 1940



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LETTER OF SUBMITTAL

DEPARTMENT OF THE INTERIOR,
Washington, December 30, 1939.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES:

MY DEAR MR. SPEAKER: I have the honor to submit herewith, for the consideration of the Congress, the second annual report of the Bonneville Administrator, made under the provisions of section 9 (c) of the Bonneville Act (Public, No. 329, 75th Cong., approved Aug. 20, 1937).

Sincerely yours,

HAROLD L. ICKES,
Secretary of the Interior.

LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE ADMINISTRATOR,
BONNEVILLE POWER ADMINISTRATION,
Portland, Oreg., December 30, 1939.

Hon. HAROLD L. ICKES,
Secretary of the Interior, Washington, D. C.

MY DEAR MR. SECRETARY: The second annual report of the Bonneville Power Administration of the Department of the Interior is herewith submitted. This report covers operations and transactions during the fiscal year 1939, together with supplementary statements relating to events occurring during the first 6 months of the fiscal year 1940, which are necessary for a clear understanding of the present status of the Bonneville power development on the Columbia River.

The report treats the Administration's activities from the standpoint of power contracts and negotiations, the marketing of Bonneville power, construction of the Bonneville system, a report of the Administration's finances, and management of the enterprise.

Tables, maps, and photographs necessary for a satisfactory explanation or amplification of the text have been included with the narrative report or as appendices.

Sincerely yours,

PAUL J. RAVER, *Administrator.*

LETTER OF TRANSMITTAL

IN MEMORIAM

J. D. Ross (1872-1939)

First Administrator of Bonneville project

J. D. Ross was one of the greatest Americans of our generation. Fighting against illness, he built for himself a strong body and a brilliant mind in the building of Alaska and later of the Pacific Northwest. An outstanding mathematician and an equally great engineer, he combined with this the practical ability to make things work in the sphere of public opinion and successful business. More than that, he was a philosopher and a lover and student of trees and flowers. My personal affection for him grew with the years, and because so many people leaned on him for so much of inspiration and advice, his place in our country will be almost impossible to fill.

FRANKLIN D. ROOSEVELT.

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SPANNING THE COLUMBIA.
Bonneville power starts on its way to Pacific Northwest markets.

SECOND ANNUAL REPORT OF THE BONNEVILLE POWER ADMINISTRATION

FISCAL YEAR 1939

I. SUMMARY OF ACCOMPLISHMENTS

The Bonneville Power Administration of the Department of the Interior was established by act of Congress on August 20, 1937. Its purpose is to market at wholesale the available electric energy generated at the Bonneville Dam, which was constructed and is operated on the Columbia River approximately 40 miles east of Portland, Oreg., by the United States Army Engineers under the direction of the Secretary of War. In order to encourage the widest possible use of the electric energy, the Bonneville Power Administrator is authorized to construct or acquire electric transmission lines and stations, to interconnect the Bonneville system with other power systems in the area, and to enter into contracts for the sale and interchange of power.

Following the untimely death on March 14, 1939, of Mr. J. D. Ross, who was appointed the first Bonneville Power Administrator, interim appointments of two Acting Administrators were made. Mr. Charles E. Carey, now Chief Consulting Engineer on the Administration's staff, served as Acting Administrator until the appointment to this post on May 4, 1939, of Mr. Frank A. Banks. Mr. Banks was temporarily transferred from his position of supervising engineer on the Grand Coulee project being built by the Bureau of Reclamation of the Department of the Interior. In August 1939 the Secretary of the Interior appointed Dr. Paul J. Raver Bonneville Power Administrator, and Mr. Banks was relieved of his temporary assignment to return to Grand Coulee on September 16, 1939, when the new Administrator took office.

Although these changes in administration during the early stage of development necessarily resulted in some uncertainty in the policy and program for the marketing of Bonneville power, the construction of the Bonneville system continued without interruption, and upon appointment of the new Administrator, the consummation of contracts for the sale and interchange of Bonneville power was actively carried forward.

During the period since the Administrator's first annual report, the following important developments have occurred:

Power contracts have been signed for sale of more than 57,000 kilowatts of firm power and additional amounts of surplus energy. Other contracts, which will bring the total firm power commitments to over 100,000 kilowatts, are being actively negotiated.

These contracts are expected to yield nearly \$1,000,000 revenue for the calendar year 1940, and \$2,200,000 revenue for the fiscal year 1941. This revenue will increase from year to year.

New Bonneville wholesale rate schedules, offering certain advantages to purchasing agencies, especially to public agencies, were approved by the Federal Power Commission to become effective on September 18, 1939.

By the close of the calendar year 1939 two municipal systems, namely, Cascade Locks and Forest Grove, were being served with Bonneville power. The home, farm, and commercial customers of these two municipal systems are thus already securing the benefits of low-cost Columbia River energy in the form of rate reductions ranging as high as 30 to 40 percent.

Bonneville power brought a new industry to the Northwest by the consummation of a contract with the Aluminum Co. of America on December 20, 1939. This contract guarantees at least \$10,000,000 revenue to the Government over its 20-year term.

Negotiations are under way for interconnection of the Bonneville system with other power systems, particularly the public systems of Seattle, Tacoma, and Centralia, Wash., and Eugene, Oreg., in order to obtain the maximum economic use of existing water resources and power facilities in the Northwest.

The first Bonneville high-power transmission line (Bonneville-Vancouver-Portland) was completed and energized on December 1, 1939, making possible for the first time power deliveries into the Portland area over the Government's own facilities. During January 1940 the Vancouver-Eugene line will be completed.

Within a few hours of this initial energization, the transmission capacity was utilized to carry a load at the powerhouse of nearly 80,000 kilowatts, or over 90 percent of the 86,400-kilowatt capacity of the present two generators.

Prior to this initial energization of the Bonneville line, an existing private-utility-company line, which was temporarily extended to the dam site but which could handle only 30,000 kilowatts, was overloaded to supply Bonneville power to the area.

In view of the existing market for power, the Secretary of War has been requested to advance the completion date for units 3 and 4 at Bonneville Dam. These units, totaling 108,000 kilowatts of capacity, will be available in early 1941.

Preliminary studies are in progress with the Bureau of Reclamation for the use of two station-service generators at Grand Coulee Dam. These generators, having a rated capacity of 25,000 kilowatts, will be available about August 1, 1940, when the first Bonneville-Coulee line is scheduled for completion.

In considering the foregoing developments, it should be realized that the first funds for construction of transmission facilities were not appropriated by the Congress until May 1938, and that the major portion of the construction funds did not become available until August 1938. In other words, provision for construction of the transmission facilities was not made until after the first two generators at Bonneville Dam had been completed and were ready for service. In view of this situation, work on the Bonneville system



Completed towers on the Coulee-Bonneville line. Near Coulee City.



Completed Bonneville-Vancouver 230-KV. double-circuit line, west from tower 64.

was accelerated in order to complete the first transmission line by December 1939.

The completion of transmission construction work now under way or planned, including that for the fiscal year 1941, will provide essentially for marketing the power capacity of Bonneville generating units numbered 1 to 4, inclusive, totaling 194,400 kilowatts, and Grand Coulee unit No. 1, amounting to 105,000 kilowatts, or a total of 299,400 kilowatts. This power will be available after August 1, 1941, and, if additional funds are provided by Congress, adequate transmission facilities can be constructed to assure the sale of this power to prospective customers.

This program, however, will not provide for the marketing of Bonneville generating units Nos. 5 and 6, and Grand Coulee units Nos. 2 and 3, totaling 318,000 kilowatts, all of which will become available in 1942. New transmission lines and substation facilities, costing approximately \$30,000,000, will be required to market this additional power capacity, since the existing transmission systems of private utility companies and those of public agencies in the area are hopelessly inadequate for this purpose. Even at the abnormal rate of speed followed in the Bonneville construction program to date, approximately 18 months' time, and under normal construction conditions about 24 months' time, would be required to study, survey, design, specify, purchase equipment for, and construct the complex, high-voltage electrical transmission facilities required for marketing of the power. If this work is delayed, the marketing studies that have been made indicate that a serious power shortage may threaten the region and retard its development. From a purely business viewpoint the loss of revenue entailed by the enforced idleness of generating equipment, caused by the delay in construction of adequate transmission and transformation facilities to serve power markets—a loss already realized in connection with Bonneville generating units Nos. 1 and 2—is of the utmost importance.

II. POWER CONTRACTS AND NEGOTIATIONS

CONTRACTS EXECUTED

As noted above, by December 1939, virtually all power available from the two generators now in service at the Bonneville powerhouse was being sold. Power deliveries were being made to five customers, namely, the cities of Cascade Locks and Forest Grove, Oreg., Northwestern Electric Co., Portland General Electric Co., and a construction company. In December the demands of these five customers reached a peak of approximately 80,000 kilowatts, including both firm power and surplus or dump energy, or over 90 percent of the 86,400-kilowatt capacity of the generating units. Total kilowatt-hour sales for the fiscal year 1939 were 30,000,000 kilowatt-hours; for the calendar year 1939 they were 128,612,711 kilowatt-hours (see fig. 2, p. 5).

In addition to contracts with these 5 customers, 6 other contracts had been consummated by December 1, 1939, although initial delivery had not been made. The 11 executed contracts, which called

for 57,410 kilowatts of firm power and for additional surplus energy, are listed in table 1, together with the dates of execution, the terms of the contracts, the dates of initial delivery and the contract demands in kilowatts. It will be noted that 7 of the 11 contracts are with public bodies, 2 are with private utility companies, and 2 are with industrial companies. Copies of these contracts will be found in appendix C.

TABLE 1.—*Prime power contracts executed*

[Dec. 31, 1939]

Contractor	Date executed	Term	Date of initial delivery	Contract demand in kilowatts
Municipalities:				
Cascade Locks, Oreg.....	Sept. 16, 1939 ¹	20 years.....	July 25, 1938	1 200
Forest Grove, Oreg.....	Nov. 7, 1939	do.....	Nov. 27, 1939 ²	750
Canby, Oreg.....	Dec. 22, 1939	do.....	(²)	300
Total, municipalities ⁴				41, 250
Public utility districts (P. U. D.'s):				
Klickitat County, Wash.....	Dec. 5, 1939	20 years.....		1, 500
Pacific County, Wash.....	Oct. 5, 1939	do.....	(⁵)	1, 500
Skamania County, Wash.....	Aug. 2, 1939	do.....	Jan. 3, 1940	200
Wahkiakum County, Wash.....	Nov. 10, 1939	do.....	(⁵)	400
Total, public utility districts.....				3, 600
Private utility companies:				
Portland General Electric Co.....	Dec. 1, 1939	1 year.....	Dec. 1, 1939	⁶ 20, 000
Northwestern Electric Co.....	July 26, 1938	Temporary..	Aug. 18, 1938	(⁷)
Total, private utility companies.....				20, 000
Industrial companies:				
Aluminum Co. of America.....	Dec. 23, 1939	20 years.....	Jan. 1, 1941 ⁸	⁹ 32, 500
Columbia Construction Co.....	Oct. 23, 1939	Temporary..	Oct. 23, 1939	60
Total, industrial companies.....				32, 560
Total, all contractors.....				57, 410

¹ Date of supplemental agreement, which calls for 100 kilowatts of prime power and 100 kilowatts of secondary power. Original contract, dated Feb. 14, 1939, called for 75 kilowatts of prime power and 75 kilowatts of secondary power. Initial delivery for street-lighting purposes was pursuant to an interim agreement dated June 10, 1938.

² Pending completion of Bonneville facilities to serve these municipalities directly, temporary arrangements have been made with Portland General Electric Co. to transfer Bonneville power over its lines for service to the cities.

³ Early 1940.

⁴ A contract was signed with the city of McMinnville for sale of 1,000 kilowatts of prime power and additional amounts of surplus energy on Jan. 13, 1940, and with the city of Monmouth for the sale of 400 kilowatts of prime power on Jan. 4, 1940.

⁵ Date of initial delivery is contingent upon acquisition of private utility company facilities by the P. U. D.'s.

⁶ Contract calls for additional sales of dump power; 10,000 kilowatts of the prime power are to be delivered beginning June 1, 1940.

⁷ On Dec. 13, 1939, the contract with Northwestern Electric Co. was modified to provide for service under "Dump Energy Schedule H-1" at 2.5 mills per kilowatt-hour. This modified agreement remains in effect only until Portland General Electric Co. completes its second connection at St. Johns substation, or until Dec. 31, 1939, whichever is earlier; after that date direct service to Northwestern Electric Co. will terminate. The company previously received up to 15,000 kilowatts of prime power and equal amounts of secondary power at an average rate of substantially less than 2.5 mills per kilowatt-hour under "Temporary Prime and Secondary Power Schedule E-1," which expired by its own terms upon completion of the Bonneville-Vancouver transmission facilities.

⁸ On or before Jan. 1, 1941.

⁹ Initial delivery is to be 27,000 kilowatts, with deliveries to increase at the rate of 500 kilowatts per month until they reach 32,500 kilowatts for the remainder of the contract.

NOTE.—The city of Cascade Locks, Skamania County, P. U. D., and Columbia Construction Co. receives the "at site" power rate. All other contracts call for a transmittal power rate.

MUNICIPALITIES

The three municipalities with which contracts for 1,250 kilowatts of firm power have been executed are the cities of Cascade Locks, Forest Grove, and Canby, Oreg.

Cascade Locks.—The circumstances leading to the sale of Bonneville power to the city of Cascade Locks are described in last year's report (p. 52). In accordance with an agreement of June 1938, initial delivery was made to the city for street-lighting purposes on July 25, 1938. Subsequently, on February 14, 1939, the city executed a contract calling for 75 kilowatts of primary power and 75 kilowatts of secondary power, to be delivered at the dam site beginning at the date of acquisition by the city of the portion of the electric system of the West Coast Power Co., which is located on the Oregon side of the Columbia River. Such acquisition was completed on July 25, 1939, and the city began the distribution of Bonneville power to residential, commercial, and industrial customers situated both within and outside the city limits. After 2 months' operating experience, the city found it neces-

BONNEVILLE POWER SALES GROWTH

FROM BEGINNING OF SALES—JULY 1938
(BASIS OF PRESENT CONTRACTS)

ACTUAL SALES—12 MONTHS
ENDING JUNE 30, 1939
(FISCAL YEAR, 1939)



30,077,295 KWH

ACTUAL SALES—12 MONTHS
ENDING DECEMBER 31, 1939
(CALENDAR YEAR, 1939)



128,612,711 KWH

ESTIMATED SALES
12 MONTHS ENDING JUNE 30,
1940 (FISCAL YEAR, 1940)



360,000,000 KWH

EACH SYMBOL REPRESENTS 30 MILLION KWH

BONNEVILLE'S FIRST MAJOR TRANSMISSION LINE WAS COMPLETED AND ENERGIZED ON DECEMBER 1, 1939.

FIGURE 2.

sary to increase its contract demand on September 16, 1939, in a supplemental agreement, to 100 kilowatts of primary power and 100 kilowatts of secondary power purchased at the "at site" rate, or an increase of 33½ percent over the previous contract demand.

The contract with the city of Cascade Locks does not contain specific resale rate schedules, but merely sets forth that the municipality will so manage and operate its electric system as to resell Bonneville energy at the lowest possible rates. On October 15, 1939, the city placed into effect reduced rates, which, on the average, were approximately 20 percent lower than the rates previously in effect.

Copies of the agreement of February 14, 1939, the supplemental agreement of September 16, 1939, and the schedule of resale rates established by the city council on October 15, 1939, will be found in appendix C.

Forest Grove.—The city of Forest Grove has operated its own Diesel plant and distribution system since 1892. The plant is virtually free from debt. The city applied to Bonneville for its entire power requirements and the Administrator authorized construction of a transmission line to serve the city. This section of line is not to be completed

until about September 1940, but pending its completion arrangements have been made with Portland General Electric Co. to transfer Bonneville power over its lines to the city. Accordingly, a 20-year contract was signed with the city on November 17, 1939, for 750 kilowatts of prime power at the new F-1 rate, and the city began receiving power as Bonneville's customer on November 27, 1939.

Immediately upon receipt of Bonneville power, the city placed in effect reduced resale rates, which were based on a study of the experience and conditions of operation in the city and which were worked out cooperatively by the city officials and Bonneville officials. These rates for residential customers are:

First 50 kilowatt-hours used per month at	3 cents per kilowatt-hour.
Next 50 kilowatt-hours used per month at	2 cents per kilowatt-hour.
Next 200 kilowatt-hours used per month at	1 cent per kilowatt-hour.
Next 900 kilowatt-hours used per month at	$\frac{1}{2}$ cent per kilowatt-hour.
Over 1200 kilowatt-hours used per month at	$\frac{3}{4}$ cent per kilowatt-hour.

Minimum monthly bill, 75 cents net per month for each meter.

As compared with the rates previously in effect, these rates are approximately 36 percent lower; those for commercial customers are 46 to 65 percent lower. The schedules of rates will be found appended to the contract with the city.

Bonneville's interest in the resale rates of its customers arises from the provisions of the Bonneville Act, which reflect certain traditional and fundamental principles that should govern the disposition of electric power incidental to Federal navigation, irrigation, and flood-control projects. Under section 5 (a) of the act, the Administrator is directed to include in the contracts for the sale of energy such provisions concerning resale rates as may be necessary to achieve the purposes of the act, namely, to assure that the full benefits of low-cost Bonneville power are channeled through the distributing agency to the ultimate consumer, that the widest possible use of the electric energy generated at the dam is thereby encouraged, and that rates are reasonable and nondiscriminatory, giving fair treatment to labor and capital. The policy thus far has been one of negotiation and experimentation in an effort to develop in the contracts resale rate provisions which are consistent with the principles of home rule and local responsibility in control over rates, and with the principles set forth in the Bonneville Act as mentioned above.¹

In working out the resale rates with each distributor, an effort is made to achieve uniformity and promotional rate structure, and to design the rates in such manner as to encourage widespread use of Bonneville power by the ultimate consumer. The rates are also fixed at a level which insures that the distributor's operations will be financially sound and self-supporting.

In this connection certain basic principles of operation for publicly owned power plants were worked out with the city officials of Forest Grove and included in the contract. These principles of operation permit adequate charges, insofar as consistent with State law, for payments in lieu of taxes on a municipal system and a return on the investment in the city's plant, in addition to operating expenses. The tax provision, which may be of interest, is as follows:

¹ See for example the discussion (p. 7) of the contract with the city of McMinnville, in which the city's charter provision on electric rates is adopted.



Control house at the Eugene substation.

Payments in lieu of taxes.—The city may pay into its general fund from electric revenues available therefor an amount in lieu of taxes, to be determined as follows:

(1) The prevailing municipal property tax rate shall be applied to the equalized value of the property used in electric operations within the municipal limits.

(2) The tax equivalent paid to the city's general funds under (1) above shall be increased by application of the county- and State-tax rates to the equalized value of the electric system, unless the county and/or State governments levy property taxes upon the electric system, in which case the city shall not take the county- and State-tax equivalents for such taxes as are assessed.

(3) In determining the amount to which the city is entitled in lieu of taxes under (1) and (2) above, the tax rate shall be applied to the present value of the system plus net additions, less the depreciation reserve equalized according to the same ratio applied to taxable property in the county.

The provision for return on investment, which is contained in the contract, states:

The city may pay into its general fund each month, from electric revenues available therefor under this contract, a return of one-half of 1 percent on the investment of the general fund in the electric system.

Inasmuch as no outstanding bonds are allocated to the electric system for the purposes of this section, the investment of the general fund in the electric system as of the date of execution of the contract shall be the depreciated present value of the system. For the purposes of this provision the depreciated present value of said system shall be deemed to be \$125,000, but that amount shall be subject to adjustment upon completion of an appraisal and inventory of the system and agreement upon a corrected figure.

The investment of the general fund in the electric system shall be increased only by and to the extent that money is transferred to the electric fund (other than for services rendered) from other funds of the city, or debts hereafter incurred by or for the account of the electric system are retired out of the proceeds of funds of the city other than the electric fund.

The amount the city may transfer to its general fund each month as return on investment shall be computed on the basis of the investment as of the last day of the month next preceding.

Copy of the power contract with Forest Grove and the transfer agreement with Portland General Electric Co. will be found in appendix C.

Canby, Oreg.—The city of Canby has operated its own distribution system since 1922, and the plant has been free of debt since 1932. The city, which has been purchasing its power from Portland General Electric Co., applied for Bonneville power. On December 22, 1939, Canby executed a contract with Bonneville for the purchase of 300 kilowatts of firm power at the F-1 rate. The Bonneville Administration made arrangements with Portland General Electric Co. to transfer power over its lines to serve the city until such time as a line may be constructed to the city. Delivery of power to the city as Bonneville's customer will begin February 1, 1940.

Resale rate schedules, similar to those established by the city of Forest Grove, were designed cooperatively by the city of Canby and the Bonneville officials, and incorporated into the power contract. Also, principles of operation, including provisions for payments to the city's general fund in lieu of taxes and return on investment, as provided for in the city of Forest Grove contract, were made a part of the Canby agreement. A copy of the contract with the city and the transfer agreement with Portland General Electric Co. will be found in appendix C.

McMinnville, Oreg.—Although signed subsequent to the close of the calendar year 1939, the contract with the city of McMinnville

will be mentioned because of its treatment of the problem of resale rates of contractors purchasing Bonneville power.

The city of McMinnville, which is the oldest municipal operation in Oregon, and one of the oldest in the West, owns a hydroelectric plant of the rated capacity of 200 kilowatts, and a Diesel plant with a rated capacity of 2,710 kilowatts. On January 13, 1940, the city signed a contract with the Bonneville Power Administrator for the purchase of 1,000 kilowatts of prime power at the C-2 rate of \$17.50 per kilowatt-year, and additional amounts of surplus energy at 2½ mills per kilowatt-hour. This contract will not become effective until it has been ratified at an election by the people of the city of McMinnville.

The city has a section of its city charter devoted to the fixing and review of electric rates of the municipal plant. In recognition of this local responsibility in control of electric rates, the contract with the city of McMinnville leaves to the city the establishment of resale rates pursuant to the city charter provision, which is incorporated in the contract and which reads as follows:

Annual estimate and report.—The commission shall annually before the first day of January make a written estimate of the probable expense of maintaining and conducting the water plant and the electric-light system during the next ensuing year, including the cost of any contemplated alterations, improvements, additions, or extensions, together with the probable amount necessary for the redemption of any unpaid warrants, together with the interest thereon, as well as the amount required for the payment of interest and maturing principal on any outstanding water and light bonds of the city of McMinnville; and shall thereupon ascertain and prescribe as nearly as can be conveniently done, a water rate and electric current rate for such ensuing year, which will create a fund at least sufficient to meet all of said requirements; and in addition thereto the commission may include a further amount sufficient to create such fund as in the judgment of the commission may be desirable in the event of any contemplated additions, improvements, or extensions to such plants.

As evidence of its good faith, in subscribing to the principles set forth in the Bonneville Act, previously described, the city agrees that if a violation of those principles occurs, the Administrator may (but it is not mandatory) cancel the contract after reasonable notice.

Copy of the contract with the city of McMinnville will be found in appendix C.

PUBLIC UTILITY DISTRICTS (P. U. D.'s)²

The four public utility districts with whom power contracts have been executed for 3,600 kilowatts of firm power are all located in Washington. They are the Klickitat County, Pacific County, Skamania County, and Wahkiakum County P. U. D.'s.

At the close of the year 1939 none of these P. U. D.'s were in operation and no other districts in Washington or in Oregon were in operation, although many of them were established by a vote of the people a number of years ago.³ Various obstacles have been encountered by the 25 districts in Washington and 5 districts in Oregon. The principal obstacles are: Court injunctions issued against the districts in taxpayers' suits or in other litigation contesting their

² In Oregon these districts are called "Peoples' Utility Districts." The districts in Washington are county-wide; those in Oregon exclude municipalities in which the majority vote is against formation of the district.

³ That is, no districts were in operation as a result of acquiring the system of a private utility company, although a few districts were operating new rural lines in areas not previously served. These rural operations were not being served with Bonneville power.



Towers 3-A and 2-A west of Vancouver on the Vancouver-Eugene line.

establishment or contemplated actions; delay, claims for severance damages in the price for properties, and other difficulties encountered by a district acting individually to acquire by negotiation or by condemnation proceedings only that part of existing electric systems which lie in its territory; impediments to cooperative action by the districts to acquire by negotiation the existing electric facilities on a system-wide basis; and inability of the districts to raise funds by issuance of their revenue bonds for financing the construction of their own systems. As the calendar year 1939 drew to a close, a decision of the Washington State Supreme Court, which is discussed below in reference to Bonneville's contract with Skamania County P. U. D., removed some of these obstacles for districts in Washington.

Klickitat County P. U. D.—In the territory of some public utility districts, such as Klickitat County P. U. D., it appears possible for the district to establish itself by development of new markets not now being served by private utility companies. In Klickitat County service appeared feasible to 250 to 300 new farm customers, averaging 8 customers per mile, and 3 industrial companies. Funds for construction of lines to serve the rural customers can be obtained from the Rural Electrification Administration. Accordingly, the county signed a contract with Bonneville on December 5, 1939, for the purchase of up to 1,500 kilowatts of firm power at the F-1 schedule. Under the terms of the contract, the Administrator is required to provide service to the district at the town of Glenwood, Wash., within 4 months from the date on which the public utility district requests such service. The district has requested service at Glenwood on April 5, 1940. The Administrator is taking steps to provide this service. Arrangements have been made by which a portion of the transmission line facilities of the Pacific Power & Light Co. will be utilized in order to avoid duplications of lines.

The Klickitat County contract provides that resale rates to be charged by the district will be formulated in cooperation with the Administrator. The district agrees to maintain and operate its electric system in accordance with certain principles of operation set forth in the contract. Copy of contract will be found in appendix C.

Pacific County P. U. D.—Pacific County P. U. D., which was established by vote of the people on November 3, 1936, entered into contracts on January 31, 1939, with the West Coast Power Co. and the Willapa Electric Co. for the acquisition of these companies' generating and distribution systems located in Pacific County. The Willapa contract constituted the settlement of proceedings in eminent domain. On the same date the Wahkiakum County P. U. D., discussed below, agreed to acquire the properties of West Coast Power Co. located in its territory.

On March 8, 1939, Bonneville entered into an agreement with the Willapa Electric Co. for the purchase of certain transmission lines owned by the company and located in Pacific County, said purchase being contingent upon the acquisition by the Pacific County P. U. D. of the Willapa Electric Co.'s generating and distribution system. A similar agreement has been discussed with West Coast Power Co.,

whereby Bonneville would acquire certain transmission lines located in Pacific County.

Agreement having been reached for these purchases, on October 5, 1939, the Pacific County P. U. D. executed a contract with Bonneville for the purchase of 1,500 kilowatts of power at the F-1 schedule, delivery to begin not later than 1 year after the date on which either of the generation and distribution systems mentioned above are acquired by the district.

The district arranged with a financial house for the sale of its revenue bonds in order to provide funds for the acquisition of the generation and distribution equipment of the West Coast Power Co. and Willapa Electric Co. However, in view of certain delays in completing the financing of the acquisitions, it became necessary for the district and Bonneville to request extensions of the purchase agreements. The agreements with Willapa Electric Co. have been extended from time to time, but in November the West Coast Power Co. declined to make further extensions of its contract with the district. A renewal of the West Coast Power Co.'s contract with the district is still a probability, and, if such renewal is made, Bonneville will endeavor to reach an agreement for the acquisition of the company's transmission facilities.⁴

In the fall of 1939, with war conditions tending to unsettle the bond market it appeared that private financing would be indefinitely delayed, except possibly at interest rates so excessive as to be prohibitive, and steps were taken by the district to obtain financing from the Reconstruction Finance Corporation. The Bonneville Administration aided in the preparation of the application for this financing. The district filed its application with RFC, including proposed resale rates, which were worked out in cooperation with Bonneville and which were not a part of the original power contract. When it appeared that the RFC might grant the loan application of Pacific County P. U. D., at an interest rate of approximately 4 percent, and with the improvement in the bond market in late 1939, private financial houses again manifested an interest in financing the district's acquisition of the properties, offering to do so at an average interest rate of approximately 4.28 percent, which is substantially below the interest rate they had previously offered. Since the West Coast Power Co. indicated that it probably will agree to renew its acquisition agreement with the district, provided that arrangements are made immediately for the financing of both the properties operated by this company and also those operated by Willapa Electric Co., the Pacific County Commissioners decided to accept private financing of both acquisitions. At the close of the year the acquisitions had not been consummated by the district or Bonneville.

Copy of Bonneville's power contract with Pacific County and its acquisition agreement with Willapa Electric Co. are included in appendix C.

Wahkiakum County P.U.D.—As noted above, Wahkiakum County P.U.D. agreed on January 31, 1939, to acquire the distribution system of the West Coast Power Co. located in its territory.

⁴An understanding with the West Coast Power Co. for the completion of this acquisition was reached early in January 1940. The acquisition will require approval of the Federal Power Commission.



North Vancouver substation.

In view of this agreement the district executed a contract with Bonneville on November 10, 1939, for the purchase of 400 kilowatts of primary power at the F-1 schedule, to be delivered not later than 1 year after the date on which the district acquires its distribution system. At the close of the calendar year 1939, the district had not yet succeeded in acquiring the system.

The contract contains provisions similar to those found in the Klickitat and Pacific County contracts with respect to resale rates and principles of operation. Copy of the contract will be found in appendix C.

Skamania County P. U. D.—On January 25, 1939, the Skamania County P. U. D. entered into an agreement with West Coast Power Co. for the acquisition of that company's electric distribution system located in Skamania County and an electric transmission line running across the Columbia River at the Bridge of the Gods near Cascade Locks, Oreg. Accordingly, the district entered into a contract with Bonneville on August 2, 1939, agreeing to purchase up to 200 kilowatts of "at site" prime power. This power is to be delivered by the Government at a point adjacent to the city of Cascade Locks, Oreg., which is located near the Bonneville Dam, until such time as Bonneville's North Bank facilities are completed, after which the power will be delivered at that point.

In a suit against the district alleging that it could not acquire the private utility company's system and finance the acquisition by the issuance of revenue bonds without a prior vote of the people in the district,⁵ the district was enjoined by the State court from closing its transaction for purchase of the West Coast Power Co.'s properties. This suit was similar to, and was controlled by, a suit against the Grays Harbor County P. U. D. The latter suit was decided favorably to the district by the Supreme Court of Washington on December 27, 1939.⁶ Under this decision the right of the Washington P. U. D. to acquire the properties of private utility companies and to finance the acquisition by the issuance of revenue bonds without a prior vote of the people in the district was established. Pursuant to the Grays Harbor decision, the court dismissed the suit against Skamania County P. U. D. on December 30, 1939. The district closed the transaction for the acquisition of the West Coast Power Co.'s properties on January 2, 1940, and Bonneville began serving the district on January 3, 1940. This is the first P. U. D. in either Washington or Oregon to get established in the electric business.

Under the terms of the Skamania County P. U. D. contract, resale rates of the district are to be agreed upon with Bonneville. Copy of the contract with the district will be found in appendix C.

As a result of the Washington Supreme Court's decision, mentioned above, it is expected that Grays Harbor County P. U. D. will acquire its electric system and execute a contract for Bonneville power early in 1940. (See contracts submitted, p. 14.)

⁵*John Sabaski et al. v. P. U. D. No. 1 of Skamania County.* Dismissed by Superior Court December 30, 1939.

⁶*John A. Bayha et al. v. P. U. D. No. 1 of Grays Harbor County et al.* Decided December 27, 1939. (See appendix F.)

PRIVATE UTILITY COMPANIES

The Bonneville Administration has executed temporary or short-term contracts with two privately owned utility companies in the area, namely, Northwestern Electric Co. and Portland General Electric Co. Both of these companies serve in the city of Portland and in territory immediately adjacent thereto.

Northwestern Electric Co.—During the period the Bonneville Dam and powerhouse were being built, the Northwestern Electric Co. supplied construction power over a 66-kilovolt line terminating at the dam site. Except for a low voltage, short line to Cascade Locks, this construction line of Northwestern Electric Co. was the only outlet for power generated at the dam until the Administration's own transmission facilities were completed and initially energized at 57,000 volts on December 1, 1939.

Because of the lack of Federal transmission facilities, the Administration entered into a temporary contract with Northwestern Electric Co. on August 1, 1938, for the sale of 5,000 to 12,000 kilowatts of power for a period of 6 months. This arrangement facilitated the partial disposition of Bonneville power and at the same time permitted an experimental operation of the generators at the dam.

On December 21, 1938, a new agreement with Northwestern Electric Co. was consummated effective retroactively from November 1, 1938. In the new contract Northwestern Electric Co. agreed to purchase a minimum of 2,500 kilowatts of continuous demand, with permission to exceed this demand in blocks of 500 kilowatts, or multiples thereof, as the company might request the Administrator to deliver, and as the Administrator might have available and be willing to deliver upon request. This power was to be sold under a temporary wholesale rate schedule E-1 for prime and secondary power which had been approved by the Federal Power Commission on December 20, 1938, effective retroactively to November 1, 1938. This temporary agreement was to terminate upon completion of the Bonneville-Vancouver transmission facilities, but in no event later than December 31, 1939, when the temporary schedule E-1 automatically expired.

Because of a critical shortage of hydroelectric power in the Portland area, and pursuant to the foregoing contract, Northwestern Electric Co. purchased up to 15,000 kilowatts of primary power and equal amounts of secondary power, or a total of 30,000 kilowatts, the maximum amount which could be carried over its 66-kilovolt line. Most of this power was sold by Northwestern Electric Co. to Portland General Electric Co. for use in the Portland area.

Upon completion of the Bonneville transmission facilities between the dam and St. Johns (Portland), and connection of the first circuit with Portland General Electric Co., the temporary contract with Northwestern Electric Co. was modified on December 13, 1939, to provide for service under the dump energy schedule H-1 at $2\frac{1}{2}$ mills per kilowatt-hour, inasmuch as the E-1 schedule expired. This modified agreement was to remain in effect only until Portland General Electric Co. completed its second connection with the Bonneville transmission facilities, or until December 31, 1939, whichever was earlier.



St. Johns substation.



Construction of dead-end tower 13-F Willamette crossing west of St. Johns, Oreg.

Service under this modified agreement continued until midnight December 31, 1939, when power deliveries to Northwestern Electric Co. were terminated.

Northwestern Electric Co. has indicated interest in purchasing additional amounts of Bonneville power, service to be made after the initial energization of the North Vancouver substation, scheduled for early spring, 1940.

Portland General Electric Co.—As noted above, Portland General Electric Co. received large amounts of Bonneville power through the system of Northwestern Electric Co., which had the only line available for transmission of the power until December 1939. Within a few hours after the Administration's transmission facilities between Bonneville and Vancouver were completed on December 1, 1939, a 1-year contract with Portland General Electric Co. was consummated, a connection of Bonneville's first circuit with the company's line was made, and, for the first time, power deliveries to the Portland area were made over Bonneville's own lines.

Under the terms of this agreement Portland General Electric Co. agrees to purchase 10,000 kilowatts of prime power at the C-2 rate of \$17.50 per kilowatt-year until June 1, 1940; 20,000 kilowatts of prime power from June 1, 1940, to October 1, 1940, at the C-2 rate; and additional amounts of surplus energy during these periods at the H-1 rate of 2½ mills per kilowatt-hour. The Administrator does not guarantee to deliver prime power after October 1, 1940, but the contract provides that prior to this date the parties shall agree upon and specify in writing the amount of prime power demand to be effective under the contract between October 1 and December 1, 1940; and it further provides that to the extent the primary power demand is reduced, if any, below 20,000 kilowatts for such period, the purchaser shall be given preference over other private agencies in the sale of surplus energy under the Bonneville wholesale schedule H-1. These provisions protect the prior rights of public agencies to Bonneville power for the peak-load period expected during the fall of 1940, and in addition make it possible to contract with industries for new or additional prime power prior to the installation of generators 3 and 4.

The agreement with Portland General Electric Co. also provides that the company and the Administrator will continue their studies and investigations with a view to working out a satisfactory agreement for the delivery of power after December 1, 1940. It is contemplated that if such an agreement is consummated, it would be for a longer term than the present interim arrangement and would contain provisions for resale rates worked out in cooperation with the State public-utilities commission. The present short-term contract was consummated without provision for resale rates, because an agreement on this question could not readily be reached between Bonneville, the State public-utilities commission, and the company in a long-term contract, and because of the urgent need of the people of the Portland area for Bonneville power. Thus the present agreement protects the Portland area from a power shortage and provides additional time to negotiate a long-term contract containing appropriate resale rates.

The present contract also provides that if the Portland General Electric Co., the State public-utilities commission, and the Bonneville

Power Administrator cannot agree by August 1, 1940, upon the provisions of a long-term contract, including resale rates, the Portland General Electric Co. will have to make other arrangements for an adequate power supply. In order to give the company sufficient opportunity to make such arrangements, the company has the option to extend the term of the temporary contract until December 1, 1941, said option to be exercised by written notice filed with the Administrator between August 1 and August 15, 1940. During the period of this extension, however, the Administrator does not guarantee delivery of firm power, but merely agrees to supply emergency or break-down relief for the company and surplus energy, if any is available.

Under the terms of the foregoing agreement, the Portland General Electric Co. purchased 17,346,400 kilowatt-hours in December 1939, and registered a delivered maximum demand of 40,700 kilowatts on December 28, 1939. The combined delivered maximum demands of Portland General Electric Co. and Northwestern Electric Co. (which resold most of its purchases to the Portland General Electric Co.) amounted to 70,700 kilowatts on December 5, 1939.

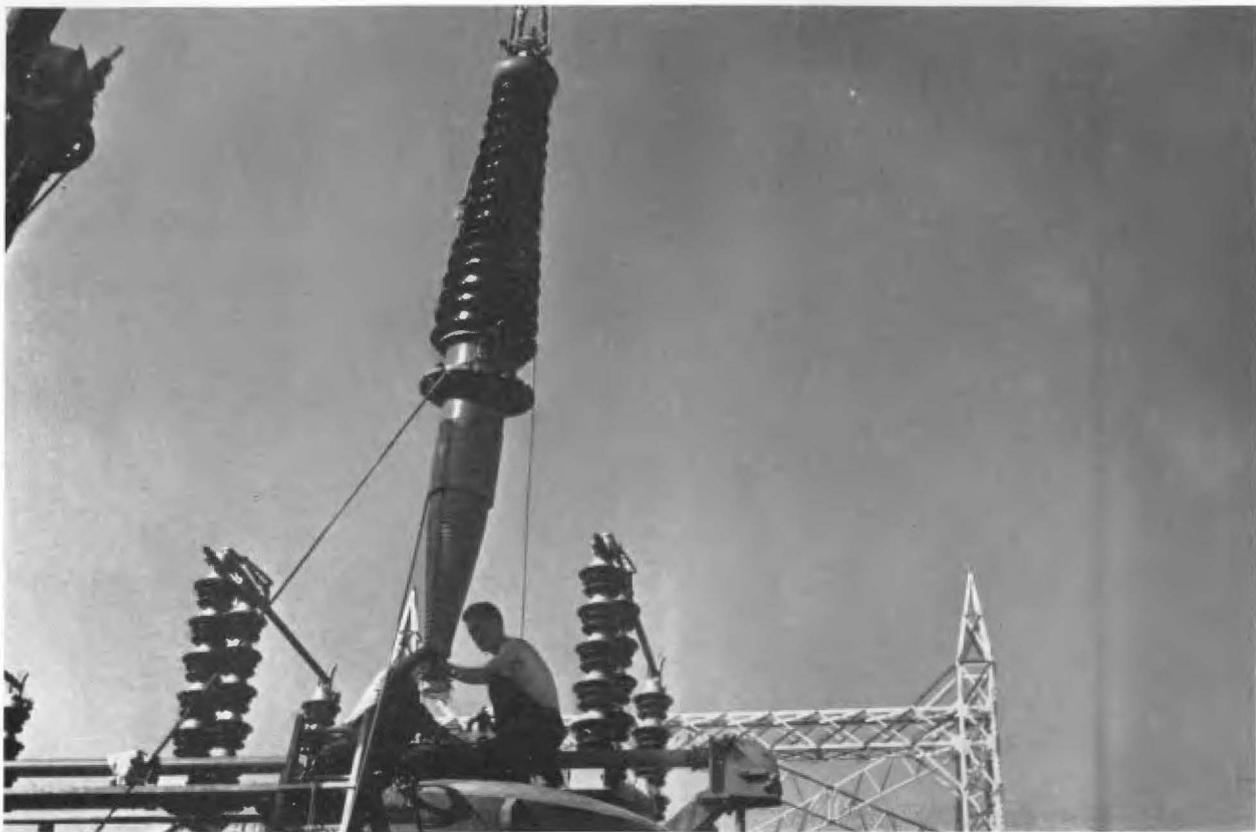
Copy of the agreement with Portland General Electric Co. will be found in appendix C.

INDUSTRIES

On December 27, 1939, Bonneville's first contract with a new industrial firm to be established in the Pacific Northwest was signed with the Aluminum Co. of America, which will build a new aluminum reduction plant on the north bank of the Columbia River a few miles west of Vancouver, Wash. This contract calls for 27,000 kilowatts of firm power on or before January 1, 1941, with deliveries to increase at the rate of 500 kilowatts per month until they reach 32,500 kilowatts, the demand for the remainder of the 20-year contract. The guaranteed revenues from this sale of firm power, which will be at the standard Bonneville rate of \$17.50 per kilowatt-year, amount to over \$10,000,000 in 20 years. It is expected the Aluminum Co. will further expand its facilities and thus require substantially larger amounts of power in the near future. Consummation of this first industrial contract marks the beginning of industrial expansion based on Bonneville power.

CONTRACTS SUBMITTED

Nine additional contracts, aggregating 10,600 kilowatts of prime power and providing for interchange of energy with other public power systems, had been submitted to prospective purchasers by December 31, 1939, for execution. (See table 2.) Other contracts were being actively negotiated. Of the nine contracts submitted for execution, eight were to public agencies with initial contract demands totaling 8,600 kilowatts, and one was to an industrial company with an initial demand of 2,000 kilowatts.



Lowering 196-KV. bushing on the 230-KV. oil circuit breaker at the North Vancouver substation.



Hanging "bells" west of Vancouver on the Vancouver-Eugene line.

TABLE 2.—*Prime power contracts submitted*

[Dec. 31, 1939]

Contractor	Date submitted	Term of contract	Contract demand
			<i>Years</i>
			<i>Kilowatts</i>
Municipalities:			
Centralia.....	Nov. 3, 1939	20	600
Eugene.....	Oct. 11, 1939	5	1,800
McMinnville ¹	Oct. 9, 1939	20	2,000
Monmouth ²	Nov. 6, 1939	20	400
Tacoma (interchange).....	Oct. 11, 1939	20	-----
Seattle (interchange).....	Oct. 12, 1939	5	-----
Public utility districts, ³ Tillamook County.....	Nov. 6, 1939	20	4,800
Rural Electrification Administration cooperatives: Oregon & Lincoln.....	Oct. 26, 1939	20	3,500
Private utility companies.....			0
Industries: ⁴ Industrial firm A.....	Nov. 19, 1938	20	2,000
Total contracts submitted.....			10,600
Contracts executed.....			57,410
Total submitted and executed.....			68,010

¹ The McMinnville contract was executed Jan. 13, 1940, subject to ratification at an election by the people of McMinnville. The contract calls for 1,000 kilowatts of prime power and additional amounts of surplus energy. (Contract was ratified by a vote of 851 to 15 against.)

² The Monmouth contract was executed Jan. 4, 1940, but initial service is dependent upon the city's acquisition of the private utility company's system.

³ A proposed contract with Grays Harbor P. U. D., calling for 5,000 kilowatts of firm power, was submitted on Jan. 2, 1940.

⁴ A proposed contract with another industrial firm, providing for deliveries up to 30,000 kilowatts of firm power by 1941, was submitted on Jan. 3, 1940.

The proposed contracts with Seattle and Tacoma are strictly interchange agreements. Similarly, the proposed contracts with Eugene and Centralia are important from the standpoint of power interchange, although these municipalities are expected to purchase some firm power from Bonneville. The interchange agreements will be mutually advantageous to the municipalities and Bonneville.

The contract with the city of Monmouth, calling for 400 kilowatts of firm power, will be executed early in January 1940. Delivery is dependent upon acquisition by the city of the private utility company's distribution system. The contract with the city of McMinnville was also expected to be signed in early 1940.

Shortly after the close of the calendar year 1939, a draft of contract was submitted to Grays Harbor Public Utility District, which was expected to acquire the private utility company's system in January 1940, as a result of the favorable decision of the Washington State Supreme Court, referred to above and reproduced in appendix F. This contract calls for 5,000 kilowatts of firm power, to be delivered upon completion of the Bonneville transmission facilities to the city late in 1940. Also shortly after the calendar year 1939, a proposed contract with an industrial firm, providing for deliveries of firm power up to 30,000 kilowatts by the fall of 1941, was submitted to company representatives for execution. This contract was expected to be consummated during January 1940.

APPLICATIONS RECEIVED

The Administrator already has received inquiries and signed applications for power from 123 agencies, with estimated aggregate preliminary demands of over 600,000 kilowatts of firm power. Many

Department of the Interior

of these applicants, such as representatives or sponsors of public utility districts who have applied for approximately 420,000 kilowatts of firm power, are not ready for delivery of power in the immediate future. However, applications from municipally owned electric systems, rural electrification cooperatives, and privately owned utilities, totaling over 65,000 kilowatts of firm power, contemplate deliveries immediately upon completion of the necessary Bonneville transmission facilities.

In addition, over 50 inquiries have been received from firms or individuals interested in utilizing Bonneville power in manufacturing operations in the Pacific Northwest. While most of these inquiries, which cover such fields as electrometallurgical, electrochemical, and allied operations, are not likely prospects for immediate deliveries of power, negotiations are being actively conducted with a number of these industries having aggregate demands approaching 100,000 kilowatts.

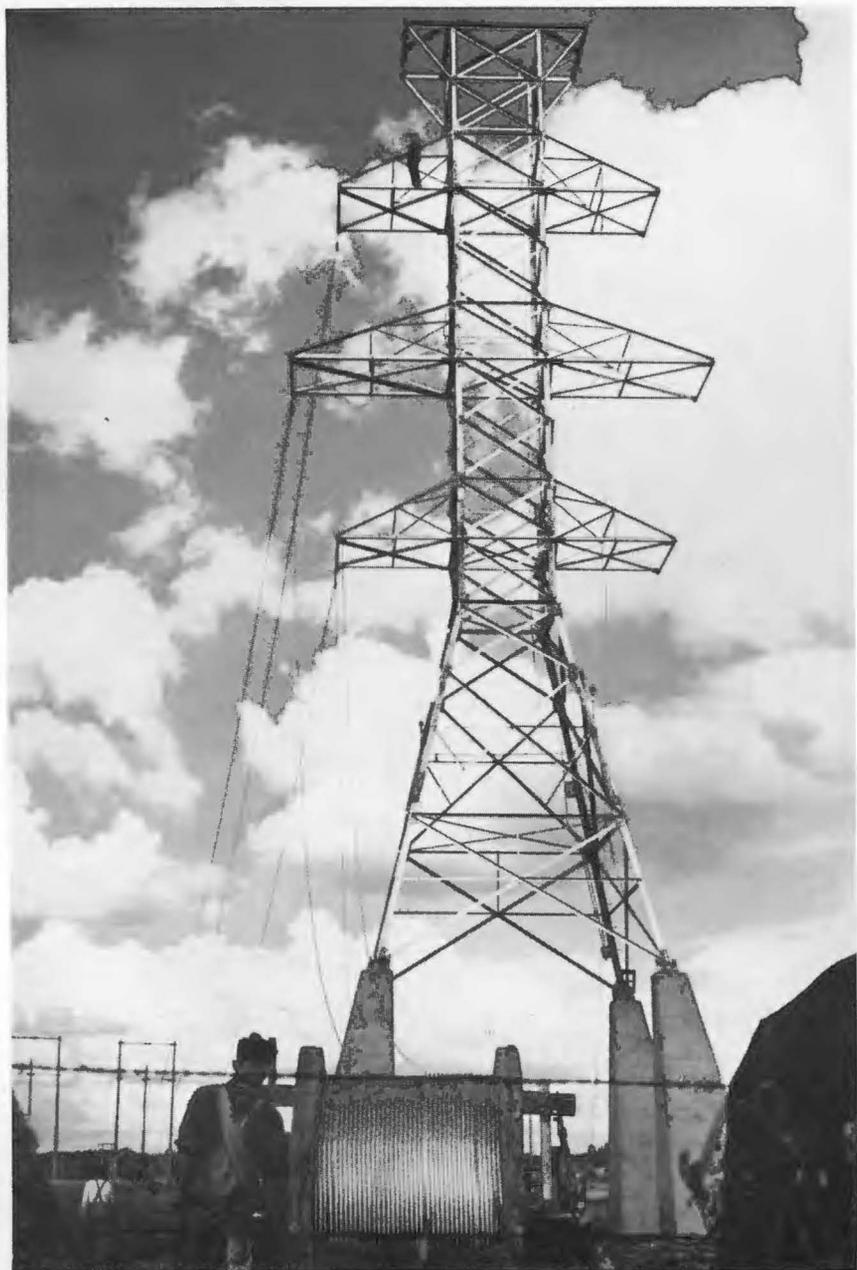
III. MARKETING BONNEVILLE POWER

The importance of power in the development of the Pacific Northwest was discussed at length in the first annual report. The possibilities of a regional transmission system for Federal power were outlined in terms of a development which fully recognizes the availability of almost unlimited supplies of water power, together with unexcelled timber and mineral resources. During the past year a substantial advance has been made in the research and analyses which are fundamental to the economic planning of the Federal transmission system. It is the purpose of this section to outline the present status of such studies and the indicated results.

As an aid to a better understanding of these studies certain policies of Congress, as expressed in the Bonneville Act, which directly shaped the approach to the marketing problem, will be briefly summarized. Of primary importance is the stipulation that the present form of administration is "provisional pending the establishment of a permanent administration for Bonneville and other projects in the Columbia River Basin." This means that all power planning by Bonneville must consider the regional as well as the local aspects of hydroelectric power development. Other stipulations of the act bear on this point. The Administrator is directed to construct the transmission system "in order to encourage the widest possible use of all electric energy that can be generated and marketed," and for interchange purposes "to interconnect the Bonneville project with other Federal projects and publicly owned systems now or hereafter constructed." Furthermore, one of the first principles of conservation is recognized by the authorization to enter into contracts for the mutual exchange of unused excess power.

SCHEDULED GENERATING CAPACITY, INVESTMENT, AND EXPENSE

At the present time a tentative schedule of generating capacity for Federal hydro power on the Columbia River covers the proposed 10 units in the Bonneville plant and the first 3 units in Grand Coulee, indicating a total capacity of 833,400 kilowatts to be available after July 1, 1944. Additional units at Grand Coulee could be scheduled if the market requires them. The following table indicates the detail of



Stringing conductor tower 1-D on the Vancouver-Eugene line at the Columbia crossing.

the tentative schedule of generating capacity, exclusive of a 4,000-kilowatt house generator at Bonneville and two 12,500-kilowatt house generators at Grand Coulee.

Tentative schedule	Kilowatts of capacity		
	Bonneville	Grand Coulee	Combined
Present installation: Bonneville units Nos. 1 and 2.....	86,400	-----	86,400
January 1941: Add Bonneville units Nos. 3 and 4.....	108,000	-----	108,000
After January 1941.....	194,400	-----	194,400
Aug. 1, 1941: Add Grand Coulee unit No. 1.....	-----	105,000	105,000
After Aug. 1, 1941.....	194,400	105,000	299,400
Nov. 1, 1941: Add Grand Coulee unit No. 2.....	-----	105,000	105,000
After Nov. 1, 1941.....	194,400	210,000	404,400
Feb. 1, 1942: Add Grand Coulee unit No. 3.....	-----	105,000	105,000
After Feb. 1, 1942.....	194,400	315,000	509,400
July 1, 1942: Add Bonneville units Nos. 5 and 6.....	108,000	-----	108,000
After July 1, 1942.....	302,400	315,000	617,400
July 1, 1943: Add Bonneville units Nos. 7 and 8.....	108,000	-----	108,000
After July 1, 1943.....	410,400	315,000	725,400
July 1, 1944: Add Bonneville units Nos. 9 and 10.....	108,000	-----	108,000
After July 1, 1944.....	518,400	315,000	833,400

The investment in Bonneville generating facilities, including joint facilities as allocated by the Federal Power Commission, and annual operating, maintenance, and renewal expenses, as estimated by the United States Corps of Engineers, are shown in table 3.

TABLE 3.—Bonneville Dam generating facilities—Estimated investment and annual expenses, 1939 to 1946, inclusive

[Prepared by U. S. Corps of Engineers]

TABULATION OF CAPITALIZED CONSTRUCTION COSTS¹—BONNEVILLE DAM

Items	Capital costs June 30, 1939 (2 units)	Estimated additions			
		1940 (2 units)	1941 (4 units)	1942 (6 units)	1943 (8 units)
Powerhouse facilities.....	\$10,842,786	\$88,673	\$6,468,203	\$4,058,668	\$10,985,816
Joint facilities chargeable to power.....	2,288,350	44,455	2,363,317	2,362,645	2,372,708
Interest during construction.....	541,659	5,492	364,300	264,879	551,040
Total.....	13,672,795	138,620	9,195,820	6,686,192	13,909,564

Items	Estimated additions			
	1944 (10 units)	1945	1946	Total (10 units)
Powerhouse facilities.....	\$4,046,219	None	None	\$36,490,365
Joint facilities chargeable to power.....	2,379,610	-----	-----	11,811,085
Interest during construction.....	265,065	-----	-----	1,992,435
Total.....	6,690,894	None	None	50,293,885

¹ Estimates were based on the assumption that units 1 and 2 only would be in operating status during the fiscal year 1940; thereafter 1 additional pair of units to be placed in operation each year until 1944. Interest rate used for interest during construction was 1.5 percent (Federal Power Commission used 0.0154271, stated to be the weighted average cost of Government money for first five years of work). Weighted average time between date of allotment and completion of work was used in computing interest, 2 years 9 months.

TABLE 3.—Bonneville Dam generating facilities—Estimated investment and annual expenses, 1939 to 1946, inclusive—Continued

TABULATION OF OPERATING AND MAINTENANCE EXPENSE²—BONNEVILLE DAM

Items	Actual expense, fiscal year 1939	Estimated expense, fiscal year		
		1940	1941	1942
Operation:				
Power facilities.....	\$38,071	\$42,735	\$47,326	\$64,100
Joint facilities.....	2,562	2,405	3,006	4,810
Subtotal.....	40,633	45,140	50,332	68,910
Maintenance:				
Power facilities.....	35,084	46,250	48,687	56,000
Joint facilities.....	4,652	7,411	9,478	15,243
Subtotal.....	39,736	53,661	58,165	71,243
Extraordinary maintenance:				
Power.....		12,500	12,850	13,900
Joint.....		2,795	3,493	5,590
Subtotal.....		15,295	16,343	19,490
Estimated annuity for renewals (3.5 percent sinking fund basis):				
Power.....	30,050	37,900	42,175	60,200
Joint.....	4,012	3,017	3,835	6,137
Subtotal.....	34,062	40,917	46,010	66,337
Administrative overhead.....	6,517	8,567	9,363	11,973
Total.....	120,948	163,570	180,213	237,953

Items	Estimated expense, fiscal year			
	1943	1944	1945	1946
Operation:				
Power facilities.....	\$53,350	\$101,500	\$115,000	\$115,000
Joint facilities.....	7,214	8,620	12,024	12,024
Subtotal.....	90,564	110,120	127,024	127,024
Maintenance:				
Power facilities.....	72,800	88,650	100,950	100,950
Joint facilities.....	22,864	30,486	38,107	38,107
Subtotal.....	95,664	119,136	139,057	139,057
Extraordinary maintenance:				
Power.....	16,700	21,200	23,300	23,300
Joint.....	8,385	11,180	13,975	13,975
Subtotal.....	25,085	32,380	37,275	37,275
Estimated annuity for renewals (3.5 percent sinking fund basis):				
Power.....	70,700	86,090	99,000	99,000
Joint.....	9,205	12,275	15,343	15,343
Subtotal.....	79,905	98,365	114,343	114,343
Administrative overhead.....	15,848	19,697	22,752	22,752
Total.....	307,066	379,698	440,451	440,451

² Estimated future operating and maintenance expense based on the assumption that units 3 and 4 will be placed in operation about Mar. 1, 1941; units 5 and 6 about July 1, 1942; and 1 additional pair at 12-month intervals thereafter until entire 10 units are under operating status. Operation and maintenance of joint facilities charged to power production in same ratio as capital additions. Generating capacity to be considered as "reserve" at each stage of development; 54,000 kilowatts (1 unit) until entire 10 units are in operation, after which 2 units (108,000 kilowatts) will be considered as "reserve."

The completed Bonneville power plant will represent an investment of \$50,293,885, including \$11,811,085 of allocated joint facilities,⁷ and the 10 generating units will have a capacity rating of 518,400 kilowatts resulting in a unit investment of \$97 per kilowatt. Operation, maintenance, and renewals chargeable to power, on the completed plant, are estimated at \$440,451 annually, representing a unit expense per year of 85 cents per kilowatt of installed generating capacity.

Detailed power-cost studies for Grand Coulee are under preparation by the United States Bureau of Reclamation. As shown above, the first main generating unit of 105,000 kilowatts of capacity is scheduled for service on August 1, 1941, although the house units, at reduced head, will be available in the fall of 1940.

MARKETING POLICIES

The fundamental marketing policies underlying the transmission-system planning are briefly outlined below:

1. The benefits of low-cost Federal hydro power should be spread over the widest possible area, limited only by the economics of transmission-line construction and operation.

2. All present and potential Federal hydroelectric power plants in the area should be considered to the end that the lowest cost Federal transmission system can be developed on a regional basis in order to obtain the full benefits of integration of the systems.

3. All other present and potential public hydroelectric power systems in the area should be considered from the standpoint of the economics of interconnection and interchange of power.

4. In general, the existing investment throughout the region in power supply and transmission facilities should be protected; that is, the Federal system should be planned as the most economic supplement to existing facilities.

5. Distributing agencies should strive for the lowest possible resale rates, thus creating an inducement to the use of electricity for all economic requirements for energy and permitting maximum utilization of Federal surplus power.

6. Every consideration should be given to making Federal power available for the expansion of existing industry and the inducement of new industrial processes, giving particular attention to those industries which make the maximum use of local resources and facilities, thus making the maximum contribution to the expansion and stabilization of local employment.

EXISTING AND POTENTIAL POWER FACILITIES

The marketing area for Bonneville and Grand Coulee power lies primarily in the States of Oregon and Washington. Minor portions of Idaho and Montana contiguous to Spokane are natural adjuncts to the eastern Washington systems.

The 1938 capacity and generation situation for the two major States, as reported by the Federal Power Commission, are shown in

⁷ In 1938 the Federal Power Commission determined the allocation of joint investment to power production at 32.5 percent.

tables in appendix H. These tables show that the two States, Oregon and Washington, at the end of 1938 contained 1,457,902 kilowatts of generating capacity. Of this amount, 1,059,006 kilowatts were hydroelectric power (including 86,400 kilowatts at Bonneville) and 394,896 kilowatts were fuel burning. The hydroelectric plants produced 4,230,000,000 kilowatt-hours and the fuel plants produced 410,000,000 kilowatt-hours, making a total energy output of 4,640,000,000 kilowatt-hours.

A major contribution to a regional inventory of power facilities in the Pacific Northwest was made by Dean Carl Edward Magnusson of the University of Washington in July 1938.⁸ Professor Magnusson undertook to inventory all hydroelectric generating stations and major transmission lines affected, and prepared excellent maps showing the results of his study. He showed the following trend of power production for the four States (i. e., Oregon, Washington, Idaho, and Montana):

Production of electric energy in millions of kilowatt-hours

Year:		Year:	
1927	5, 169	1933	4, 920
1928	5, 968	1934	5, 305
1929	6, 221	1935	6, 037
1930	6, 004	1936	6, 775
1931	5, 514	1937	7, 414
1932	4, 675		

In its Interim Power Survey Report of 1935, the Federal Power Commission pointed out that the three States of Washington, Oregon, and Idaho contained 41.4 percent of the undeveloped hydroelectric energy in the United States (114,200,000,000 kilowatt-hours). The report estimated undeveloped potential hydro capacity at 15,664,000 kilowatts, in addition to 1,183,000 kilowatts then installed. Over half of the available undeveloped hydro energy lies in the Columbia River system, exclusive of the Snake River, as shown in the following table:

Undeveloped water power in Washington, Oregon, and Idaho

Drainage basin:	Estimated average annual output in M kilowatt-hours
Columbia, including tributaries above Portland	62, 700, 000
SNAKE RIVER and tributaries	17, 510, 000
Puget Sound Basin	10, 760, 000
Willamette Basin	6, 530, 000
Cowlitz River	3, 270, 000
Total, 5 basins	100, 770, 000
Total for zone (including minor streams)	114, 200, 000

The United States Corps of Engineers' data for the main Columbia River development are shown in the following table:

⁸ Electric Power Markets in Washington. Part II, Residence Service Markets and a Regional Power Transmission Grid, Bulletin No. 99, Engineering Experiment Station.



Bradford Island River crossing with Bonneville Dam in the background.



Towers B-1 and B-2 on the Bonneville-Vancouver line west of the Bonneville Dam.

Summary of data, power-navigation dams of comprehensive plan for Columbia River¹

Site	Miles from mouth	Average head	Installed capacity
		<i>Fest</i>	<i>Kilowatts</i>
1. Grand Coulee.....	597	300	² 1,890,000
2. Foster Creek.....	544	155	706,000
3. Chelan.....	503	82	408,000
4. Rocky Reach.....	475	51	270,000
5. Rock Island.....	452	42	³ 180,000
6. Priest Rapids.....	396	127	631,000
7. Umatilla Rapids.....	293	50	415,000
8. John Day Rapids.....	216	103	857,000
9. The Dalles.....	193	75	660,000
10. Bonneville.....	146	60	⁴ 432,000
Total.....			6,449,000

¹ Revised data, U. S. Corps of Engineers, North Pacific Division, November 1937.² Under construction by the Bureau of Reclamation.³ Partially developed by the Puget Sound Power & Light Co., with 60,000 kilowatts of installed capacity.⁴ Present plans call for an installed capacity totaling 518,400 kilowatts.

The Corps of Engineers' report on the Willamette River and tributaries, Oreg., indicates an ultimate power installation of 413,140 kilowatts of capacity and an average output of 1,955,670,000 kilowatt-hours in connection with the flood-control project recommended by the report (H. Doc. No. 544, 75th Cong., 3d sess). Construction on this project has been initiated.

In the immediate market area for Federal power there are four municipal systems operating hydroelectric plants of importance from the standpoint of interconnection: The cities of Seattle, Tacoma, and Centralia in Washington and the city of Eugene in Oregon. Of these, the Seattle system is of major importance because of the potentialities of the Skagit development, which total 840,000 kilowatts of storage hydro power. Of this potential capacity 175,500 kilowatts are now installed and operating in the Gorge and Diablo projects on the Skagit River.

The city of Tacoma owns storage hydro projects on the Cushman and Nisqually Rivers which are capable of economic expansion. The Eugene and Centralia plants are relatively small run-of-river projects, but nevertheless are important because of the availability of surplus hydro power.

Present steam generating facilities are largely concentrated in the Puget Sound and Portland areas, and are used primarily for stand-by and dry-season generation. Over half of this production is by the use of waste-wood fuel, and, except for the cheapness of this unlimited supply, most of the present installations cannot be classed with modern, low-cost fuel-generating plants. As the Federal transmission system develops, the present fuel-generating capacity will become primarily stand-by, transmission back-up and emergency reserves.

MARKET ANALYSIS

In the light of the above picture of existing and potential power resources in the area, as well as such other factors as population concentrations, topography, transportation facilities and layout of existing systems, the 4-State region was segregated along county lines into

15 power load and interchange areas, as shown on figure 3. The southern Oregon, southern Idaho, and Montana areas are included primarily for examination in power interchange possibilities.

As shown in table 4, by load areas, the territory so delineated had an estimated 1939 population of 3,211,000, and total utilization of central station electric energy in 1938 amounting to 4,686,000,000 kilowatt-hours. The installed hydro capacity on major systems totaled 1,213,386 kilowatts, or 0.378 kilowatts per capita.

TABLE 4.—Columbia River power load and interchange area—Summary of basic data

Load areas	Population				1938 sales M kilowatt-hours			Installed hydro capacity in kilowatts		
	Urban, 1939 ¹	Rural farm, 1935 ²	Rural non-farm, 1930 ³	Total, 1939, estimated ⁴	Industrial and railroad	All other	Total	Total	Per capita of 1939 population	
									Total	Urban
Vancouver-Portland	399,172	96,581	109,617	605,370	369,188	560,816	930,004	157,360	0.260	0.394
Willamette Valley	72,752	71,157	57,990	201,899	50,363	110,932	161,295	11,640	.058	.160
Southwest Oregon ⁵	64,233	45,995	46,058	156,286	53,227	88,262	141,489	109,440	.700	1.710
Aberdeen	38,930	13,125	30,807	82,862	16,360	26,577	45,937	240	.003	.006
Puget Sound	681,439	147,060	206,245	1,034,744	559,421	783,215	1,342,636	360,131	.348	.529
Central Oregon	19,168	26,435	20,423	66,026	10,039	38,404	48,443	20,780	.314	1.083
Yakima Valley	59,431	52,823	39,990	152,244	34,359	116,261	150,620	83,120	.546	1.309
Prosser-Walla Walla	24,770	19,123	13,021	56,914	13,032	38,657	51,689	2,500	.044	.101
Eastern Oregon	27,540	32,282	26,418	86,240	8,893	33,528	42,421	12,400	.144	.450
Southern Idaho ⁵	51,699	54,834	26,962	133,495	21,296	156,172	177,468	24,170	.181	.467
Colfax-Lewiston	24,293	39,213	31,439	94,945	11,800	23,769	35,069	11,420	.120	.470
Coolsee, local	3,101	24,263	20,070	47,434	19,237	40,553	59,790	51,665	1.093	16.640
Spokane	157,859	56,765	69,217	283,841	319,441	311,034	630,475	179,080	.632	1.135
North Montana ⁵	42,083 ³	40,550	30,633	113,266				72,800	.643	1.730
South Montana ⁵	24,364	27,116	44,476	95,956	757,293	111,931	869,224	116,640	1.216	4.785
Total	1,690,834	747,322	773,366	3,211,522	2,243,449	2,443,111	4,686,560	1,213,386	.378	.718

¹ Weighted population increase computed from 1939 estimated population of key cities in Oregon, Washington, Idaho by Equitable Savings & Loan Association.

² 1935 U. S. Census of Agriculture.

³ 1930 U. S. Census of Population.

⁴ Combined 1939 urban estimate, 1935 rural farm, and 1930 rural nonfarm populations.

⁵ Included primarily for examination of power interchange possibilities.

This latter relationship varies greatly among the 15 load areas and may be considered as of fundamental importance. Unless concrete evidence of demand in a particular load area dictates otherwise, it may be assumed that the programming of transmission construction to market Federal hydro power must give first consideration to areas with lowest ratios of available per capita hydro power. In general such areas are of low consumption, high rates, and are dependent upon local fuel generation or transmitted hydro. If these areas are now served by transmission lines, the introduction of Federal hydro may release the capacity of such lines for other purposes by reversal of the flow of power. The order of installed hydro power per capita for the 15 load areas is shown in table 5.

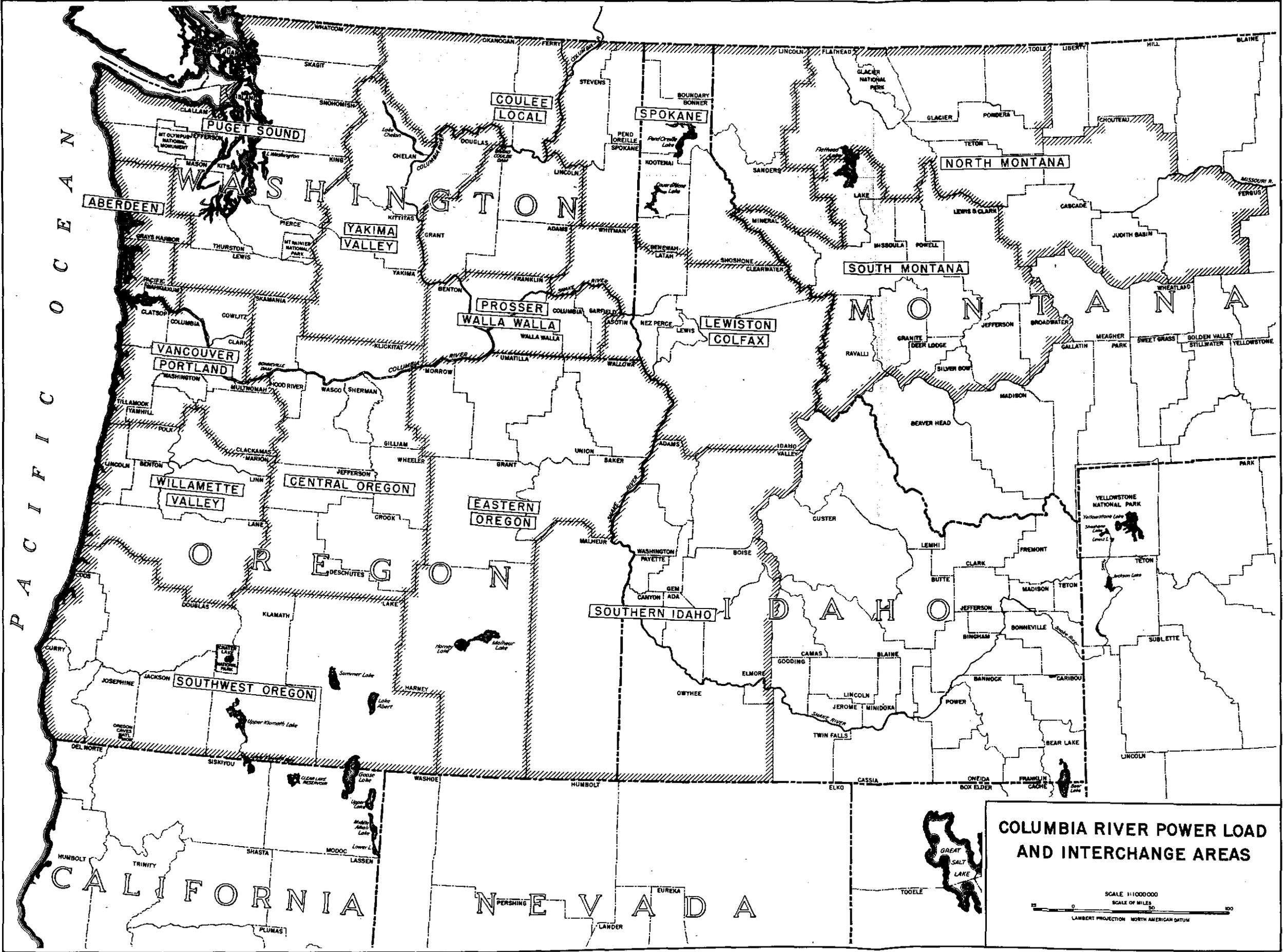


FIGURE 3

TABLE 5.—Columbia River power load and interchange areas—Ratio of hydro capacity to estimated 1939 total population

Load area	Estimated 1939 total population	Installed hydro capacity in kilowatts	Ratio of hydro capacity to total population
1. Aberdeen.....	82,862	240	0.003
2. Prosser-Walla Walla.....	56,914	2,500	.044
3. Willamette Valley.....	201,899	11,640	.058
4. Colfax-Lewiston.....	94,945	11,420	.120
5. Eastern Oregon.....	86,240	12,400	.144
6. Southern Idaho ¹	133,495	24,170	.181
7. Vancouver-Portland.....	605,370	157,360	.260
8. Central Oregon.....	66,026	20,780	.314
9. Puget Sound.....	1,034,744	360,131	.348
10. Yakima Valley.....	152,244	83,120	.547
11. Spokane.....	283,841	179,080	.631
12. North Montana ¹	113,266	72,800	.643
13. Southwest Oregon ¹	156,286	109,440	.700
14. Coulee, local.....	47,434	61,665	1.090
15. South Montana ¹	95,956	116,640	1.215
Total.....	3,211,522	1,213,386	.378

¹ Included primarily for examination of interchange possibilities.

Similar analyses indicate an important variation of the use of electricity per capita among the 15 load areas. The close relationship of such use to the availability of local hydro power is shown in the following table, in which the load areas are arranged in order of total 1938 consumption per capita:

Columbia River power load and interchange areas—Electricity consumption per capita in kilowatt-hours, 1938

Load area	All classes	Industrial and railway	All other	Ratio of hydro capacity to total population (from table 5)
1. Colfax-Lewiston.....	369	119	250	0.120
2. Eastern Oregon.....	492	103	389	.144
3. Aberdeen.....	555	198	357	.003
4. Central Oregon.....	733	152	581	.314
5. Willamette Valley.....	799	250	549	.058
6. Southwest Oregon ¹	906	341	565	.700
7. Prosser-Walla Walla.....	908	229	679	.044
8. Yakima Valley.....	990	226	764	.547
9. Coulee, local.....	1,263	407	856	1.090
10. Puget Sound.....	1,297	540	757	.348
11. Southern Idaho ¹	1,330	160	1,170	.181
12. Vancouver-Portland.....	1,635	610	925	.260
13. Spokane.....	2,223	1,113	1,110	.631
14. North Montana ¹	4,160	3,621	535	.643
15. South Montana ¹				
All load areas.....	1,458	699	760	.378

¹ Included primarily for examination of interchange possibilities.

Based on the above analysis, the indications of immediate deficiencies of hydro power, that is, the indications of markets, dictate the programming of Federal transmission construction with a view toward making power available as soon as possible in the Pacific-

coast section of Washington, the Willamette Valley of western Oregon, the central Oregon section, and the dry-farming areas of southeast Washington and northeast Oregon.

The next step in the analysis of power markets as a basis for transmission-line planning is to determine the expectable loads in each area, on the assumption that ample supplies of low-cost hydro power are uniformly available, together with appropriate resale-rate schedules. The results of this study are indicated in table 6. The potential load on this basis is estimated at 2,524,360 kilowatts for all areas, and the deficiency, after deducting present hydro capacity, totals 1,310,974 kilowatts.

TABLE 6.—Columbia River power load and interchange areas—Estimates of potential requirements for additional power

Load areas	Estimated population		Prospective sales, 1950 (M kilowatt-hours)			M kilowatt-hours required at 80 percent efficiency	General business load in kilowatts ⁴	Existing hydro capacity, kilowatts	General market for power in kilowatts	Special industries ⁵	Additional kilowatts hydro capacity required
	1939	1950 ¹	All other ²	Industrial and rail-road ³	Total						
Bonneville, local										100,000	100,000
Vancouver-Portland	605,370	696,176	1,044,000	553,782	1,597,782	1,997,000	456,000	157,360	298,640	100,000	398,640
Willamette Valley	201,899	232,184	348,300	75,545	423,845	529,000	124,000	11,640	112,360		112,360
Southwest Oregon ⁶	156,286	171,915	257,600	79,841	337,441	422,000	96,250	109,440	⁷ (13,190)		(⁸)
Aberdeen	82,862	82,862	124,300	24,540	148,840	186,000	42,450	240	42,210		42,210
Puget Sound	1,034,744	1,189,955	1,784,000	839,132	2,623,132	3,278,000	747,200	360,131	387,069	100,000	487,069
Central Oregon	66,026	79,231	118,900	15,058	133,958	167,200	38,130	20,780	17,350		17,350
Yakima Valley	152,244	190,305	285,600	51,538	337,138	421,800	96,200	83,120	13,080		13,080
Prosser-Walla Walla	56,914	62,605	93,900	19,548	113,448	143,300	32,710	2,500	30,210		30,210
Eastern Oregon	86,240	94,864	142,300	13,340	155,640	190,900	43,600	12,400	31,200		31,200
Southern Idaho ⁹	133,495	146,845	220,100	31,944	252,044	315,100	71,850	24,170	47,680		47,680
Colfax-Lewiston	94,945	104,440	156,700	16,960	173,660	216,800	49,550	11,420	38,130		38,130
Coulee, local	47,434	52,177	78,200	28,856	107,056	133,800	30,520	51,665	⁹ (21,145)	100,000	¹⁰ 78,855
Spokane	283,841	326,417	480,000	479,162	959,162	1,200,000	273,700	179,080	94,620		94,620
North Montana ⁶	113,266	124,593	186,900					72,800			
South Montana ⁶	95,956	105,552	158,300	1,135,940	1,481,140	1,850,000	422,200	116,640	232,760		232,760
All load areas	3,211,522	3,660,121	3,479,100	3,365,176	8,844,276	11,050,900	2,524,360	1,213,386	1,310,974	400,000	⁸ 1,710,974

¹ 10-percent increase over 1939 except the following: Aberdeen, 0 percent; Vancouver-Portland, Puget Sound, Willamette Valley, and Spokane, 15 percent; central Oregon, 20 percent; Yakima Valley, 25 percent; and Coulee, local, 50 percent.

² Based on estimated 1,500 kilowatt-hours per capita consumption.

³ Estimated 150 percent of 1938 consumption.

⁴ Based on 50-percent load factor.

⁵ 100 percent load factor industries such as electrochemicals and electrometallurgical.

⁶ Included primarily for examination of interchange possibilities.

⁷ Surplus of existing hydro over general market demand, 13,190 kilowatts.

⁸ Southwest Oregon 13,190-kilowatt hydro surplus subtracted from total.

⁹ Surplus of existing hydro over general market demand, 21,145 kilowatts.

¹⁰ Balance of special industrial load after subtracting hydro surplus of 21,145 kilowatts.

A summary of these deficiencies in order of magnitude is shown in table 7, together with an assumed distribution of 400,000 kilowatts for high load factor electrothermal and electrolytic industries.

TABLE 7.—Columbia River power load and interchange areas—Summary of potential requirements for additional power in kilowatts

Load area	General market	Special industries	Total market
1. Puget Sound.....	387,069	100,000	487,069
2. Vancouver-Portland.....	298,640	100,000	398,640
3. Western Montana ¹	232,760	.....	232,760
4. Willamette Valley.....	112,360	.....	112,360
5. Bonneville, local.....	.....	100,000	100,000
6. Spokane.....	94,620	.....	94,620
7. Coulee, local.....	(21,145)	100,000	78,855
8. Southern Idaho ¹	47,680	.....	47,680
9. Aberdeen.....	42,210	.....	42,210
10. Colfax-Lewiston.....	38,130	.....	38,130
11. Eastern Oregon.....	31,200	.....	31,200
12. Prosser-Walla Walla.....	30,210	.....	30,210
13. Central Oregon.....	17,350	.....	17,350
14. Yakima Valley.....	13,080	.....	13,080
15. Southwest Oregon ¹	(13,190)	.....	(13,190)
Total.....	1,310,974	400,000	1,710,974

¹ Included primarily for examination of interchange possibilities.

Obviously the exact distribution of special industrial load cannot be accurately determined in advance. Experience to date suggests that the choice lies between the economics of lower cost "at site" power, and the advantages of ocean navigation. The possibilities of ore refinement at the mine are not fully explored. Similarly, the time element is lacking in the above analysis. Certain areas with currently high levels of consumption may attain and advance beyond these estimates long before the electrically "backward" areas can obtain the necessary low resale rates and move forward to the levels of consumption now regarded as normal.

However, the experience of the Tennessee Valley Authority with regard to the growth of use of electricity, induced by drastic downward revision of resale rates, leads to the conclusion that the market for Federal power indicated above will be available within 5 to 8 years from the time such power is made available in the respective load areas.

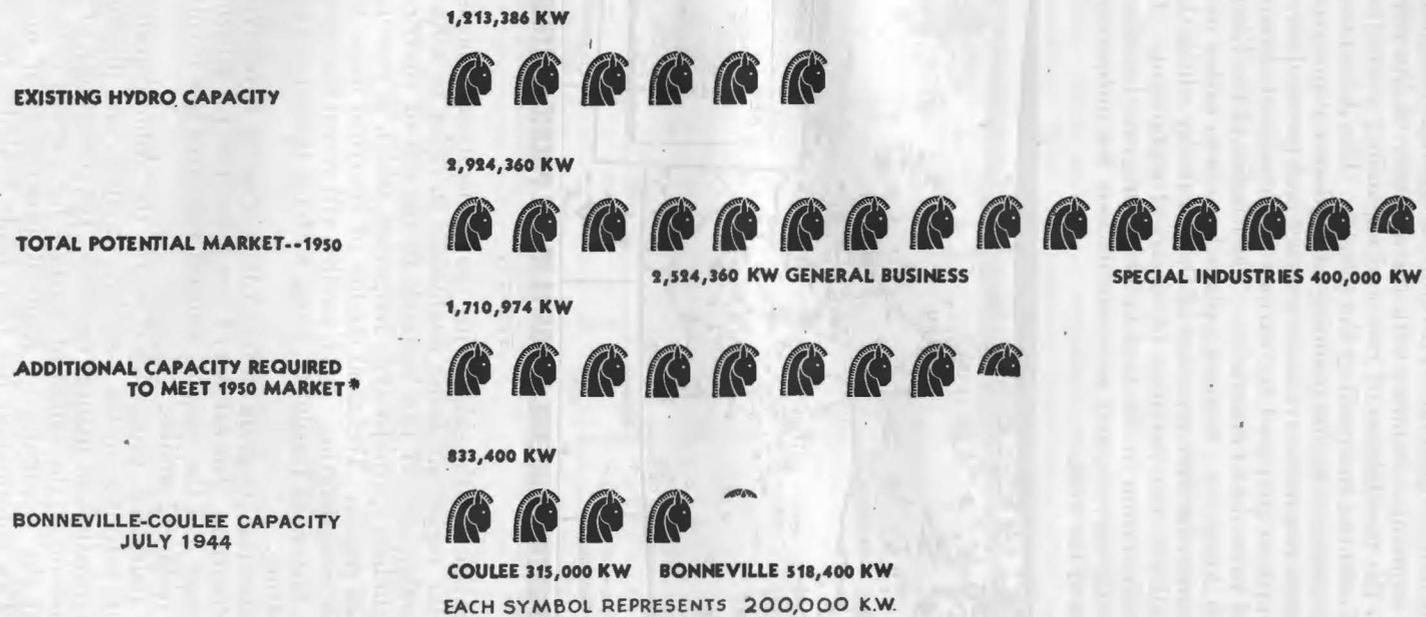
The Bonneville Power Administration is taking active steps to promote the possibilities of the rapid attainment of such markets for Federal power. Quite aside from consideration of the great public benefit from abundant use of electricity, this is good business, as the effect is materially to reduce the accrual of unliquidated fixed charges during the developmental period of the project.

Efforts to develop new and expanding markets—that is, to build load—have required and will continue to require two distinct types of programs, one for the domestic and commercial consumers of electricity and one for industrial-power utilization.

As for the domestic consumer in urban and rural areas, it is realized that the sharp rate reductions that become effective for residential service upon delivery of Federal hydroelectric power present an immediate opportunity to stimulate use of electricity. While lower rates automatically induce increased consumption of electricity, the

ELECTRIC GENERATING CAPACITY & POTENTIAL MARKET FOR POWER

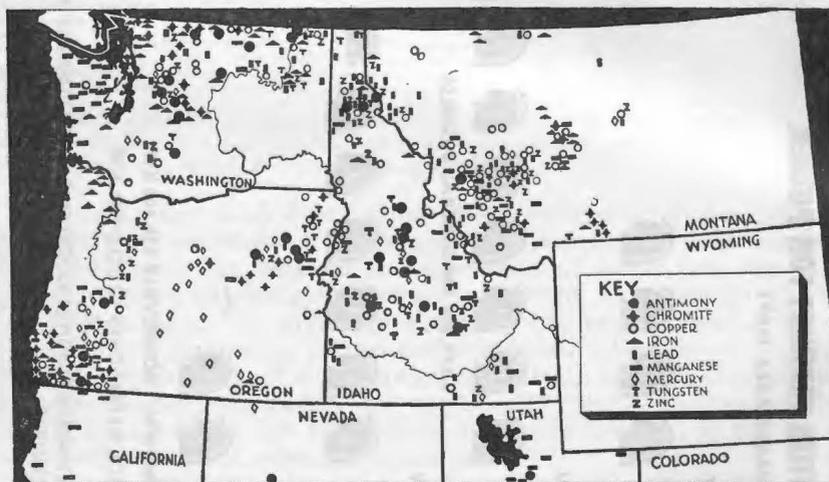
(BASED ON COLUMBIA RIVER POWER LOAD AND INTERCHANGE AREA MAP)



*EXISTING STEAM GENERATING CAPACITY OF 400,000 KW IS ASSUMED TO REPRESENT THE CAPACITY REQUIRED FOR RESERVE AND STAND BY FACILITIES

FIGURE 4.

increase usually is gradual. Therefore, a vigorous load-building program to acquaint consumers with the economy of the reduced rates and with the possibilities of new and expanding utilization of electricity is essential to speeding the process. The Administration has extended assistance in the planning of appliance demonstrations and exhibits, and has made available to cities and power districts technical information prepared by various governmental departments on urban and rural use of electricity. The benefits of the Electric Home and Farm Authority's financing plans have been called to the attention of many who were unaware of this means by which the Government facilitates the purchase of electrical equipment. Plans now under consideration in the load-building program include appliance and lighting surveys, and recommendations for adequate wiring of the homes of the area.



IMPORTANT MINERAL DEPOSITS IN THE PACIFIC NORTHWEST

FIGURE 5.

Cooperative relationships with the agricultural schools and colleges of the region are being established in order to achieve coordinated development of new methods in the use of electricity on the farm, including sprinkler-type irrigation, which is proving so valuable in the region. Technical studies of electrical house heating are also under consideration. Such studies will reveal the operating and economic factors of feasibility, along with the limitations of electrical house heating.

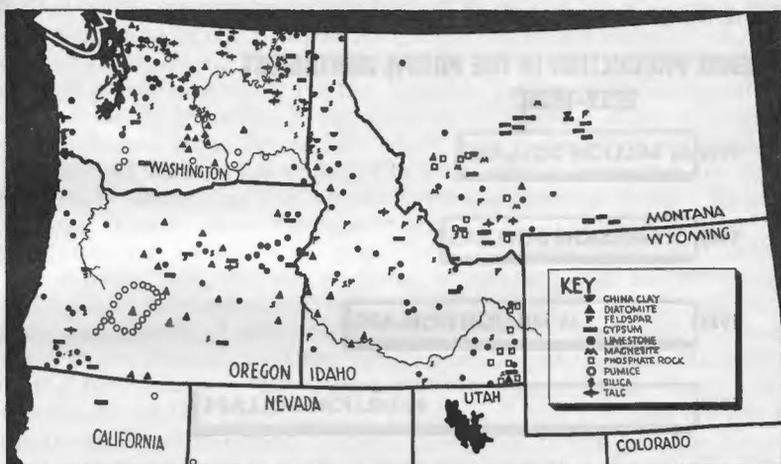
The industrial program of the Administration is receiving a great deal of attention. The subject of new industries for utilizing Federal hydro power and the region's mineral resources has involved a program of technical studies.

In its industrial promotional work, the Administration has restricted its activities to the assembly, analysis, and dissemination of basic information on natural resources, the technology of utilization of such resources, the extent of markets for various industrial products, and the economics of regional production of manufactured goods. This information has been made available not only to industrial and financial inquirers, but to the public at large for use

in local industrial promotion. In a relatively new region, where practical industrial information is largely lacking, or at best uncoordinated, this activity is of primary importance.

The growing scarcity of hydro sites elsewhere in the Nation is stimulating much interest in the Federal program on the Columbia River on the part of established and new electrometallurgical and electrochemical industries. Prior to their establishment, these industries must be furnished with basic data on industrial plant site availability, extent of transportation facilities and costs, raw materials, labor supply, taxation factors, and other related information.

Inasmuch as the subjects described above cover a field extending in many aspects beyond the statutory authority of the Bonneville Power Administration, cooperative arrangements have been made with Federal, State, and civic organizations for undertaking the necessary studies. Most significant of these is one which entails an



IMPORTANT NON-METALLIC MINERAL DEPOSITS In The Pacific Northwest

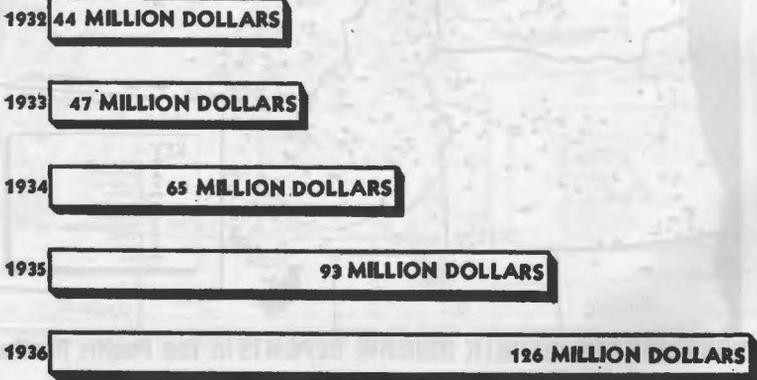
FIGURE 6.

industrial economic survey of the Pacific Northwest. For the pursuance of this work the Pacific Northwest Regional Planning Commission (the local branch of the National Resources Planning Board), the Northwest Regional Council (financed by the Rockefeller Foundation), and the Bonneville Power Administration have formed a correlating committee, through which the facilities and personnel of many Federal, State, and civic organizations can be brought into focus upon the practical aspects of economic and industrial expansion of the region. Some of the Federal agencies with whom cooperation is contemplated include the Department of Agriculture's regional laboratory at Berkeley, Calif., and its forest-product laboratory at Madison, Wis.; the various metallurgical and other laboratories of the Bureau of Mines, Department of the Interior; the United States Geological Survey, for the work of inventory of Northwest minerals; and many other agencies. The cooperation of various State colleges and universities is also involved.

An immediate practical result of such cooperation is the publication by the Administration of mineral occurrence maps, which were

prepared jointly with the State bureaus of mines and geology in the region. The United States Bureau of Mines assisted in the preparation of technical reports on specific industries. The United States forest-products laboratory has supplied the Administration with valuable information relative to the greater utilization of the forest resources, and the United States Forest Service has made available much essential statistical and other information relative to the forests of the Northwest and their utilization. The United States Corps of Engineers assisted by making available material relative to the hydraulic characteristics of the Columbia River and water transportation. Full cooperation also has been received by the Administration from the various planning agencies of the region in the formulation of basic policies and plans for the regional transmission network, sales of power, and determination of economic factors influenced by such network facilities. The State departments in the region have contributed advice and valuable material for the guidance of the technical staff of the Administration.

MINERAL PRODUCTION IN THE PACIFIC NORTHWEST 1932-1936



FROM MINERALS YEARBOOK · U.S. BUREAU OF MINES-1938

FIGURE 7.

With respect to strategic and critical industries, such as those of concern to national defense, the low-grade-ore bodies of the Northwest (as chromite, manganese, magnesium) will need not only immediate inventory, but the development of technical and commercial processes. Technical reports on programs leading to the acceleration of industrial expansion through the development of Northwest resources are being completed.

TRANSMISSION PLANNING

In view of the foregoing market analyses, statement of basic marketing policies, and outline of existing and potential power facilities in the region, the bases for the transmission system as completed, under construction, and planned will be briefly discussed. A reference map is shown in figure 9, page 34.

The backbone of the Federal system in the Pacific Northwest will consist of the interconnection of the Bonneville and Grand Coulee

power projects, obtaining thereby the important advantages of integration and consolidation of reserves. Bonneville is essentially a base load, energy-producing development, with its generators capable of continuous production over 90 percent of the time. Grand Coulee, on the other hand, is essentially a storage hydro project, and the possibilities of hydraulic interplay indicate that the combined output of primary power will greatly exceed the sum of such outputs calculated on an isolated basis.

Design considerations set 220,000 volts as the interconnection voltage, and dictated the necessity for a minimum of two major lines between the two Federal power projects. The most careful study has been given to the location of these lines. As a result it became apparent that consideration of both ultimate economy and immediate marketing requirements calls for a separation of routes in the form of a loop.

The first circuit interconnecting Bonneville and Grand Coulee will be completed by the fall of 1940. It follows the shortest possible route afforded by the intervening topography. It crosses the Columbia River at Vernita, close to the prospective project at Priest Rapids. A single 220,000-volt receiving substation at this point will be the immediate source of power deliveries for the Yakima Valley in Washington, and the dry-farming territory to the east and southeast. Right-of-way has been purchased for a second line along this route when required.

The second Bonneville-Grand Coulee circuit is designed for initial service as a marketing line and follows a circuitous route. Running west from Bonneville to Vancouver are two 220,000-volt circuits. The interconnecting circuit then runs north through Kelso to Chehalis, where a major 220,000-volt receiving substation will be constructed. The Chehalis substation will serve the Pacific coast section of Washington and the local area. From Chehalis this line will run north toward Puget Sound, and then turn east across the Cascade Mountains, crossing the Columbia River at a point adjacent to the Rock Island development of the Puget Sound Power & Light Co. and continuing directly northeast to Grand Coulee. The Rock Island plant is the only private-company development on the main Columbia River. Equipped for 60,000 kilowatts this plant is designed for an ultimate installation of 180,000 kilowatts.

At the present time negotiations are under way for interchange and back-up arrangements with the municipal systems of Tacoma and Seattle. It will be possible to extend this circuit No. 2 and consummate these interconnections from 1940 funds, and the protection thereby afforded the Bonneville system will enable the deferment of the section of the second Coulee circuit between Puget Sound and Grand Coulee until a later date. The interchange possibilities are of substantial interest to both the municipal and Federal systems in each case, for the storage hydro systems of the municipalities can be combined with the run of river plant at Bonneville so as to "firm up" both systems, thereby effecting an improvement in the grade of power available for sale. Such interconnections will also permit the Puget Sound area to progress industrially with the same power rate advantages as the remainder of the territory served by the Federal system. As in the case of the Bonneville-Grand Coulee No. 1 circuit, right-of-way for the No. 2 circuit is being purchased for an eventual duplicate line, and a 220,000-volt receiving substation will be constructed to serve the Puget Sound area when required to serve the market for Federal power.

COMPARISON OF WAGE-EARNERS PER CAPITA BY INDUSTRIES PERCENTAGE OF PACIFIC NORTHWEST TO NATIONAL AVERAGE

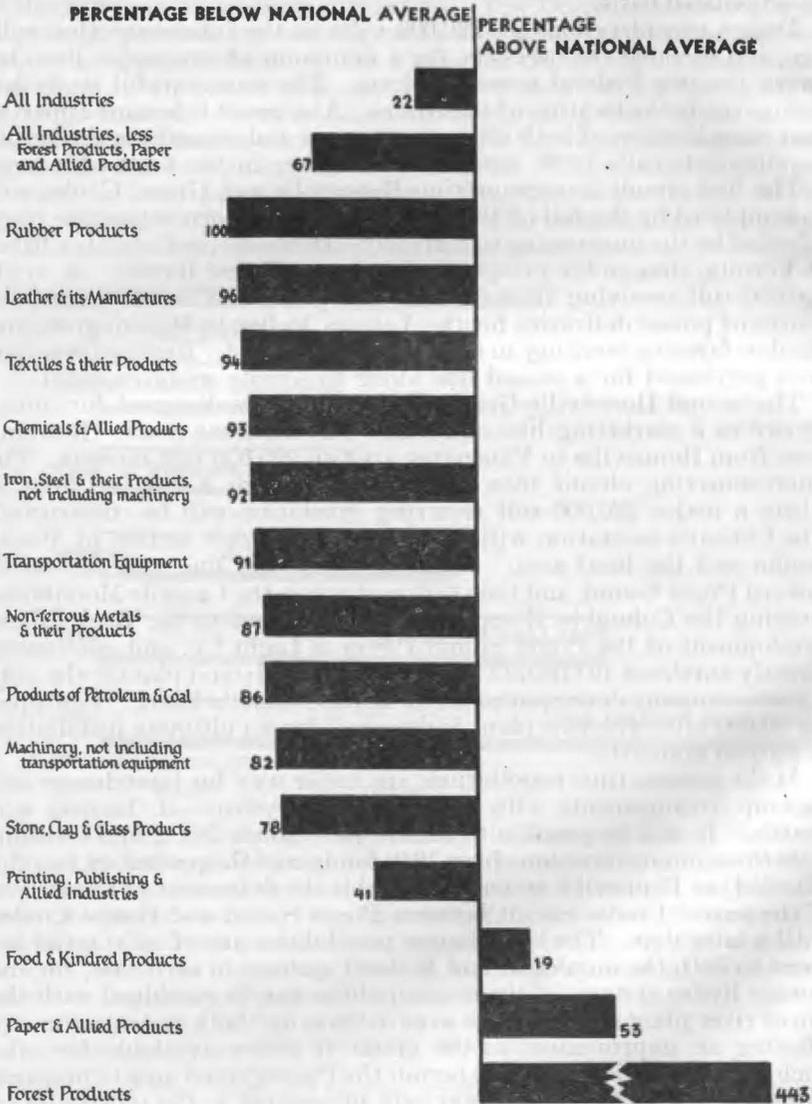


FIGURE 8. (From U.S. Census of Manufactures - 1937)

The local market in the Portland-Vancouver area is the most important from the standpoint of immediate requirements. At the present time delivery of power from the Bonneville plant to the Portland area is provided at 57,000 volts over the two lines from the powerhouse to the St. Johns substation. Later in 1940 this service will be rendered at 110,000 volts by the following means:

(a) One of the present two Bonneville-Vancouver lines will operate at 220,000 volts, stepping down to the 110,000-volt bus through two 75,000 kilovolt-amperes, 220/110 kilovolt transformer banks at Vancouver. The other Bonneville-Vancouver line will operate at 110,000 volts and will connect directly to the 110,000-volt bus at Vancouver.

(b) The Vancouver bus will be extended at 110,000 volts to the St. Johns substation over the two circuits now connecting these stations.

The Willamette Valley section will be served initially by a 110,000-volt circuit extending from the St. Johns (Portland) substation to Eugene, with a receiving substation at Salem. This Eugene circuit No. 1 was substantially completed at the close of the calendar year 1939. A second circuit is now under survey to be routed as directly from the Bonneville plant to the Salem substation as topography will permit. From Salem to Eugene the second circuit will follow a route on the west side of the Willamette River. These lines can serve initially for the interchange of power with the Eugene municipal system and for power sales. Eventually they will provide the means of interconnection with the Willamette River system flood-control power projects, for which initial construction has been commenced by the United States Corps of Engineers.

The possibilities of service in the area south and west of Eugene are under study. Complications exist in the way of rather sparsely developed territory, and by the fact that the California-Oregon Power Co., now serving the major portion of this area, is interconnected with and regulated by the California power systems.

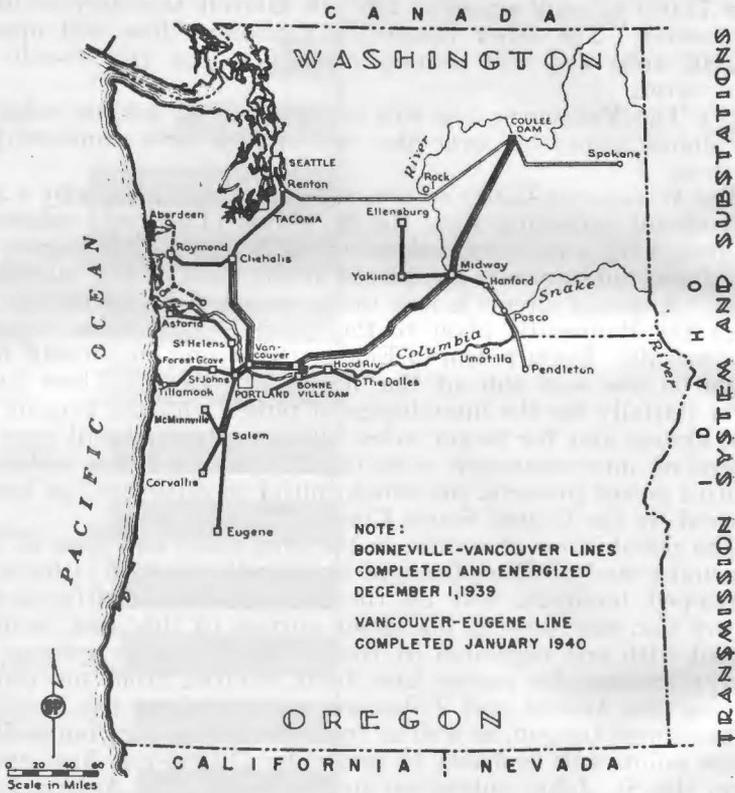
Applications for power have been received from the companies serving the Astoria and Tillamook sections along the Pacific coast of northwest Oregon, as well as from the Tillamook County P. U. D. These points will probably be served by 110,000-volt lines extending from the St. Johns substation in Portland. The Astoria line will follow the south bank of the Columbia River, and traverse an area with significant industrial potentialities. The Tillamook line will also serve the city of Forest Grove, which is temporarily taking Bonneville power through transfer arrangements with the Portland General Electric Co. The second Eugene circuit will be routed with a view to extending a branch west to the Toledo-Waldport section on the Pacific coast.

The Central Oregon section will be served by a 110,000-volt line now under construction from Bonneville east to Hood River and The Dalles. When funds are available this line may be extended south from The Dalles to a point adjacent to Bend.

The principal service to the Pacific-coast section of Washington will be the 110,000-volt line now under construction from Chehalis to Raymond. A contract has been executed with the Willapa Electric Co., contingent upon the sale of its distribution system to the

Pacific County Public Utility District, covering the purchase of its 66,000-volt line from Raymond to Aberdeen. This line will deliver power to the Grays Harbor area. Another purchase contract is under negotiation covering a similar joint purchase of the West Coast Power Co. transmission lines in Pacific and Wahkiakum Counties.

U.S. DEPARTMENT OF THE INTERIOR



LEGEND
 □ SUBSTATIONS.
 — PROPOSED LINES FOR CONSTRUCTION.
 - - - - - PROPOSED LINES FOR ACQUISITION BY PURCHASE.
 - - - - - SURVEY ONLY.

CONSTRUCTION PROGRAM

Jan. 1940

THE BONNEVILLE PROJECT

FIGURE 9.

Line extensions from the Vernita substation on the Bonneville-Coulee line No. 1 are under study. A number of municipal and cooperative systems in the Yakima Valley, Washington, are ready to purchase Bonneville power. A similar situation exists in the eastern Washington and contiguous Idaho sections, where the Rural Electrification Administration has already sponsored a major development of rural electric cooperatives. In view of the deficiencies of hydro power in the section east of Vernita, the line to Pasco will be



Tower construction on Columbia-Willamette crossings on Vancouver-Eugene line.



Insulators, Bradford Island crossing.

constructed as soon as possible, and extensions to Walla Walla, Lewiston, and Colfax will be constructed as soon as funds are available. The projected line from Pasco to Pendleton, Oreg., must be designed in consideration of the possible eventual extension of the line to La Grande and interconnection with the eastern Oregon and Idaho power companies.

The expansion of the Federal transmission system in the Grand Coulee and Spokane, Wash., areas is under preliminary study. Numerous applications from districts and from existing municipal and cooperative systems have been received. The development of the Columbia Basin irrigation project is under survey by the Bureau of Reclamation, with the Bonneville Power Administration cooperating, in view of the effect of such development on the Federal transmission system and other power systems in the region.

The planning of the transmission system has involved consideration of operating as well as marketing problems. The aim has been to program a system not only to supply the initial power markets but also to provide for the expansion of service to meet growing power loads with the maximum economy of investment and operating costs. All lines are planned with a view toward making the maximum use of surplus hydroelectric and fuel generating facilities as back-up and reserves. Receiving substations, marketing lines, and subtransmission capacities are based on estimates of load growth which contemplate adequacy of construction for at least 5 years. Interchange arrangements are contemplated wherever the diversity of hydraulic characteristics indicates the conservation of water power. Wherever possible, surplus hydroelectric power will be made available to displace more expensive fuel production of electricity.

The policy of coordination with other public and private power systems to produce the lowest cost power supply throughout the Pacific Northwest was recently announced by the Administrator in the following terms:

Under this method both parties to an interconnection maintain complete independence but agree to so schedule their operations that each may, without disadvantage to the other, obtain the maximum possible economic benefit from interconnection. Obvious benefits include:

- (a) Reduction of reserve capacity, as either system may call on the other in time of emergency.
- (b) Displacement of steam energy by surplus hydro energy, preventing waste of water power.
- (c) Exchange of surplus hydro energy where a diversity between hydraulic conditions produces a mutual firming up.
- (d) Reduction in total generating capacity by taking advantage of any diversity that exists between system peak loads.
- (e) Programming of generator installations to reduce the overbuilding factor on the combined load.

These advantages can be obtained by coordination on a mutually agreeable and cooperative basis under which, as the various conditions arise, the two systems in accordance with a contractual understanding, work out the means of obtaining the natural economic benefit resulting from the interconnection. From time to time, the weight of economic advantage may swing from one system to another, but in the long run both systems save money and increase the reliability of their service. This is the type of integration which the Bonneville system has proposed to the four major municipal systems in Washington and Oregon.

TRANSMISSION INVESTMENT

Current plans and estimates indicate that the Federal transmission system in the Pacific Northwest region can be constructed for a unit cost per kilowatt, on an ultimate basis, of not more than \$70 a kilowatt of installed capacity. By its very nature the construction required during the period of initial development results in a higher unit cost. The switchyards at the generating stations and step-up transformation are not included.

The specific amounts made available to the Bonneville Power Administration to date for transmission construction are shown in the following table:

1939 fiscal year congressional appropriation-----	\$3, 500, 000
1939-40 Public Works allotment-----	10, 750, 000
1940 fiscal year congressional appropriation-----	13, 000, 000
Total-----	27, 250, 000

The above amounts are exclusive of funds supplied by the Works Progress Administration for clearing costs on transmission right-of-way.

With minor system additions the completion of work under way with present funds will provide for marketing the power capacity of Bonneville Generating Units Nos. 1 to 4, inclusive, totaling 194,400 kilowatts, and Grand Coulee Unit No. 1, totaling 105,000 kilowatts, or a total of 299,400 kilowatts. This power will be available after August 1, 1941, and with adequate transmission facilities assured, can be delivered to customers.

Present funds will not provide for the marketing of Bonneville generating Units Nos. 5 and 6, and Grand Coulee Units Nos. 2 and 3, totaling 318,000 kilowatts, all of which will become available in 1942. The new lines and substation facilities required to market this additional power capacity will cost approximately \$30,000,000. As it takes from 18 to 24 months to study, survey, design, specify, purchase equipment and construct the complex, high-voltage electrical transmission facilities required for this purpose, the preliminary work on the necessary additions should be commenced at once. If delayed, a serious power shortage may threaten the region and retard its development. From a purely business viewpoint, the loss of revenue entailed by the enforced idleness of generating equipment because of delay in the construction of adequate transmission and transformation facilities to serve markets, is of the utmost importance.

WHOLESALE RATES

As provided in the Bonneville Act, the Power Administrator is required to market Bonneville power at wholesale, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. The wholesale rate schedules of the Bonneville Administration as of December 31, 1939, are listed as follows:

1. At site prime power (A-2), \$14.50 per kilowatt per year.
2. Transmitted prime power (C-2), \$17.50 per kilowatt per year.

3. Optional prime power (F-1), 75 cents demand charge per kilowatt per month, plus energy charge of $2\frac{1}{2}$ mills per kilowatt-hour.

4. Dump energy (H-1), $2\frac{1}{2}$ mills per kilowatt-hour.

(See appendix B for complete schedules.)

The above schedules were approved by the Federal Power Commission on September 13, 1939, to become effective September 18, 1939, and involve three major changes from the rate schedules previously in effect:

1. The secondary power rates previously in effect were withdrawn as inconsistent with the results of integration through an interconnected Federal hydro system.

2. A new firm power rate was added, called "prime power optional wholesale power rate schedule F-1," which provides advantages for customers having an average monthly load factor of less than 45 percent.⁹

3. A new dump energy rate was authorized, called the H-1 rate at 2.5 mills per kilowatt-hour for surplus energy. Delivery of such energy is not guaranteed, but is made only when the energy is available to customers who have other dependable sources of supply.

The new rates recently approved by the Federal Power Commission were designed to fit more closely the conditions confronting prospective purchasers of Bonneville power. As noted above, the new F-1 rate provides advantages for customers with average monthly load factors lower than approximately 45 percent. These advantages result partly because of a change in the form of the rate from a flat demand charge per kilowatt of \$17.50 per year (1.46 per month) to a demand charge of 75 cents per month with a charge of one-fourth cent per kilowatt-hour for energy used, whereas no energy charge is included in the kilowatt-year rate. In addition, the new F-1 rate provides that the demand charge shall be based on the maximum demand during each month, while the charge under kilowatt-year rate (C-2) is based on the maximum yearly demand. Since electrical loads of municipal utilities typically vary from a high figure in winter months to a low figure in summer months, the new rate provides a further advantage for such utilities by permitting a similar variation in the demand charges. When this factor is taken into account, the two rates (F-1 and C-2) "cross" at about 45 percent load factor—that is, the F-1 rate is more advantageous for practically all utilities with less than 45 percent average annual load factors.

Most municipal and cooperative utilities at present have annual load factors of less than 45 percent, and would thus benefit by application of the new rate. It is significant that in the studies thus far made of the operations of existing and prospective municipal utilities and public-utility districts which are expected to purchase Bonneville power on the transmission system for their total requirements, the new F-1 rate is the more advantageous for the purchaser in every case.

Both the new F-1 rate and the old C-2 rate retain the provision that public bodies and cooperatives purchasing their entire energy

⁹ That is, customers having an average power demand which is less than 45 percent of their maximum power demand.

requirements from Bonneville will be permitted a developmental period of 2 years during which the average cost of energy will not exceed 5 mills per kilowatt-hour. The advantages of this provision to new public and cooperative distributing agencies are obvious.

The new dump energy rate (H-1) is a flat one-fourth cent per kilowatt-hour. Delivery of such energy is not assured, but will be made only to the extent that surplus power is available. The schedule provides that the dump-energy rate will be applied only in cases where the purchaser has other sources of power, such as a steam-generating plant held in reserve, ample to supply its requirements when dump energy is not available. That is, it must be possible for the Bonneville Power Administrator to withdraw dump energy without adversely affecting the ability of the utility to render adequate service to its customers.

It should be clear from the above that schedule H-1 does not have wide applicability, but is intended for use in special circumstances, primarily to replace energy which would otherwise be generated by fuel. The Administrator has ruled that dump energy cannot be used as a substitute for shortage in either stream flow or stored water, except where fuel-generating facilities sufficient for this purpose are maintained, and that dump energy cannot be used to take the place of reasonable reserve generating capacity, such as would be maintained by a prudent utility.

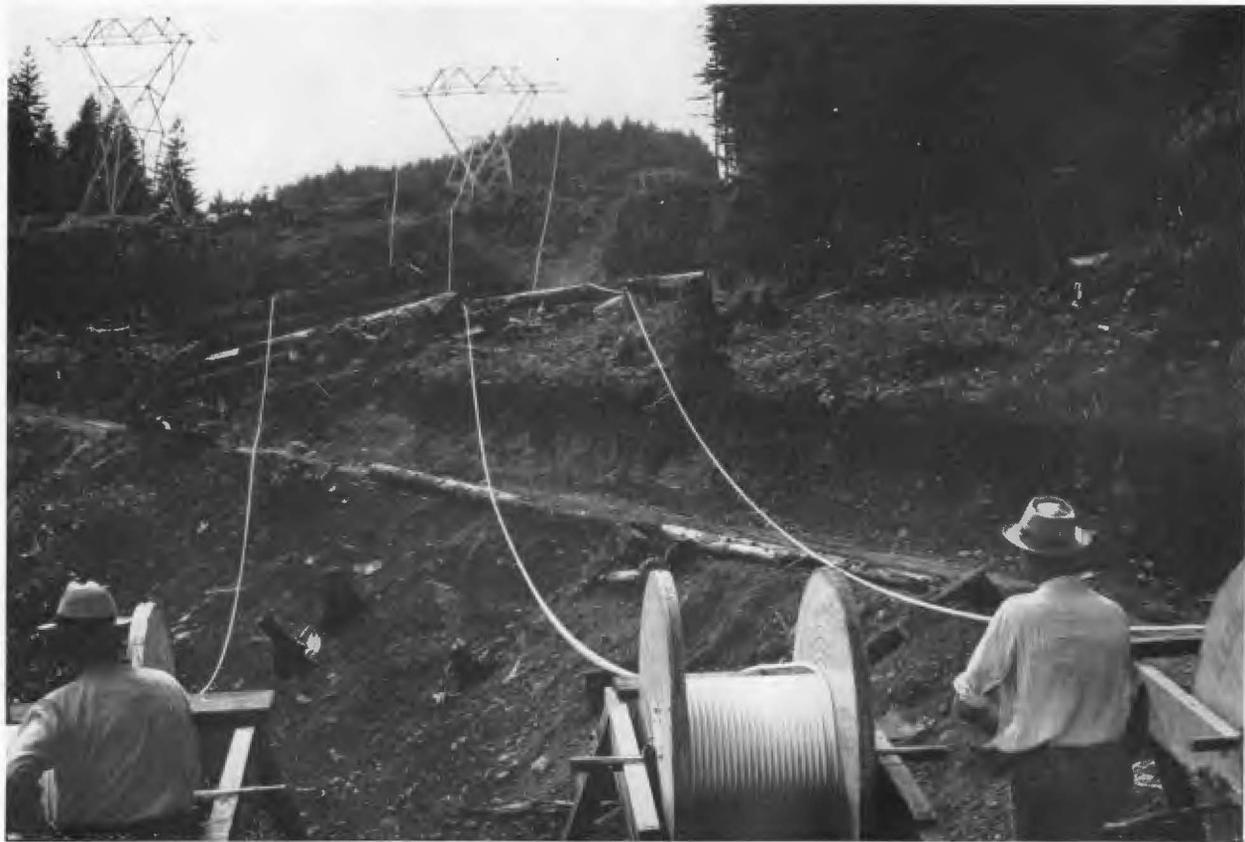
During the past year, up to December 13, 1939, another rate schedule was in effect. This was the temporary wholesale power rate schedule E-1 which was designed to enable the sale of energy generated at the Bonneville project power plant in advance of completion of Bonneville's transmission facilities. The schedule was approved by the Federal Power Commission on December 20, 1938, retroactive to November 1, 1938. (See appendix B for the complete schedule.) Schedule E-1 covered prime and secondary power on a flat-demand basis at the rate of one three hundred and sixty-fifth of \$17.50 and \$11.50 respectively per day per kilowatt of billing demand. By its terms, this schedule expired on the date of completion of the Bonneville-Vancouver transmission facilities, but in no event later than December 31, 1939. The rate provided for transmission of power by the purchaser from the Bonneville power plant to the place of distribution, with adjustment for losses in transformation and transmission from the point of metering to the theoretical point of delivery. Power was sold to Northwestern Electric Co. under rate schedule E-1 until December 13, 1939, when the Bonneville-Vancouver transmission facilities were considered completed, and the rate schedule expired.

REVENUES, EXPENSES, AND INCOME

Estimated revenues from power sales during the 1940 fiscal year are set forth in other sections of this report. Power revenues for the 1941 fiscal year are estimated at \$2,200,000, the major variable being the market for dump power, which is affected by the extent of rainfall. On this basis the results of the 1941 fiscal year will show a substantial surplus returned to the Federal Treasury toward fixed charges, as indicated in the following table:



Completed tower 681 on Bonneville-Coulee line.



Stringing conductor on line 2 of the Bonneville-Vancouver line. Looking west near tower 48.

Statement of estimated revenues and expenses

[Fiscal year ended June 30, 1941]

Estimated power revenues.....	\$2, 200, 000
Less expenses of operation, maintenance, depreciation, and administration of dam (as allocated by Federal Power Commission), power plant and switchyard (estimate of U. S. Corps of Engineers).....	180, 213
Balance available for marketing expenses, fixed charges, and surplus.....	2, 019, 787
Less estimated marketing expenses.....	904, 850
Balance available for fixed charges and surplus.....	1, 114, 937

The estimate of revenues for the fiscal year 1941 takes account of the fact that generating units Nos. 3 and 4 will be available for only half the year.

Notwithstanding the fact that present wholesale rates are the lowest in the country, the ability of Bonneville power sales rapidly to liquidate the investment of the Federal Government in the combined generating and transmission system is strikingly illustrated by the revenue-cost study summarized in table 8. This study shows the expectable results after completion of all generating units and that portion of the regional transmission system fairly allocable to the Bonneville project. Present wholesale rates, allowing conservatively for energy losses and sales factors, would provide annual revenues averaging \$9,350,000. The United States Corps of Engineers would require \$440,451 and the Bonneville Power Administration would require \$1,450,000 a year for operation and maintenance, renewals, sales, and administration expenses. The balance of \$7,459,549, after deducting these expenses, would be available to the Federal Treasury for fixed charges and liquidation. This balance represents a return of 8.6 percent on the combined power investment. If liquidation is assumed on the basis of 3½ percent for interest with amortization over a 40-year period, the annual requirement would amount to \$4,060,000. On this basis over one-third of the gross revenues would be available for liquidation of the direct and allocated navigation investment and for the support of future conservation projects as additional power supplies became necessary.

TABLE 8.—Revenue—Cost estimates

	ULTIMATE BASIS	Per kilowatt-year
Basis for estimates:		
A-2 rate.....		\$14. 50
C-2 rate.....		17. 50
H-1 rate (80 percent, utility factor).....		17. 56
F-1 rate (F-1 at 40 percent, H-1 at 40 percent).....		¹ 24. 76
Loss-diversity relation:		Kilowatts
Available capacity.....		518, 400
Losses, etc., on peak (10 percent).....		51, 840
Balance at load.....		466, 560
Diversity factor.....		1. 11
Contract demand capability.....		518, 400
¹ See the following:		
Demand 75 cents by 12 months equals \$9 by 80 percent.....		\$7. 20
Energy 7,000 kilowatt-hours/kilowatts, at 2.5 mills.....		17. 56
Total.....		24. 76

TABLE 8.—Revenue—Cost estimates—Continued

Ultimate revenues:		
Distribution of capacity:		<i>Weighted</i>
20 percent on A-2, at \$14.50	-----	\$2.90
50 percent on C-2, at \$17.50	-----	8.75
20 percent on F-1, at \$24.76	-----	4.95
10 percent on H-1, at \$17.56	-----	1.76
Average per kilowatt-year	-----	18.36
		<i>Average year</i>
Energy available	----- kilowatt-hours	4,180,000,000
Losses, etc. (8 percent)	----- do	335,000,000
Balance for load	----- do	3,845,000,000
Required for 80-percent utilization factor on capacity (518,400 kilowatts)	----- kilowatt-hours	3,635,000,000
Balance (off-peak)	----- do	210,000,000
Total revenues:		
518,400 kilowatt-years, at \$18.36	-----	\$9,325,000
210,000,000 kilowatt-hours off-peak, at 2.5 mills	-----	525,000
Ultimate total	-----	9,850,000
Sales factor	----- percent	95
Revenue estimate for average year	-----	\$9,350,000

ANNUAL COST

Fixed capital:

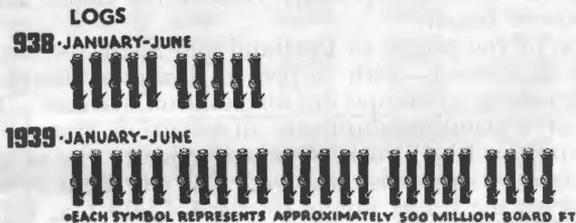
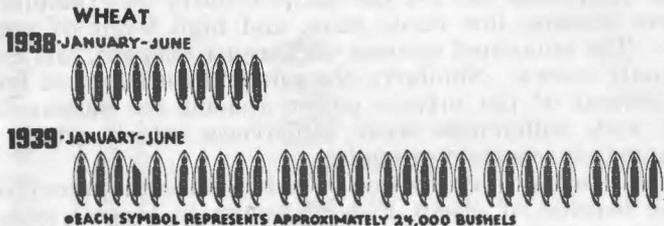
Investment in transmission, transformation, and operating facilities (518,400 kilowatts at \$70)	-----	\$36,288,000
Investment in dam (as allocated by Federal Power Commission), power plant, and switchyard (U. S. Corps of Engineers)	-----	50,293,885
Total fixed capital	-----	86,581,885

Revenue—Cost statement:

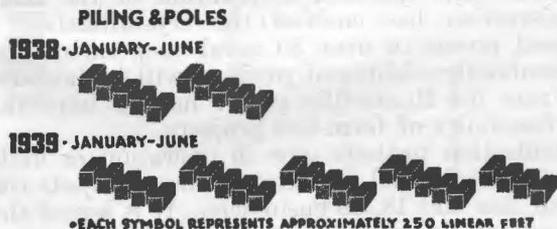
Average annual revenues (ultimate basis)	-----	9,350,000
Less: Operation, maintenance, depreciation, and administration of dam (as allocated by Federal Power Commission), power plant and switchyard (U. S. Corps of Engineers)	-----	440,451
Balance	-----	8,909,549
Less: Marketing costs:	<i>Percent</i>	
Operation and maintenance (of transmission investment)	1.5	
Depreciation	1.0	
Sales and administration	1.5	
Total	-----	1,450,000
Balance for fixed charges	-----	7,459,549
Balance, percent of fixed capital	-----	8.6
Fixed charges at 3½ percent interest and 40-year amortization rate (4.683 percent of fixed capital)	-----	4,060,000
Surplus revenues	-----	3,399,549
Percent surplus of total revenues	-----	36.4

In summary, the feasibility studies indicate that if the present wholesale rates are maintained, the Government would recover within 15 years of the completion of all power-generating units in Bonneville Dam not only the full investment allocated by the Federal Power Commission to power production, but also interest thereon at 3½ percent.

SHIPMENTS DOWN THE COLUMBIA

SHIPMENTS UP THE COLUMBIA

•COURTESY U.S. ARMY ENGINEERS•

FIGURE 10.

DISTRIBUTION

The problem of marketing Bonneville power cannot be confined to a discussion of the wholesale aspects. The problem of distribution is of equal importance. The cooperation of distributing agencies is essential if the congressional power policy is to be attained in the Pacific Northwest.

The Pacific Northwest has led the entire country in examples of low-cost power systems, low resale rates, and high levels of power consumption. The municipal systems of Tacoma, Eugene, and Seattle are nationally known. Similarly, the rate and consumption levels attained by several of the private power systems are outstanding. Nevertheless, wide differences occur, differences which cannot be readily explained on economic grounds.

Efficient and economic distribution is a fundamental prerequisite to permit the benefits of cheap Federal power to become general throughout the region. This is especially true if the home, farm, and small business are to benefit.

The future position of the people in Portland and Seattle—the two largest cities in the Northwest—with respect to low-cost electricity is obscured by the existence of competing distribution systems. The investment burden of expanding duplicate distribution systems in these communities appears likely to become a barrier to the attainment of the low resale rates otherwise assured. The city-light system of Seattle competes with the Puget Sound Power & Light Co., which serves a wide area. The Portland General Electric Co. and Northwestern Electric Co., a unit of the Electric Bond & Share group, jointly serve in Portland, Oreg., and Vancouver, Wash.

Private systems throughout the area have applied for Bonneville power and have offered complete cooperation and system coordination in the attainment of a low-rate-power economy. No matter how sincere such offers appear, the Bonneville Administrator must face the facts of each case and determine whether the facts are conducive to economical distribution. The spread of organized public utility districts throughout the State of Washington, and to a lesser degree in Oregon, may be viewed as an expression of the people of their intention to insist on the elimination of all artificial barriers to the attainment of low rates.

The regional situation on the development of rural electrification offers a brighter picture. The splendid cooperation of the Rural Electrification Administration has enabled the crystallization of plans to deliver Federal power to over 30 rural cooperatives and district projects. Undoubtedly additional projects will be initiated, as the low wholesale rate for Bonneville power has an important effect on the economic feasibility of farm-line projects.

A list of rural-electrification projects now in operation or under way is shown in table 9. At the end of the year these projects contemplated 7,012 miles of line and 18,539 customers. It is hoped that Federal power will be generally available to most of these projects by the end of 1941. Initial deliveries will be made within a few months to several projects. An important expansion of these rural electrification cooperatives is anticipated for the next few years.

CONSUMER MARKET ANALYSIS OF THE PACIFIC NORTHWEST

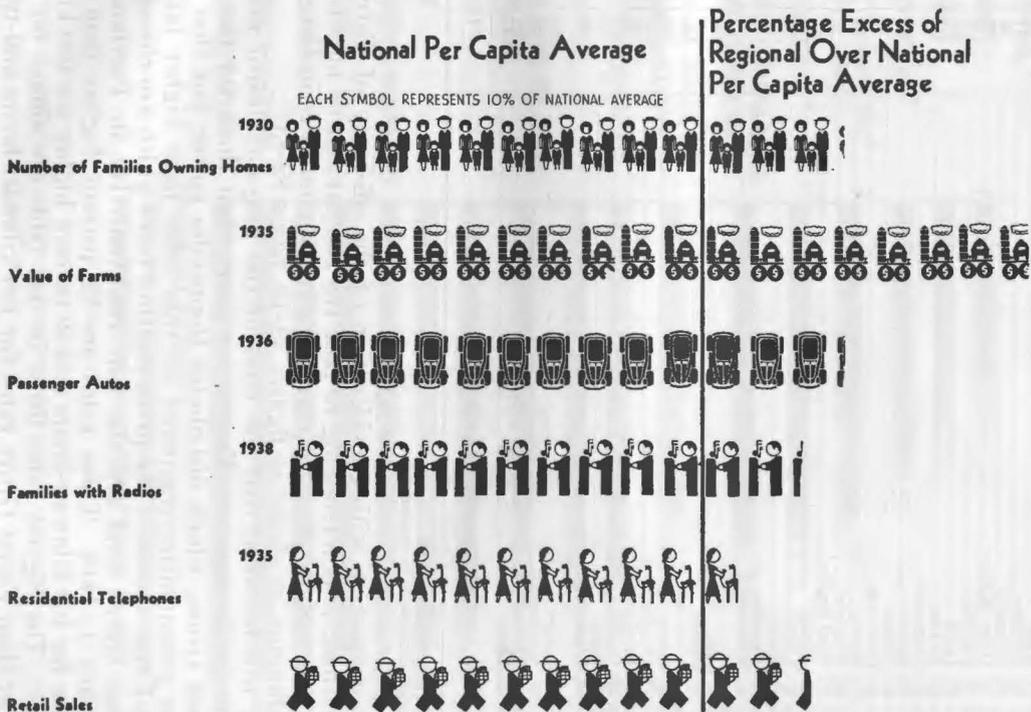


FIGURE 11.

TABLE 9.—*Rural Electrification Administration projects in Bonneville—Grand Coulee territory*

[As of Dec. 15, 1939]

Project	Miles of line	Customers
Washington:		
No. 8. Benton.....	197	647
No. 9. San Juan.....	105	295
No. 14. King.....	13	38
No. 18. Spokane.....	1,571	3,585
No. 20. Columbia.....	69	116
No. 23. Grays Harbor.....	23	150
No. 25. Cowlitz.....	151	585
No. 27. Lewis.....	255	1,034
No. 28. Kittitas.....	127	258
No. 29. Skamania.....		(¹)
No. 30. Stevens.....	292	703
No. 31. Chelan.....		(¹)
No. 32. Okanogan.....	47	191
No. 33. Mason.....	60	175
No. 34. Whatcom.....		(¹)
No. 35. Pend Oreille.....	179	388
No. 36. Adams.....	268	278
No. 37. Lincoln.....	592	605
No. 38. Douglas.....	110	118
No. 39. Nespelen.....	36	208
No. 40. Klickitat.....		(¹)
Oregon:		
No. 2. Lane.....	108	446
No. 4. Lincoln.....	217	701
No. 14. Umatilla.....	240	622
No. 5. Clatsop.....	54	273
No. 17. Douglas.....	110	372
No. 18. Eugene.....	28	260
No. 20. Curry.....	70	215
No. 21. Coos.....	99	357
No. 22. Clackamas.....	45	175
Idaho: ²		
No. 4. Bonner.....	243	986
No. 10. Nez Perce.....	1,123	3,346
No. 11. Kootenai.....	263	607
No. 15. Idaho.....	317	805
Total (34).....	7,012	18,539

¹ Field surveys in progress.² Projects contiguous to Spokane area.

In connection with consideration of the efficiency of distribution operations, it is interesting to note the comparison of monthly electric bills now in effect for representative communities in Oregon and Washington, as shown in figures 12-13, pages 82-83.¹⁰

It will be noted that the rates of the long-established municipal plants in Tacoma and Eugene are lower than those for the city of Forest Grove, which distributes Bonneville power, but that all the other communities compared on this table have higher bills than does Forest Grove. The private utility rates which are closest to the Forest Grove level are the new rates effective in Portland after January 1, 1940. These rates are 22 percent higher than Forest Grove for 100 kilowatt-hours and 39 percent higher for 250 kilowatt-hours. The highest rates listed in this table are almost 90 percent higher than Forest Grove rates for 100 kilowatt-hours and twice the Forest Grove bill for 250 kilowatt-hours.

Bills at Cascade Locks, which also distributes Bonneville power, are also shown in the charts. These bills are 75 cents per month higher than those in Forest Grove for all usages of 50 kilowatt-hours per month or more, or 30 percent higher for 100 kilowatt-hours and

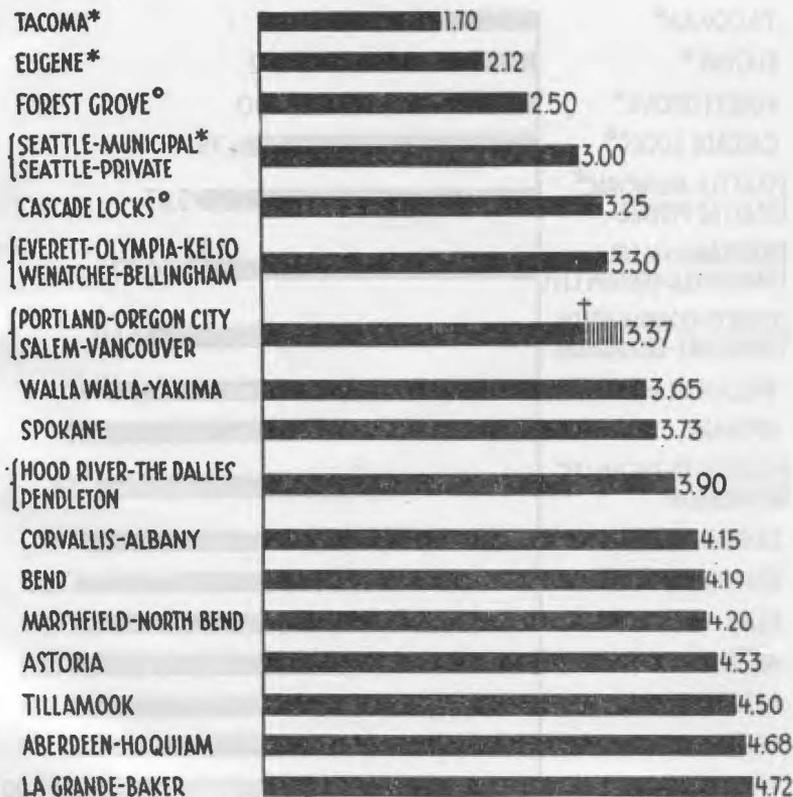
¹⁰ For statement of Bonneville's interest in resale rates, see pp. 12 and 26, above.

19 percent higher for 250 kilowatt-hours. As of December 1939, no private utility was as low as Cascade Locks. It may be noted that Cascade Locks serves less than 500 customers, scattered for 25 miles along the mountainous Columbia River Gorge.

COMPARATIVE ELECTRIC BILLS

RESIDENTIAL SERVICE OREGON & WASHINGTON COMMUNITIES

BILL FOR 100 KWH
(DECEMBER, 1939)



* MUNICIPAL SYSTEM*

° MUNICIPAL SYSTEMS DISTRIBUTING BONNEVILLE POWER°

† NEW RATES EFFECTIVE 1-1-40-REDUCE BILL TO \$3.05†

FIGURE 12.

FORECAST OF POWER DEMANDS AND CAPACITY

The forecast of power demands rests in large part upon completion of transmission facilities and connection of new load.

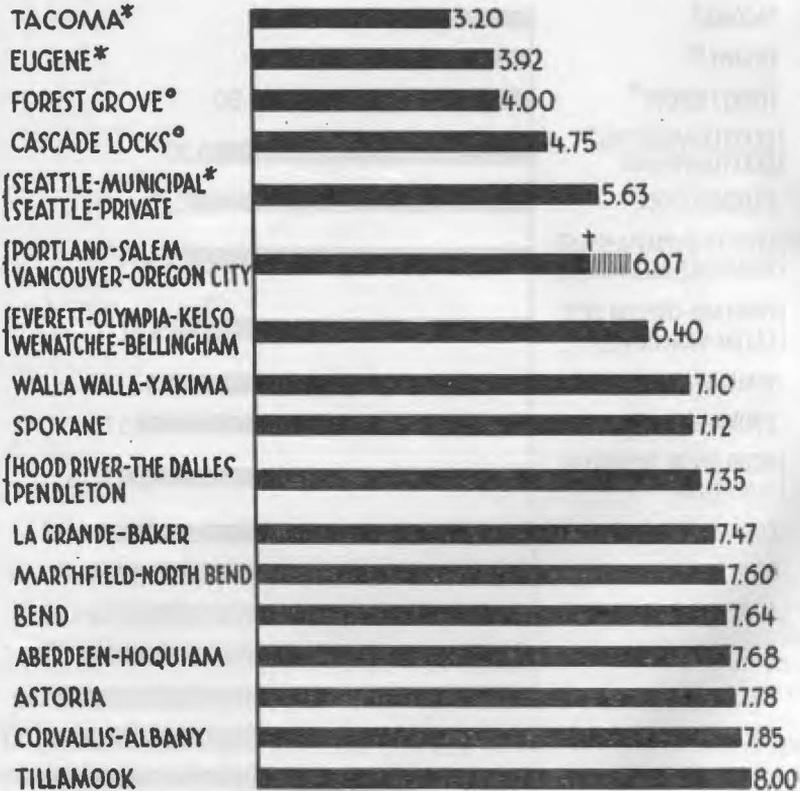
The first important completion of Bonneville transmission facilities occurred on December 1, 1939. Simultaneously a contract was signed with the Portland General Electric Co. and the Federal and private systems were interconnected. With numerous other line and substation completions scheduled for the near future, the contract

and load forecast situation has entered a period where even weekly estimates must be considered tentative.

Table 10 and figure 14, summarizing the estimated primary power demands and available generating capacity for the 1939-40 peak

COMPARATIVE ELECTRIC BILLS

RESIDENTIAL SERVICE OREGON & WASHINGTON COMMUNITIES
BILL FOR 250 KWH
(DECEMBER, 1939)



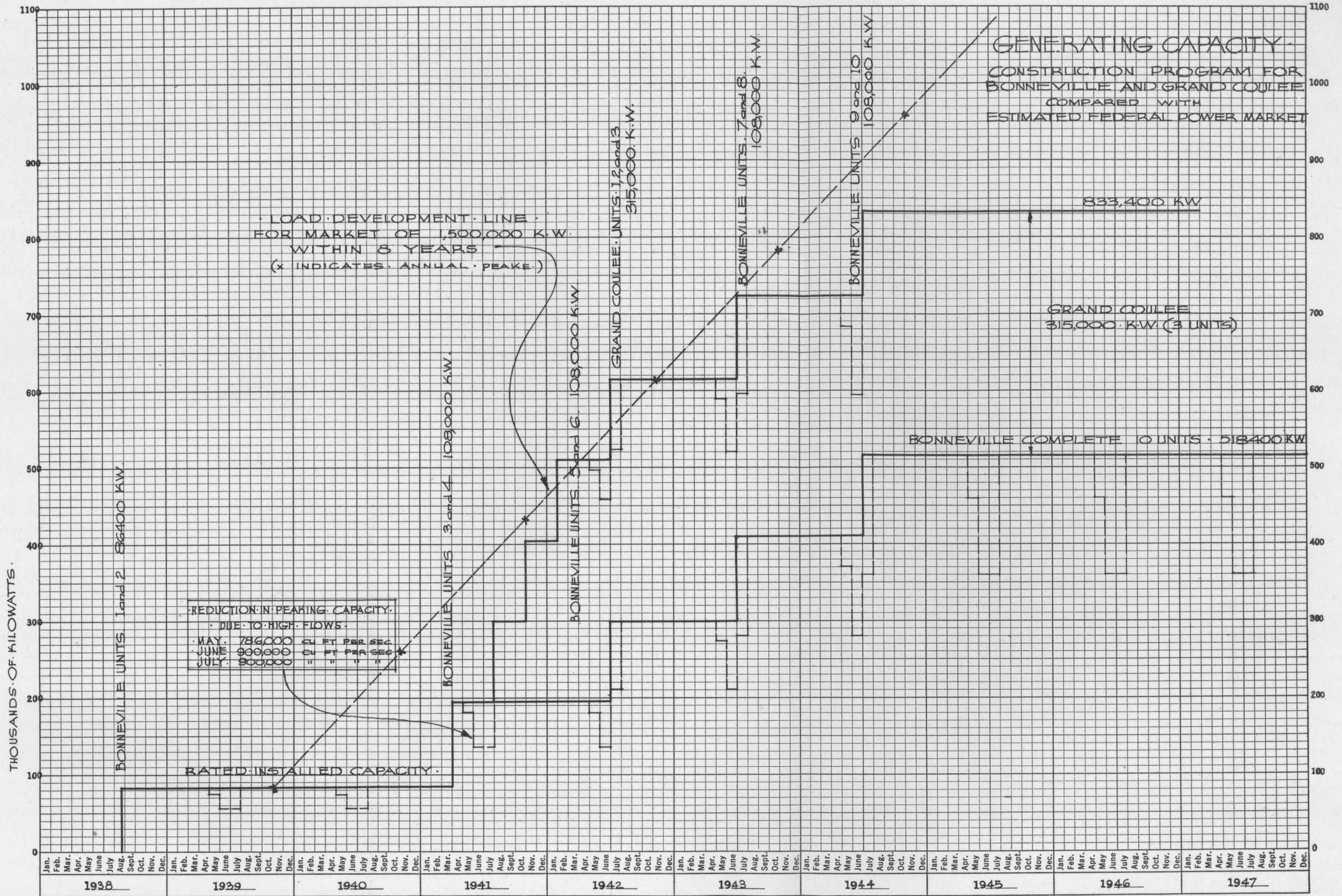
MUNICIPAL SYSTEM

°MUNICIPAL SYSTEMS DISTRIBUTING BONNEVILLE POWER°

† NEW RATES EFFECTIVE 1-1-40--REDUCE BILL TO \$5.55 †

FIGURE 13.

period and for the next two winter peak periods fairly represent the status as of December 31, 1939. These estimates give effect only to signed contracts, formal applications, and other evidence of willingness and ability on the part of prospective customers to purchase Bonneville power during the periods covered by the chart. The chart reveals the necessity of curtailing the demands of private agencies until Bonneville generating units No. 3 and No. 4 are available in order to give full effect to the expressed policy of the Bonneville Act for preference to public agencies. The frequent revisions



BONNEVILLE POWER ADMINISTRATION

OCT. 30, 1939 SP-1

of this table seem to be uniformly in the direction of increased demands, and are such as to warrant a careful review of present generation and transmission construction schedules.

TABLE 10.—The Bonneville project¹—Summary of estimated primary power demands

[Status as of Dec. 31, 1939]

	Fiscal year		
	1940	1941	1942
Municipalities:	<i>Kilowatts</i>	<i>Kilowatts</i>	<i>Kilowatts</i>
Cashmere, Wash.....			1,200
Centralia, Wash.....		600	900
Chewelah, Wash.....			250
Cheney, Wash.....			800
Ellensburg, Wash.....		1,500	1,800
Seattle, Wash.....			
Tacoma, Wash.....			
South Cle Elum, Wash.....		50	70
Canby, Oreg. ²	300	350	400
Cascade Locks, Oreg. ²	240	280	320
Eugene, Oreg.....		1,800	3,000
Forest Grove, Oreg. ²	750	850	1,000
Hood River, Oreg.....		100	100
McMinnville, Oreg.....		1,500	1,800
Milton, Oreg.....		500	750
Monmouth, Oreg.....		300	350
Public utility districts (excluding Rural Electrification Administration):			
Skamania ²	200	250	300
Pacific ²		2,000	2,300
Wahkiakum ²		700	800
Klickitat ²	100	500	1,000
Grays Harbor.....		5,000	6,000
Cowlitz.....		1,000	1,500
Wickiup.....		100	120
Drainage districts		7,500	7,500
Rural Electrification Administration projects		8,450	10,660
Total public agencies	1,590	33,330	42,920
Power companies:			
Portland General Electric Co. ²	20,000	30,000	40,000
Northwestern Electric Co.....		15,000	20,000
Pacific Power & Light Co.....		5,000	8,000
Mountain States Power Co.....		15,000	18,000
Total companies	20,000	65,000	86,000
Industries:			
Aluminum Co. of America ²		29,500	32,500
B Co.....	6,000	15,000	30,000
C Co.....		8,000	8,000
D Co.....		27,000	32,500
Total industries	6,000	79,500	103,000
Total private agencies	26,000	144,500	189,000
Total primary power	27,590	177,830	231,920

¹ Contracts executed or under negotiation, status as of Dec. 31, 1939.

² Contract executed.

NOTE.—Dump-power demands not included.

IV. CONSTRUCTION OF THE BONNEVILLE SYSTEM

SUMMARY

At the close of the calendar year 1939 the initial Bonneville transmission lines were complete and in part energized. The lines and substations completed or under construction, those scheduled in the 1940 construction program, and those which are being surveyed and prepared for later construction are indicated by figure 15, page 50.

The completed units of the system include the Bonneville-North Vancouver-Portland (St. Johns) twin circuit, separate tower, 230-kilovolt line, with its 3,756-foot Columbia River crossing, supported on 499-foot towers, north of Portland. This line was energized on December 1, 1939, and immediate power deliveries up to 80,000 kilowatts of generated power were made to the Portland area.

By the end of December the Vancouver-Eugene 115-kilovolt line and the Eugene substation were virtually complete. Energization is scheduled for early in 1940, when the North Vancouver substation will be complete for service south to Eugene and north to Raymond.

Construction contracts on the 230-kilovolt Vancouver-Kelso line were awarded in the latter part of 1939. Designs and construction specifications have been completed, and virtually all right-of-way has been secured and cleared for the 230-kilovolt Kelso-Chehalis line. The Raymond-Aberdeen line is to be acquired by purchase from Willapa Electric Co. Construction of substations is keeping pace with the erection of these transmission lines.

Construction work is progressing on the 234-mile Bonneville-Coulee 230-kilovolt line, which was about one-third complete at the close of the calendar year. The line is expected to be in operation in the summer of 1940.

On the Bonneville-Hood River-The Dalles 115-kilovolt line, bids have been received for the Ship Canal Crossing at Bonneville, designs and construction specifications are complete, and right-of-way is being secured and cleared.

As for the new 1940 construction program, surveys have been practically completed for the Chehalis-Renton (Seattle) 230-kilovolt line, and designs are well under way. Completion of this line is tentatively scheduled for the fall of 1940. Work on the St. Johns-Astoria 115-kilovolt line is being pushed to make power available along the Oregon shore of the Columbia River, the surveys being approximately half completed at the close of the calendar year. Construction of the Midway-Yakima line may be deferred if power transfer privileges can be arranged with Pacific Power & Light Co., which has a line in the territory. The surveys preparatory to construction on the Yakima-Ellensburg 115-kilovolt line were virtually complete at the close of the calendar year 1939. Designs for the St. Johns, Ellensburg, and Midway substations were well under way.

In addition to the foregoing immediate program, construction in connection with service to new customers, whether public agencies, industrial companies, or private utility companies, will be necessary. For example, erection of a short, double circuit, 115-kilovolt transmission line and substation will be necessary for service to the Aluminum Co. of America, which has contracted for 32,500 kilowatts of continuous primary power.

Surveys are well under way on the future construction program, including the St. Johns-Tillamook 115-kilovolt line, the Bonneville-Oregon City-Salem 115-kilovolt line, the Coulee-Spokane line, and the 190-mile Renton (Seattle)-Coulee 230-kilovolt line. Surveys are practically complete for the second line of the Bonneville-Kelso twin



Clearing right-of-way near Archer Mountain. Bonneville-Vancouver line.



Right-of-way clearing by WPA crew on the Raymond line.

circuit, and also the second line of the Bonneville-Coulee twin circuit. The projected construction of the last three lines mentioned is dependent in part upon the character of interconnection arrangements which may be consummated with the municipal systems of Seattle, Tacoma, and Centralia, Wash.

CONSTRUCTION ACTIVITIES

The construction work of the Administration has included planning and research, and design and construction. As the first Bonneville transmission lines were energized at the close of the year, a system operations staff also began to function. These activities have been guided by policy as set forth in the Bonneville Act and as directed by the Administrator. In general, the Administration's transmission system is designed and constructed on a basis sufficient to serve present and future load requirements.

The official projects of the Public Works Administration, which have financed the greater part of the Bonneville construction program for the fiscal year 1939, furnished funds for the Bonneville-Grand Coulee line, the Bonneville-The Dalles line, the Vancouver-Raymond line, and the Vancouver-Eugene line, as well as for the associated substations.¹¹ The various items of work carried on under the appropriations and under the Public Works Administration official projects during the fiscal year 1939 are indicated by the following summary, and their geographical locations are shown on figure 15, page 50.

Appropriation No.	P. W. A. official project	Work order No.	Description
148/90614C		C-5	Bonneville-Vancouver, 230-kilovolt line.
		C-7	North Bonneville, 230-kilovolt substation.
		C-8	Ampere substation, 230- and 115-kilovolt.
		C-7	North Bonneville, 13.8-kilovolt substation.
		C-13	Bonneville, 13.8-kilovolt substation.
14-408/00513C	752-05-168	PC-15	Bonneville-Coulee, 230-kilovolt line.
		PC-16	Midway substation, 230-kilovolt.
14-408/00513C	752-05-169	PC-35	Bonneville-The Dalles, 115-kilovolt line.
		PC-36	Hood River substation, 115-kilovolt.
		PC-37	The Dalles substation, 115-kilovolt.
14-408/00513C	752-05-170	PC-27	Vancouver-Kelso, 230-kilovolt line.
		PC-28	Kelso substation, 230-kilovolt.
		PC-30	Kelso-Raymond, 115-kilovolt line.
		PC-33	Raymond substation, 115-kilovolt.
14-408/00513C	752-05-171	PC-20	Vancouver-Eugene, 115-kilovolt line.
		PC-21	St. Johns substation, 115-kilovolt.
		PC-22	Oregon City substation, 115-kilovolt. ¹
		PC-23	Salem substation, 115-kilovolt.
		PC-24	Albany substation, 115-kilovolt.
		PC-25	Eugene substation, 115-kilovolt.

¹ Work on this substation was temporarily suspended subsequent to the close of the fiscal year 1939.

¹¹ The construction activities for the fiscal year 1939 cover the work under appropriation No. 148/90614C, and under Public Works Administration official projects 752-05-168, 169, 170, and 171, under appropriation No. 14-408/00513C.

U.S. DEPARTMENT OF THE INTERIOR



- LEGEND**
- SUBSTATIONS.
 - PROPOSED LINES FOR CONSTRUCTION.
 - PROPOSED LINES FOR ACQUISITION BY PURCHASE.
 - SURVEY ONLY.

CONSTRUCTION PROGRAM

Jan. 1940

THE BONNEVILLE PROJECT

FIGURE 15.

Subsequent to the close of the fiscal year 1939 additional work orders were approved under appropriation No. 149/00614, as follows:

Description:	Work order No.
Bonneville-Midway, 230-kilovolt line, No. 2 (surveys)-----	C-17
Midway-Coulee, 230-kilovolt line, No. 2 (surveys)-----	C-18
Chehalis substation, 230-kilovolt-----	C-32
Bonneville-Oregon City, 115-kilovolt (surveys)-----	C-34
Midway-Ellensburg, 115-kilovolt (surveys and materials)-----	C-42
Ellensburg substation, 115-kilovolt-----	C-44
Chehalis-Renton, 230-kilovolt line-----	C-47
Renton-Coulee, 230-kilovolt line (surveys)-----	C-48
Coulee-Spokane, 230-kilovolt line (surveys)-----	C-52 J1
St. Johns-Tillamook line, 115-kilovolt (surveys)-----	C-54
Vancouver-Chehalis, 230-kilovolt line, No. 2 (surveys)-----	C-55
Midway-Pendleton line, 115-kilovolt (surveys)-----	C-56
Underground 13.8-kilovolt feeders, South Bonneville-----	C-63
St. Johns-Astoria line, 115-kilovolt-----	C-64
Purchase of Forest Grove substation-----	C-65
Subtransmission line, conduit to Glenwood, Klickitat County-----	C-67

¹ Work order on this substation approved shortly after the close of calendar year 1939.

Additions to many of the work orders of the fiscal year 1939 were also provided by the 1940 appropriation. The status of each of these projects as of December 31, 1939, is described in detail in appendix D.

In reviewing the construction activities of the Administration, it should be emphasized that most of the program of construction now in progress was authorized little more than a year ago. Appropriation 148/90614 was made available on May 26, 1938. The authorizations under official projects 752-05-168 to 171, inclusive, were made available on August 18, 1938.

Prior to the granting of appropriation 148/90614, the Administration's personnel engaged in construction work was limited to an average of 65 or less employees. On June 30, 1938, they totaled 98, of which 19 were in the office and 78 in the field, and required a June 1938 pay roll of approximately \$14,000. The funds under the official projects becoming available in August 1938 accelerated the expansion of the construction force so that on June 30, 1939, it numbered 701, with 249 in the office and 452 in the field, requiring a pay roll of approximately \$174,000.¹² In addition, approximately 2,263 men under W. P. A. were doing right-of-way clearing, and other men were working for contractors engaged in constructing the system.

In view of the dates on which the project authorizations became available, it may be considered that the construction program really began in August 1938. Thus, the fiscal year 1939 contained, in effect, only 10 months, during which the power-transmission system has been planned, designed, and in part surveyed and constructed. This required the development of a complete engineering organization including specialized technical personnel not easily obtained. Construction had to be undertaken without the benefit of engineering and construction records and without the seasoned organization ordinarily expected in large-scale operations. It has been necessary to build the organization and to develop the loyalty, morale, and discipline requisite to the rapid design and execution of a large undertaking. During this period it was also necessary to design the system, to determine electrical characteristics, to design lines and substations, to specify

¹² See table, appendix D.

materials, and to provide for the purchase of materials and for construction services. The variety of materials, assemblages, machines, and services purchased is indicated in this report, and the complexity of detail and design required to purchase these items is suggested somewhat by the 9,139 drawings which were made by the drafting section.¹² Since there was no file of drawings or specifications that could be consulted, all data had to be assembled from widely distributed sources and from the experience of the employees.

DESIGN OBJECTIVES

The principles followed in the program of design of the power system are those which have been developed in practice by other Government power agencies, and by publicly and privately owned utilities. The transmission system is being designed to provide primarily a high-voltage network to be integrated with the existing network of lines in the Pacific Northwest, and insofar as conditions may require it, a high-power-distribution system to supplement existing facilities.

Power development in Oregon and Washington has advanced to the stage where the capacities of the power systems exceed the capacities of the interconnecting lines. The result is that the systems in the greater part of Washington are unable to interchange substantial amounts of power with the systems in Oregon, and the systems around Portland are unable to interconnect effectively with the systems in southern Oregon. This condition will be aggravated by connecting Grand Coulee and Bonneville plants to the power systems contiguous to the plants without the construction of new interconnecting lines. Thus, one of the objectives of the Bonneville Administration program is to provide facilities for the interconnection of the several generating systems in the area. This, of course, will benefit all the power systems in Oregon, Washington, and western Idaho, whether privately, municipally, or federally owned.

Operations extend from north of central Washington to central Oregon, a distance north and south of about 350 miles, and from the Pacific coast inland for a distance of about 200 miles. Climatic conditions vary from desert in central Washington to one of the heaviest ice-loading zones in the country in the Columbia River Gorge. Terrain includes rocky desert, sagebrush areas, heavy forest, mountains, large river crossings, fertile farm land, and urban areas. These variations of conditions have required unusual care in the design of the system.

The principal lines of the Bonneville Power Administration are to be twin 230,000-volt circuits, located for maximum effective transmission of power between generating plants and load centers, and at the same time, to be effective for interchange of power in either direction between the interconnected systems. Lines thus located, develop naturally into what is known as a synchronized-at-the-load system. In such a system, generating plants usually are connected by transmission lines to a network of distribution lines. The distribution network permits a free flow of power from one part of the network to another, and acts, relative to each of the generating stations and lines, as a bus of very large capacity, thus facilitating stable opera-

¹² See table, appendix D.

tion. In a system of this kind, disturbances at individual generating plants have relatively less effect on interconnected plants than other types of systems, and at the same time a maximum of economy is achieved in the use of lines so connected. Still another advantage lies in the fact that unused investments in transmission facilities are kept to a minimum in anticipation of load growth.

In Oregon and Washington, there are a number of more or less distinct load areas. One is around Puget Sound. Another is the area around Spokane. A third is around Portland and south in the Willamette Valley. The Bonneville plant is within 50 miles of the most dense load area in Oregon; Grand Coulee is in the Spokane area. There are several large plants in the Puget Sound area. In each of the respective areas most of the plants, including those of the Government, will feed into comparatively extensive distribution networks. Between each of the load areas, some power is now interchanged by interconnecting transmission lines. Interchange of power between the Puget Sound area and the Spokane area can be and is now accomplished to the extent of 25,000 kilowatts. But, between the Portland area and other areas there are not the facilities for even this small amount of interchange. Considering the fact that there is over 800,000 kilowatts of generating capacity in the Puget Sound area, about 230,000 kilowatts in the Spokane area, and about 300,000 kilowatts in the Portland area, it is quite apparent that ties of greater capacity than now exist are essential if integration of the systems in the northwest is to be achieved. If we consider further the effect of the low-cost power from Grand Coulee and Bonneville in stimulating load growth, the justification of the high-voltage, high-capacity transmission lines under the Bonneville Administration program, becomes manifest.

The program of construction of transmission lines by the Government in Oregon and Washington provides adequate transmission facilities for interconnection between the Government's plants and between those plants and the load areas they will be required to serve. The service that each of the Bonneville Administration lines being constructed in the fiscal year 1939 is expected to render is indicated by the following:

(a) Bonneville-Vancouver 230-kilovolt line:

- (1) To transmit Bonneville and Grand Coulee power to the Portland area.
- (2) To be a link in interconnection of the Portland load area with the Spokane load area.

(b) Bonneville-Grand Coulee 230-kilovolt line:

- (1) To transmit Bonneville power into eastern Washington.
- (2) To transmit Grand Coulee power south and westward throughout the Columbia River Basin.
- (3) To interconnect the Bonneville and Grand Coulee plants.
- (4) To interconnect the Portland and Spokane load areas.
- (5) To coordinate the operation of the Coulee and Bonneville plants in order to develop more prime power than would be available if these plants operated singly.

- (c) Bonneville-The Dalles 115-kilovolt line:¹³
 - (1) To transmit Bonneville power eastward, south of the Columbia River.
- (d) Vancouver-Kelso 230-kilovolt line:¹³
 - (1) To transmit Bonneville power northward into western Washington.
 - (2) To be a link in interconnection of the Portland load area with the Puget Sound load area.
- (e) Kelso-Raymond 115-kilovolt line:¹⁴
 - (1) To transmit Bonneville power to load centers on the Washington coast line.
- (f) Vancouver-Eugene 115-kilovolt line:
 - (1) To transmit Bonneville power into the Portland load area and south to load centers in the Willamette Valley.

These lines are all located so as to be effectively used for transmitting power from a plant to a load. Some of them are located so that they will be used for system and plant inter-ties.

TRANSMISSION LINES

Approximately 1,750 miles were covered in reconnaissance flights for the purpose of establishing routes for the transmission lines to be constructed under the 1939 program. Following these, the surveys were started for the actual location of the lines. Two related types of surveys were required, those for the 230-kilovolt steel-tower lines and those for the 115-kilovolt wood-pole lines.

With the exception of the river crossings the steel lines will all be constructed with 795,000-circular-mil aluminum cable steel-reinforced conductors, of which there are two types having different ultimate strengths for use with the two ice-loading conditions encountered. Both conductors are approximately 1.1 inches in diameter, spaced 27½ feet apart in a horizontal plane with a minimum vertical ground clearance of 30 feet. Insulator strings of sixteen 10-inch units having a nominal rating of 15,000 pounds will be used for suspension towers, and three parallel strings of 18 units each will be used at dead ends. The standard towers used provide average spans about 875 feet long in the 1-inch ice zones and about 1,120 feet long in the ½-inch ice zones. The average span lengths vary somewhat, depending on the conductor used.

¹³ Plans for this line may be revised to meet later conditions.

¹⁴ Revised plans adopted June 28, 1939, have extended the length of the 230-kilovolt line from Kelso to Chehalis, Wash., so that the Vancouver-Kelso line is now the Vancouver-Chehalis line, and the Kelso-Raymond line is now the Chehalis-Raymond line.



Erection of a Columbia-Willamette crossing tower.



Stringing conductor at Columbia-Willamette crossing. Telephone operator is giving signal to tension machine operator.

TABLE 11.—Transmission-line construction data

[As of Dec. 31, 1939]

	Cascade Locks line ¹	Bradford Island crossing	Bonneville-Vancouver lines	Bonneville-Coulee line	Vancouver-Eugene line	Columbia-Willamette crossings	Vancouver-Kelso line	Kelso-Chehalis line	Chehalis-Raymond line	Bonneville-The Dalles line	Total
Voltage of line (kilovolts).....	13	230	230	230	115	230	230	230	115	115	-----
Number of circuits under construction.....	1	2	2	1	2	2	1	1	1	1	-----
Final length of line, right-of-way miles.....	4.2	0.63	36.76	233.7	124.75	2.87	41.23	30.1	45.5	38.7	558.4
Circuit miles of line, total.....	4.2	1.26	73.52	233.7	128.76	5.74	41.23	30.1	45.5	38.8	602.7
Width of right-of-way, feet.....	10	560	300	250/300	50/180	150/200	250/300	300	100	150	-----
Steel towers, total.....		4	372	1,154	4	13	189	131		4	1,871
Wood-pole structures, total.....	94				1,630				440	399	2,563
Average number of structures to circuit mile.....			5.0	4.9	² 12.7		4.5	4.4	9.6	10.3	-----
Conductors:											-----
Make.....		Special	Mallard	{ Mallard Drake }	Ibis	Special	Drake	Drake		Mallard	-----
ACSR., M. C. M.....		801.9	795	795	397.5	801.9	795	795		795	-----
Make.....					Phelps-Dodge				Phelps-Dodge	Phelps-Dodge	-----
Copper M. C. M., H. D. C. No. 2.....					{ 250 350 }				250	250	-----
Conductor length, total feet.....		21,000	1,149,000	3,904,000	2,208,000	91,800	680,000	500,000	765,000	645,000	9,963,800
Overhead ground wire length, total feet.....		7,000	88,400	54,000	125,000	30,400	9,000	10,000	13,000	29,000	365,800
Number of insulator disks, total.....	330	1,900	35,900	65,700	35,700	5,600	14,000	10,000	10,000	11,000	189,800
Date surveys began.....		4-4-38	6-1-38	8-30-38	9-1-38	9-26-38	9-26-38	9-26-38	9-26-38	9-1-38	-----
Date of erection contract.....	5-30-38	4-11-39	3-10-39	6-20-39	3-30-39	4-15-39	9-21-39	(³)	10-20-39	(⁴)	-----
Construction completed to June 30, 1939.....	(¹)	50%	65%		25%	25%					-----
Construction completed to Dec. 31, 1939.....	(¹)	100%	100%	48%	100%	100%	(⁴)		(⁴)		-----

¹ Completed prior to June 30, 1938.
² Includes single-pole structures.
³ Not started.
⁴ Construction started.

The 115-kilovolt wood-pole lines will utilize three different conductors, 350,000-circular-mil copper, 250,000-circular-mil copper, and 397,500-circular-mil aluminum cable steel-reinforced, as required for the electrical and mechanical loadings encountered. H-frame structures with a 12-foot horizontal conductor spacing will generally be used, although there will be some single-pole structures. Minimum vertical ground clearance for all conductors is 25 feet. The 10-inch, 15,000-pound insulators form strings of six units for suspension towers and seven units for dead ends. Average spans are 520 feet with H-frame structures and 290 feet with single-pole structure with some deviations depending on the conductor used.

Ground wires over all lines for short distances from substations will protect them from the effects of direct strokes of lightning.

All clearing for the lines is being done by labor provided by the Works Progress Administration.

SUBSTATIONS

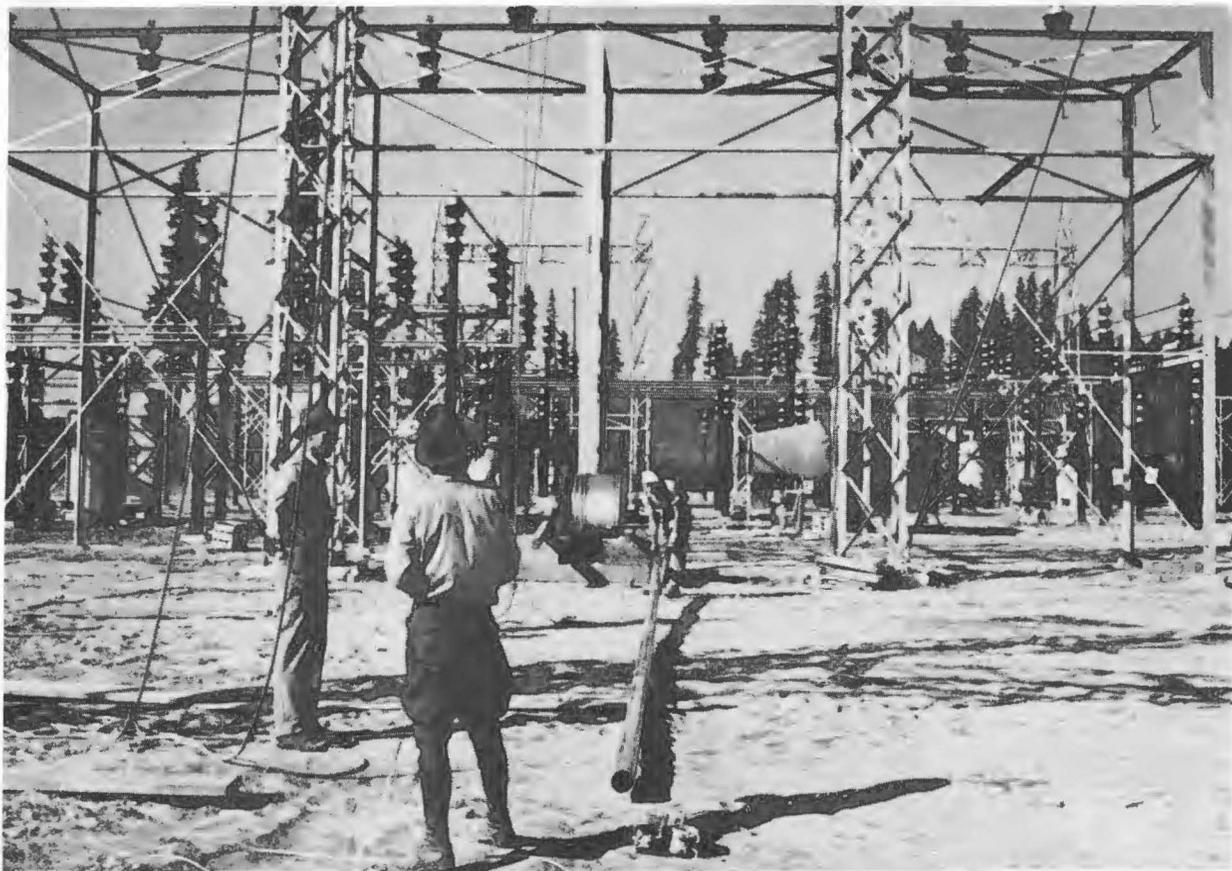
Before definite drawings for substations could be prepared and design standards set up it was necessary to build a reference file containing catalogs, drawings, specifications, and technical information obtained from various other substations and construction jobs in all parts of the country. Basic designs were then prepared so that all substations could be built of standard units, the design of a specific substation merely requiring the combining of the units involved into one coordinated whole. Work was continued insofar as personnel permitted on eight other substations.

To get construction under way in the shortest possible time, one of the first jobs was the preparation of specifications for some of the heavy equipment which requires months of manufacture, such as synchronous condensers, high-voltage transformers, and 115- and 230-kilovolt oil circuit breakers. These were followed later by specifications for the other items entering into construction of substations, such as control equipment, battery charging, bus materials, and lightning arresters.

Construction work is well under way at North Vancouver, Eugene, South Bank, and St. Johns substations. At North Vancouver, contracts have been let for construction of the station, control house, oil house, and unloading tower, including the installation of major items of equipment. At Eugene and South Bank substations, contracts cover the construction of buildings and footings. The work of grading and of installing footings is being done by force account at both North Vancouver and St. Johns substations.

ARCHITECTURAL ASPECTS

The substation buildings are designed on a unit basis so that each unit will present a complete and appropriate structure that may have additional units added as the needs of the substation increase. The first unit includes an office for public contact and separate rooms for station service and communication equipment, batteries, and controls. From an architectural viewpoint the most interesting feature of a



Installing 230-KV.—4½-inch—O. C. aluminum bus bars on transformer tower at North Vancouver substation.



115-KV. oil circuit breaker, North Vancouver substation.

substation is the control house, where plain wall surfaces are interrupted only by carefully proportioned window and door openings.

Particular attention is being given to the selection of materials on a basis of durability and low expense of upkeep. Lighting is receiving emphasis because of the interest of the Administration in the development of advanced methods for the use of electricity. Landscaping has been made an integral part of the design of the substations to achieve natural, dignified, and pleasing structures.

COMMUNICATIONS

A complete analysis of the communication requirements for the construction and for the future operation of the transmission system has been prepared. This study covers the use of both carrier current telephone and radio telephone equipment, as well as an extensive use of land telephone facilities. Conferences held with the business and engineering departments of the Pacific Telephone & Telegraph Co. to correlate our carrier network with their telephone facilities provided a basis for a tentative working agreement. Economic studies of the cost of carrier communication in comparison with the cost of leased telephone facilities have indicated where the two types should be used.

A thorough study of carrier current telephone practice was made and an ultimate carrier telephone system network decided upon. Specifications covering the apparatus were prepared and requisitions were made for the initial equipment. The carrier equipment, which is located in a separate room of the control house, will work in essentially the same manner as an ordinary telephone, in that the termination and control of the equipment will be in a standard telephone instrument. Calls placed by means of a rotary dial on the base of the instrument will ring only the called station, and the ring will be received in the same manner as with a standard telephone. An emergency power-supply system automatically starts in the event of normal station service failure, insuring power for the urgent communications required during transmission failure.

Radio has been adopted for two-way communication between field party trucks and substations during construction, and for system maintenance. It will also become a communication network to provide a supplementary channel during emergency conditions or on failure of other communication facilities. Tests have been made to locate transmitting and receiving sites for best performance and to determine equipment required for satisfactory operation of both mobile and stationary units. The substation radio apparatus will be located about $\frac{1}{2}$ mile from the control house and will be remotely controlled by a small unit on the operator's desk. The mobile radio units, requiring less than $1\frac{1}{2}$ cubic feet of space, will be mounted on the trucks, and power for their operation will be obtained from the regular truck storage battery. The equipment in the cab will consist of only the microphone, loudspeaker, and control panel.

The carrier telephone facilities supplemented by land lines will provide the normal point-to-point communication channels, while radio will be used for emergency conditions and for contact with mobile equipment.

PROTECTION

A detailed study has been made of the short-circuit values, both three-phase, and phase-to-ground, for all main points on the transmission system. Calculations were made mathematically and, in addition, positive, zero, and negative-phase sequence boards representing the system in miniature but operating on a direct current were built to check the values and to give additional information for the purpose of determining relay setting values, and oil circuit-breaker capacities throughout the system. These boards have been kept up to date and in step with changes in the transmission system as they have evolved, and a tabulation of all three-phase and line-to-ground short-circuit values has been made.

A master system of relay protection for all the Bonneville transmission lines has been designed to isolate any faulted line or equipment without affecting the operation of the remainder of the system. In general, the long high-voltage lines will be protected by directional impedance relays, with the addition of carrier-current pilot relaying at a later date, plus the use of directional ground relays. The short lines will be protected by a pilot wire-relaying scheme. The Vancouver to St. Johns crossing will be protected by balanced current relays for parallel line protection. Customer's feeders will be protected by directional overcurrent protection, and also by ground relay protection where necessary. Transformer banks will have differential protection and where required, substations will have bus differential protection. Condensers will have differential protection plus reverse phase, under- and over-voltage, ground current, and temperature protection. A special relay test set has been designed and constructed by the personnel of the Administration to facilitate relay testing.

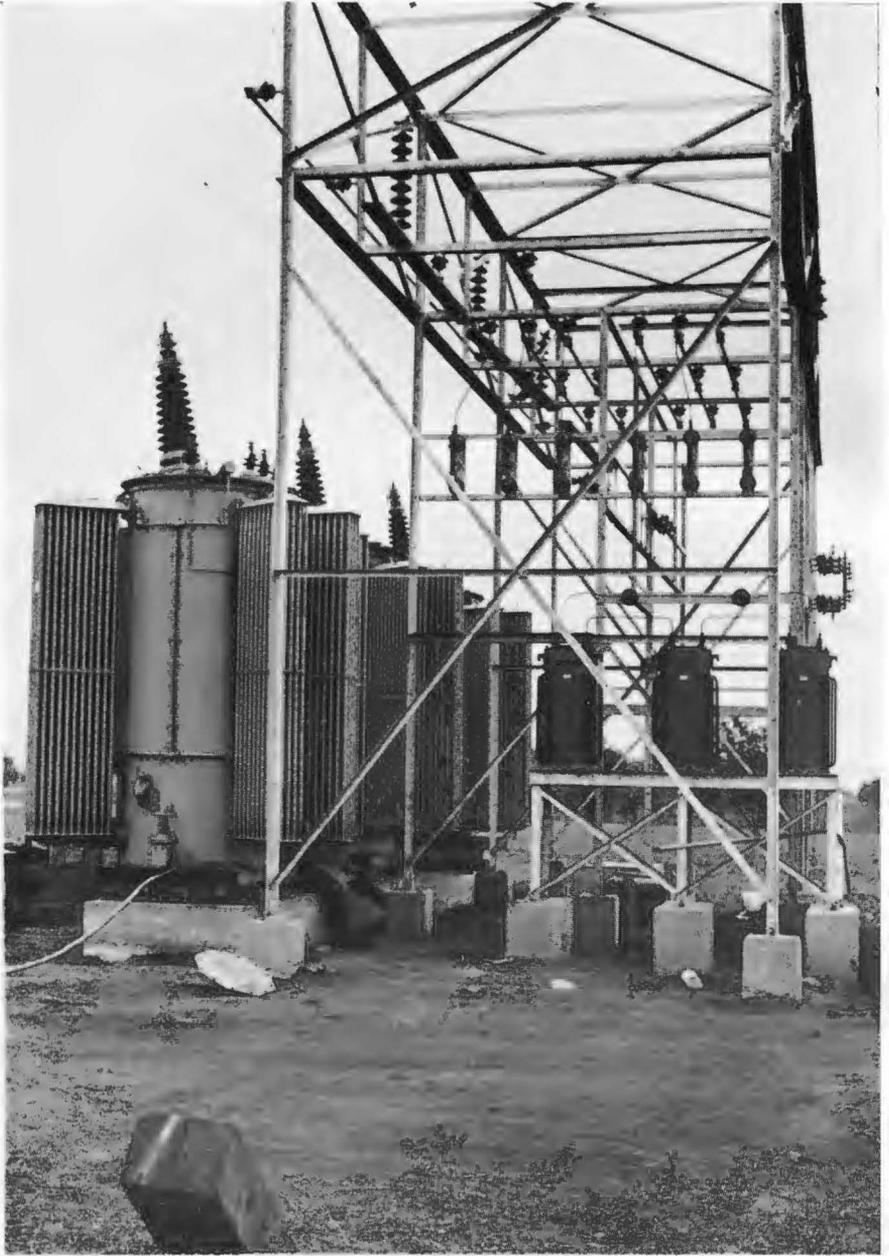
Conferences have been held with the United States Army Engineers and with prospective users of Bonneville power to correlate relay and circuit-breaker operations between the interconnected power systems.

V. FINANCIAL REPORT

The financial position of the Bonneville Power Administration, as of June 30, 1939, is presented in the "Statement of Balances—General Ledger Accounts" (table 12), and the "Schedule of Balances Showing Status of Appropriations" (table 13). These statements reflect the financial activities of the Administration since the availability of its first appropriation in the fiscal year 1938.



Telephone and winch operation near base of tower 3 at Columbia crossing of the Eugene-Vancouver line.



Transformer at Eugene substation.

TABLE 12.—Statement of balances—general ledger accounts

[Period ended June 30, 1939]

Accounts	Balances		Accounts	Balances	
	Detail	Total		Detail	Total
01 Treasury cash, schedule A.....		\$20, 200, 760. 42	60. Vouchers payable, preaudit.....		\$62, 284. 70
03. Requisitions in transit, disbursing funds (schedule A).....					
03.31 Disbursing officer's cash, disbursing funds (schedule A).....		2, 120, 229. 24	64.1 Retirement contributions, Civil Service Commission, Form 2806.....	\$38, 942. 87	
03.32 Disbursing officer's cash, collections:.....			64.11 Retirement contributions, pay card.....	. 00	
Repayments, schedule A.....			66. Unapplied Special deposit collections.....		38, 942. 87
Receipts, retirement fund.....			70. General fund receipts: 144330 reimbursed Government property lost or damaged.....		61, 529. 20
Receipts, miscellaneous.....					17. 40
03.37 Disbursing officer's cash, special deposits.....		61, 529. 20	73. Unapplied special funds receipts: 146652, deposits from sale and transmission of electric energy, Bonneville project, Oregon.....		46, 543. 38
04 Securities, special deposits.....			90. Invested and donated capital.....		1, 983. 80
05. General fund receipts deposited 144330 (see account 70).....		17. 40	91.1 Unallotted appropriations (schedule A).....	13, 950, 370. 07	
06. Special fund receipts deposited, 146652 (see 73).....		46, 542. 80	91.2 Unencumbered allotments (schedule A).....	Unexpended 8, 387, 143. 20	
07. Retirement and disability funds deposited, 148182 contributions.....		38, 942. 87	91.3 Unliquidated encumbrances (schedule A).....		
10.1 Accounts receivable.....	(1)	2, 060. 46	91.4 Expended appropriations ² (schedule A).....	5, 177, 486. 73	
11.1 Unmatured collection contracts.....					27, 515, 000. 00
11.11 Less estimated returns, unmatuired collection contracts.....					
20.1 Stores (inventory).....		2, 075, 676. 08			
30.1 Fixed property.....					
30.11 Less fixed property depreciation reserve.....	(1)				
33.1 Equipment (in use).....	197, 803. 22	168, 887. 95			
33.11 Less equipment depreciation reserve.....	1 28, 915. 27	2, 770, 079. 95			
38.1 Work in process, construction:.....		14, 245. 16			
Per cost accountant's reports.....					
39.1 Undistributed expenditures.....		255, 820. 14			
40.1 Current (operation and maintenance) costs:.....					
Per cost accountant's reports.....					
Total.....		27, 726, 301. 35	Total.....		27, 726, 301. 35

¹ Contra or decrease.

² Credit balance due to distribution of labor costs prior to submission of pay rolls for payment.

³ This amount represents total of all vouchers scheduled to the disbursing officer for payment.

TABLE 13.—Schedule A of balances showing status of appropriations

[Period ended June 30, 1939]

	91 ¹	91.4	01	60	03.31	03.32	Total balances	91.3	91.2	91.1
	Appropriations	Expended appropriations	Treasury cash	Accounts payable	Disbursing officer's cash, disbursing funds	Disbursing officer's cash, repayments		Unliquidated encumbrances	Unencumbered allotment	Unallotted appropriations
14-408/00513. Public Works Administration, act of 1938 (allotment to Interior, Bonneville project) 1938-40.....	\$10,750,000	\$3,396,444.73	\$6,420,933.80	\$7,756.06	\$924,865.41	-----	\$7,353,555.27	-----	\$6,399,379.27	\$954,176.00
149/00614. Construction power-distribution system, Bonneville project, Oregon, Department of the Interior, 1939-40.....	13,000,000	17,624.65	12,900,000.00	667.73	81,707.62	-----	12,982,375.35	-----	7,081.28	12,975,294.07
1490608. Power-distribution system, Bonneville Project, Oregon, Department of the Interior, 1939.....	165,000	128,241.32	1,714.54	677.78	34,366.36	-----	36,758.68	-----	25,858.68	10,900.00
148/90614. Construction and maintenance power-distribution system, Bonneville project, Oregon, Department of the Interior, 1938-39.....	3,500,000	1,546,509.57	867,885.53	7,422.04	1,078,182.86	-----	1,953,490.43	-----	1,953,490.43	-----
1480608. Power-distribution system, Bonneville project, Oregon, Department of the Interior, 1938.....	100,000	88,666.46	10,226.55	-----	1,106.99	-----	11,333.54	-----	1,333.54	¹ 10,000.00
Total appropriations.....	27,515,000	² 5,177,486.73	20,200,760.42	16,523.61	2,120,229.24	-----	22,337,513.27	-----	8,387,143.20	13,950,370.07

¹ Budget reserve.² This amount represents total of all vouchers scheduled to the Disbursing Officer for payment.

Because activities during the fiscal year 1939 were limited almost entirely to construction work the reports as of June 30, 1939, necessarily indicate merely the source and application of funds. With the expansion of our activities into operation and power sales during the coming year, more detailed reports for financial analysis will be possible.

The reports shown are of the form submitted monthly to the General Accounting Office for reconciliation with the Treasury accounts. The accounts listed are, of course, only control and summary accounts. These accounts are supported by the detail customary in electric utility operations. The finance, or general ledger, accounts are kept in accordance with the requirements of the General Accounting Office. Originally established independently of that office, the accounts were changed but little during a recent visit of General Accounting Office auditors engaged in establishing a uniform accounting system. The detail records incident to our construction, operation, and maintenance activities are kept in accordance with the Federal Power Commission uniform system of accounts.

The accounting policy of the Administration is to maintain records as nearly comparable with those of privately owned utilities as is possible under existing statutes. At the end of the fiscal year, the accounting staff was preparing depreciation studies, the results of which will be reflected in future annual reports when lines and substations have passed the work-in-process stage to become fixed property. In this connection emphasis is being placed upon consideration of the depreciation experience of other organizations, both public and private, rather than upon theory alone.

In order to present an accurate, unbiased picture, the reports submitted herewith take into consideration the value of certain equipment and services beneficial to the project, although furnished by other agencies at no cost to the Bonneville Administration. While these expenditures are not made by the Bonneville Administration, they are a part of the cost of its system and are therefore reflected in the statement.

Available funds are shown under accounts 01 and 03.31.¹⁵ Against the \$22,321,000 of cash available as of June 30, 1939, there were unexpended allotments of \$8,387,000 (accounts 91.2 and 91.3) and unallotted appropriations of \$13,950,000 (account 91.1). (See detailed schedule, table 13.) The large amount of unallotted appropriations is occasioned by the fact that the 1940 fiscal year appropriation was made available shortly before June 30, 1939.

The figure shown under account 06, "Special fund receipts deposited" is the amount of revenue from the sale of electric energy received and deposited to the date of the reports.¹⁶ Revenue collections amounted to \$46,542.80 to June 30, 1939.¹⁷ The collections by months are shown in table 14.

¹⁵ For the most part, funds shown under accounts 03.32 and 03.37 are not available for use by the project, being generally funds to be covered into miscellaneous receipts or the retirement fund, or to be returned to a depositor upon release from guaranty.

¹⁶ The lack of an entry opposite account 11.1, "Unmatured collection contracts" is not to be interpreted as indicating an absence of revenue contracts. The function of this account is to guard against oversights in billing and its use is limited to instances when the values of the contracts can be determined in advance. Since power sales billings are guarded by meter readings and since the value of a power revenue contract is affected by fluctuating demand, the project cannot use this account advantageously.

¹⁷ It is known that revenues will amount to approximately \$250,000 by December 31, 1939.

These power revenues were earned by means of a tie line at the dam site even though the first Bonneville transmission line was not completed at the end of the fiscal year. The receipts from power sales are to be covered into the Treasury of the United States to the credit of miscellaneous receipts, except that the Treasury is required to set up and maintain from such receipts a continuing fund of \$500,000 "to defray emergency expenses and to insure continuous operation" (sec. 11 of the Bonneville Act). Therefore, the amount shown under account 06, reflecting an accumulation of revenues of less than \$500,000, is the amount available to the Administration for these purposes.

TABLE 14.—*Monthly summary of collections from the sale of electricity*

1938:		1939:	
September -----	\$2, 979. 45	February -----	\$6, 912. 33
October -----	6, 078. 08	March -----	2, 780. 82
November -----	7, 865. 75	April -----	3, 078. 77
December -----	10, 745. 88	May -----	2, 979. 45
		June -----	3, 122. 27
		Fiscal year 1939 -----	46, 542. 80

The amounts shown as accounts receivable, account 10.1, are composed almost entirely of interoffice transfers between appropriations and Public Works Administration allotments. Because the Administration is conducting closely integrated activities under several appropriations and allotments, it is faced with the necessity of making continuous adjustments between funds. Many of these adjustments cost more to effect than the amounts involved would appear to warrant, but under existing appropriations and regulations there is no alternative. Accounting for funds would be considerably simplified if all funds were under a single appropriation.

The "Stores (inventories)," account 20.1, consisted principally of construction materials as of June 30, 1939, with a small amount for stationery and office supplies. No considerable stocks of maintenance materials have been acquired to date.

"Equipment (in use)," account 33.1, in the amount of \$197,803.22 on June 30, 1939, consists primarily of trucks and passenger cars, office furniture and machines, tools, and miscellaneous equipment. Depreciation of the equipment has been computed on a straight-line basis and credited to depreciation reserve, which is shown on the statement as a deduction from the capital account.

In the account 38.1, "Work-in-process—Construction," are carried the capital costs which have been allocated to construction work under way. Descriptions of the work-in-process account and the amounts involved are presented in table 15. As yet, no property has been transferred from the work-in-process account to "Fixed property," account 30.1.

TABLE 15.—Work in progress—Construction (June 30, 1939)

Description	Work	Amount	
BONNEVILLE-VANCOUVER LINE			
<p>The Bonneville-Vancouver line between Bonneville and North Vancouver, Wash., consists of 2 single-circuit 230-kilovolt lines on the same 300-foot right-of-way. Each of the 37.4-mile circuits can carry 1/4 million kilowatts, although together they will normally only have to carry about 200,000 kilowatts. This line will transmit power from Bonneville and Grand Coulee to the Portland area and will be an interconnection of the Portland load area with power centers to the north.</p>	C-5 Bonneville-Vancouver line.....	\$730,700.96	
	Clearing.....	96,546.97	
	C-7 North Bonneville substation.....	21,843.62	
	C-8 Vancouver substation.....	261,651.53	
		1,110,743.08	
<p>The single-circuit steel towers supporting the lines are designed in consistence with the strength of the 1.1-inch diameter 795,000 circular mil aluminum cable steel reinforced conductor. The loading conditions encountered on the line vary from 1/2-inch radial ice which is usually considered as heavy loading) to 2 (nches of ice. The ice loadings are assumed to occur simultaneously with a load corresponding to a 60-mile gale. The 25 miles of line nearest Vancouver are designed for 1/2-inch ice; the 12.5 miles in the Columbia Gorge are subject to heavier ice conditions and are designed for 1-inch-ice loading. The Columbia River crossing to the powerhouse on Bradford Island is in a still more exposed location, which requires special high-strength conductors and towers of unusually great weight to withstand a 2-inch-ice load.</p>	BONNEVILLE-COULEE LINE		
	<p>The Bonneville-Coulee line is a single circuit, 230-kilovolt transmission line of steel-tower construction. It is 233.7 miles long and extends from the substation at North Bonneville, Wash., northeast, to connect with the switching structure of the U. S. Bureau of Reclamation at Grand Coulee, Wash. In addition to serving as an interconnection for the Bonneville and Grand Coulee plants, this line will supply power to communities in southeastern Washington and north-eastern Oregon and vicinity.</p>	C-15 Bonneville-Coulee line.....	396,169.84
		Clearing.....	43,920.25
		C-16 Midway substation.....	3,077.78
			443,167.87
<p>A 300-foot right-of-way is provided in timbered land and 250 feet in open country, with the line 62 1/2 feet to one side of the center line, leaving space for a future second line. 795,000 circular mil aluminum cable steel reinforced conductors are used throughout the line, which is designed for 1-inch-ice conditions for 33 miles from Bonneville, and 1/2-inch-ice conditions for the remainder of the line.</p>	VANCOUVER-EUGENE LINE		
	<p>The 127.6-mile line between North Vancouver, Wash., and Eugene, Oreg., consists of a single 115-kilovolt circuit except for the 7.3-mile section between North Vancouver and St. Johns substations, which has 2 circuits. This line will transmit power to the Portland load area and south to load centers in the Willamette Valley.</p>	C-20 Vancouver-Eugene line.....	621,969.43
		Clearing.....	8,002.81
		C-21 St. Johns substation.....	17,995.09
C-23 Salem substation.....		6,774.54	
<p>The line is supported on wood poles throughout, except for the Columbia and Willamette River crossings near Portland, and the Willamette crossings at Spong's Landing and at Harrisburg, which are supported on steel towers. The wood-pole structures are of the H-frame type except for about 25 miles along the Oregon Electric R. R., where narrow right-of-way necessitates single-pole structures. The towers for the 3,756-foot Columbia River crossing span rise 499 feet above their footings, which extend about 15 feet above the ground. The Willamette River crossing near Portland is supported on 356-foot towers.</p>	C-24 Albany substation.....	10,149.33	
	C-25 Eugene substation.....	21,673.96	
			686,665.16
	<p>4 types of conductor are used on the line, which is designed for 1/2-inch-ice loading at 0° F. with an 8-pound (60-mile an hour) wind. The conductors used are 350,000 circular mils between North Vancouver and Oregon City; 250,000 circular mils copper from Oregon City to Salem; and 397,000 circular mil aluminum cable steel reinforced (250,000 circular mils copper equivalent) from Salem to Eugene. The 397,500 circular mil aluminum cable steel reinforced is used for all river crossings except over the Columbia and Willamette Rivers near Portland, where a special 801,000-circular-mil aluminum cable steel reinforced conductor is used.</p>		

TABLE 15.—Work in progress—Construction (June 30, 1939)—Continued

Description	Work	Amount
VANCOUVER-KELSO LINE		
<p>This line extends from North Vancouver to Kelso, Wash., a distance of 41.2 miles. It is of steel-tower construction, and is designed to operate at 230 kilovolts. Power will be transmitted over this line northward into western Washington. This line also serves as a link in the interconnection of the Portland load center with centers to the north.</p> <p>The right-of-way is 250 feet wide in open country and 300 feet wide in timbered areas. The towers are to one side of the center line, providing space for a future second circuit. 795,000 circular mil aluminum cable steel reinforced conductors are used throughout the line, which is designed for ½-inch-ice loading except for 1.4 miles through the Kalama River Gorge, which is designed for 1-inch ice. River crossings over the Lewis, Cowlitz, and Coweman Rivers were designed to meet the requirements of the War Department for clearances over navigable rivers.</p>		
	C-27 Vancouver-Kelso line.....	\$169,236.64
	Clearing.....	28,535.48
		197,772.12
KELSO-CHEHALIS-RAYMOND LINE		
<p>The 30.1-mile section of line from Kelso to Chehalis, Wash., was originally part of the 115-kilovolt Kelso-Raymond line, but on June 28, 1939, permission was received to adopt revised plans changing the voltage of this section to 230 kilovolts. This line is a link in this interconnection of Portland with the north, and is a means of transmitting power to western Washington.</p> <p>The line is to be constructed on one side of a 300-foot right-of-way, which provides for a future line. 795,000 circular mil aluminum cable steel reinforced conductors will be used throughout the line, which is designed for ½-inch-ice loading and will be supported on steel towers. Because of the changed plans the schedule of this line has been delayed. However, construction specifications are expected to be issued for bid early in January 1940.</p> <p>The 45.5-mile section of line between Chehalis and Raymond, Wash., will supply power at 115 kilovolts to the central region of the coast of Washington.</p> <p>This line will be single circuit supported on wood-pole structures located on the center of a 100-foot right-of-way. The H-frame structures are designed for ½-inch-ice loading. All conductors used are 250,000 c. m. copper.</p>		
	C-30 Kelso-Chehalis-Raymond line.....	119,832.63
	Clearing.....	21,373.43
	C-28 Chehalis substation.....	12,308.90
	C-33 Raymond substation.....	9,080.75
		162,600.71
BONNEVILLE-THE DALLES LINE		
<p>This line will transmit power eastward, south of the Columbia River. It is 38.7 miles long and extends from the Bonneville powerhouse to The Dalles, Oreg. The 115-kilovolt single circuit will be supported on wood poles except for the first 0.6 mile out of Bonneville, which includes the ship-canal crossing and will be supported by steel towers.</p> <p>The first 18 miles of line are designed for 1-inch loading and a 60-mile wind, and the rest of the line for ½-inch-ice conditions. The wood-pole structures are of the H-frame type throughout and will be located on a 150-foot right-of-way. The conductors are 250,000 c. m. copper except for the ship-canal crossing and for 1 very long span which uses 795,000 circular mil aluminum cable steel reinforced conductor. Bids for the ship-canal crossing were opened on Dec. 18, 1939. Construction specifications for the remainder of the line are expected to be issued so that construction can start in the early part of 1940.</p>		
	C-35 Bonneville-The Dalles line..	92,268.38
	Clearing.....	24,141.16
	C-36 Hood River substation.....	7,836.62
		124,246.06
BONNEVILLE-CASCADE LOCKS LINE		
<p>This line supplies Bonneville power to the city of Cascade Locks, Oreg., at 13.8 kilovolts. Starting at South Bank substation, which is the terminus of a cable from Bonneville to the Oregon side of the Columbia, the line extends for 4.2 miles to Cascade Locks. The single-pole structures are mainly located on highways or national-forest lands. They support the No. 2 hard-drawn copper conductors on pin-type insulators. Future connections to this line are expected to make power available over the area adjacent to Cascade Locks.</p>		
	C-12 Bonneville-Cascade Locks line..	15,464.21
	C-13 South Bonneville substation..	7,197.44
		22,661.65

TABLE 15.—Work in progress—Construction (June 30, 1939)—Continued

Description	Work	Amount
CHEHALIS-RENTON LINE		
<p>This line consists of a single-circuit, 230-kilovolt steel-tower line from the Chehalis substation to the Renton substation near Seattle, Wash., a distance of approximately 77 miles. The towers and conductors will be designed for a maximum loading of 1/2-inch radial ice and 8-pound wind at 0° F. The conductors will have a conductivity equal to 500,000-circular-mil copper and an outside diameter of not less than 1.08 inches. All towers will be of the single-circuit steel type, with a minimum clearance between conductors and tower steel of 72 inches under extreme swing due to wind loading. The insulators will be of the 10-inch-disk type, having a mechanical and electrical rating of 15,000 pounds.</p>	C-47 Chehalis-Renton.....	\$4.91
<p>The right-of-way for the line will have a width of 300 feet, providing space for a future additional line. The right-of-way will be cleared to its full width for the entire length of the line. Any danger trees existing adjacent to this area will be removed or topped.</p>		
<p>This transmission line is necessary to provide the facility for transmitting Bonneville power to northwestern Washington and to provide part of a future interconnecting loop between Bonneville and Grand Coulee power plants.</p>		
OTHER CONSTRUCTION WORK		
<p>In addition to the above listing of lines, on which construction work is authorized, work is being conducted on the surveys of certain other lines. In some cases, the engineering work incident to the design of the line or substation has also been authorized. Construction has not yet been authorized on these projects, due to lack of the detailed information necessary for decision as to whether or not the line is immediately feasible or to prepare precise estimates of construction costs.</p>	C-48 Renton-Grand Coulee surveys. C-19 Northwestern Electric Co. tie line. C-38 Vancouver warehouse and machine shop.	4.95 4,543.57 5,102.05
<p>A temporary tie line was constructed to furnish service to the Northwestern Electric Co. near the site of the dam, pending completion of the Bonneville-Vancouver line. It is estimated that this line will bring in gross revenues in excess of \$200,000.</p>		9,650.57
<p>A permanent warehouse and machine shop is under construction at Vancouver (ampere substation), Wash. This centrally located establishment will serve most of the transmission system.</p>		
MISCELLANEOUS		
<p>The balance of the charges appearing against "Work in progress, construction," for the most part, consists of a group of small charges covering such items as line transformers, meters, and alterations to rented buildings. Also included under this heading are some charges relating to research and design studies which will subsequently be prorated over direct construction.</p>		12,667.92
<p>Total.....</p>		2,770,079.95

"Undistributed-expenditures," account 39.1, is maintained to accumulate charges, including direct expenditures, stores issues, depreciation, etc., pending distribution of such charges to the proper asset or cost accounts.¹⁸

Certain undistributed overhead charges, dating from the organization of the Administration, still remain in account 40.1. "Current (operation and maintenance) costs," together with the normal charges to this account, as indicated by its title. While the charges incident to initial organization are capitalizable, the initial construction does not bear the full amount of this overhead.

¹⁸ Normally a debit balance account, this account shows a credit as of June 30, 1939, because of distribution of labor cost prior to payment of the pay rolls covering these charges.

With outstanding obligations adequately covered under "Unliquidated encumbrances" (account 91.3), the practice of carrying "Accounts payable" (account 60) will be discontinued immediately following the end of the fiscal year 1939, except for recording the amount of the vouchers forwarded to the General Accounting Office for preaudit. The practice of forwarding vouchers for preaudit is followed not only with those vouchers on which the necessary information to make satisfactory audit is lacking, but also with those concerning the propriety of which there is any possibility of question.

The revenues from power sales, previously discussed, are credited to account 73, "Unapplied special funds receipts," in which also is recorded the assessment of penalties for delinquent payment of power bills.

Furniture transferred from the Public Works Administration, at no cost, accounts for virtually all of the amount appearing under account 90, "Invested and donated capital."

The "Unallotted appropriations," account 91.1, are the amounts of our appropriations available as of the date of the statements for allocation by the Administrator to specific construction projects. On the other hand, "Unencumbered allotments," account 91.2, are funds which have been allotted to construction jobs by Administration but which have not been obligated by issuance of purchase orders, letting of contracts, hiring of personnel, or other commitments. "Unliquidated encumbrances," account 91.3, are funds which have been so obligated but which have not been expended in the liquidation of the obligation. Shown combined under "Unexpended appropriations" on the June report, these accounts will be segregated in the future.

Amounts that have been expended to satisfy obligations are recorded in "Expended appropriations," account 91.4.

A detailed analysis of the Administration's appropriations as of June 30, 1939, is presented in the "Schedule of balances showing status of appropriations," table 13. The subdivision of this schedule indicates those appropriations which are still available for obligation. The other appropriations may be used only to liquidate previous encumbrances.

VI. MANAGEMENT OF THE ENTERPRISE

THE MANAGEMENT PROBLEM

The management problem facing the Administrator since the last annual report was submitted probably can best be understood by reference to the development of the activities of the operating divisions of the organization.

At the beginning of the fiscal year 1939 the construction of transmission facilities was just getting under way. The first appropriation for construction work was not made available until May 26, 1938, and the major portion of construction funds was not available until August 18, 1938. On June 30, 1938, the personnel engaged in construction work numbered approximately 100.

Upon receipt of the funds for construction it was necessary to develop the organization rapidly in order to get the program into operation. During the year the initial high-voltage power transmission system was planned, designed, and in part surveyed and

UNITED STATES DEPARTMENT OF THE INTERIOR
THE BONNEVILLE POWER ADMINISTRATION
 (TENTATIVE ORGANIZATION)

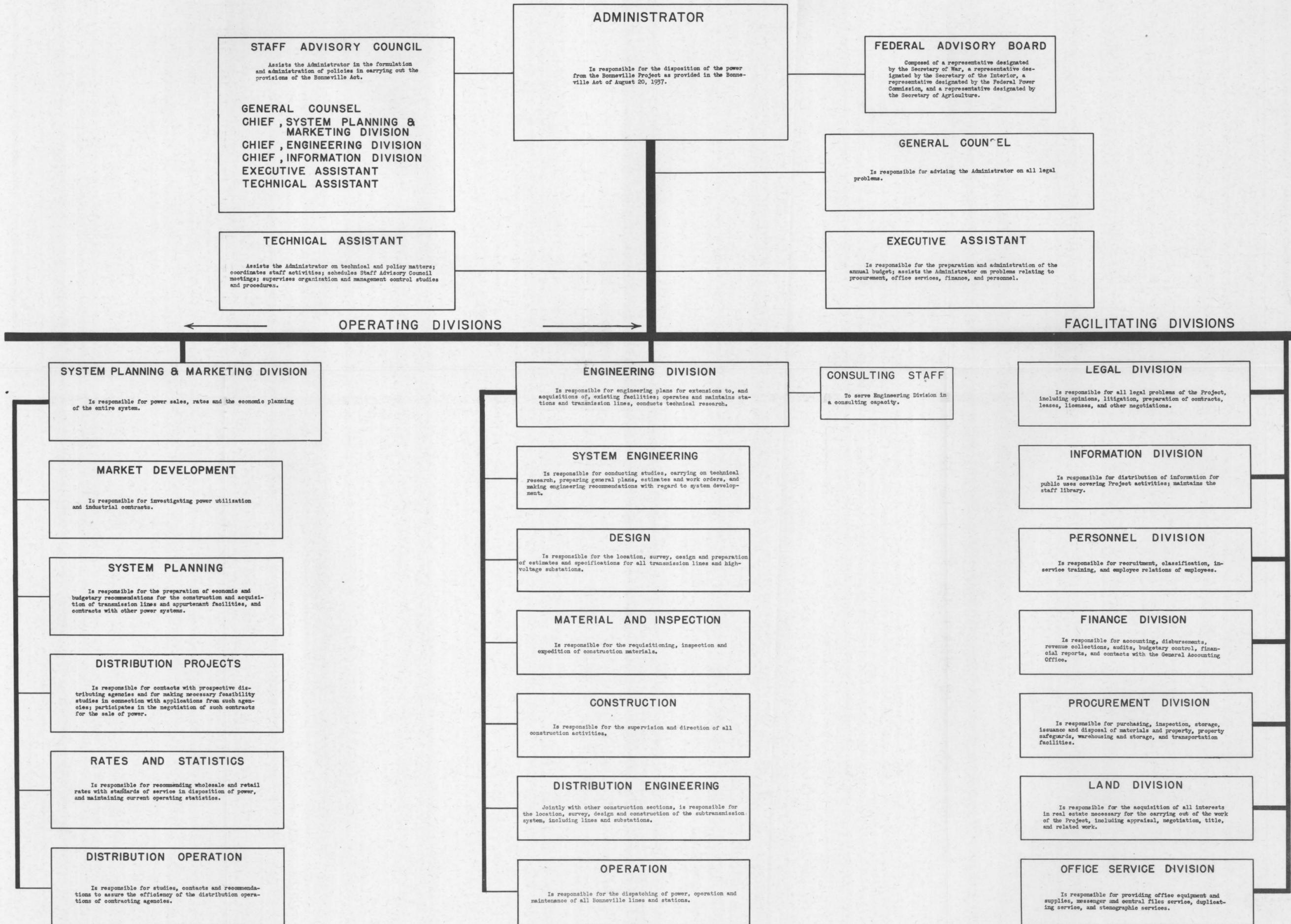


FIGURE 16

constructed. By the close of the fiscal year 1939 the personnel engaged in construction work numbered 700, of which approximately 250 were in the office and 450 in the field. In addition, the work of this personnel force had to be coordinated with the work of Works Progress Administration clearing crews, of contractors building the facilities, and of the administrative personnel of the project, which numbered 319. At the close of the fiscal year 1939, therefore, the Bonneville organization consisted principally of an engineering division engaged in construction of high-voltage-power transmission and substation facilities.

Since the first transmission lines were nearing completion as the new Administrator took office in September 1939, he was immediately confronted with the planning and determination of the future construction program. In determining this program, it was found necessary to give more attention to the economic planning of the transmission system with relation to market demands, actual delivery of power over the transmission lines required to serve customers, coordination of the Bonneville system with existing power systems in the area, and negotiation of power-sales contracts. Also, immediate attention had to be given to perfecting an operating organization to operate the first transmission lines which were approaching completion.

The administrative problem, therefore, was to maintain the existing engineering and construction organization, since the Administration was approaching the peak of its construction activities, and at the same time to develop system planning, marketing, and operating organizations. Because of the development of these activities and the continuation of the construction program, immediate expansion of the service divisions, including legal and administrative forces, became necessary.

The tentative organization chart (Fig. 16) sets forth the lines along which the organization has developed by the close of the calendar year 1939. A System Planning and Marketing Division has been established to be responsible for power sales and power interchange, including contacts with prospective customers, wholesale and resale rate analyses, the preparation of feasibility studies, economic planning of the system, participation in negotiation of contracts, research of industrial-power utilization, and studies to assure the efficiency of distribution operations of Bonneville customers.

The Engineering Division has been strengthened by the appointment of an acting chief engineer, establishment of a consulting staff under the direction of a chief consulting engineer, development of an operating force, and general expansion within the Division.

To assist in the coordination of staff activities, a Staff Advisory Council has been set up, composed of key organization members. Weekly and special council meetings provide a clearing house for all problems which arise, and assist the Administrator in the formulation of policies. Minutes of the council meetings are maintained currently. Further coordination is provided by weekly production reports and by organization and procedure studies.

It should be noted that the organization is still in a developmental stage, and therefore that the chart is tentative. As a result of organization and procedural studies now in progress, further changes in the structure and functions of the staff divisions may be made.

In connection with the development and expansion of the operating divisions of the Bonneville staff, changes in the facilitating divisions rendering management services were found necessary and desirable. These changes are discussed below in relation to the problems and activities confronting these service units of the organization.

LEGAL SERVICES

The work of the Legal Division during the period covered by this report has been greatly increased by the rapid development of Bonneville's transmission-line-construction program and, more recently, by the problems incident to the marketing of Bonneville power.

During the past fiscal year a large part of the Legal Division's time has been devoted to the handling of condemnation cases, through which approximately 500 miles of right-of-way have been acquired for Bonneville's transmission program. This work has been done in cooperation with the Bonneville Land Division and the Department of Justice. More recently a program for acquiring such right-of-way by voluntary purchase has been adopted. Insofar as legal matters were concerned, the Legal Division has assisted in developing the procedures for carrying on the new work. Details of the land-acquisition program are discussed in the next section.

With commencement of the marketing of Bonneville power the Legal Division has had new problems and added activities. Most of these have arisen in connection with the rate schedules and the contracts for the sale of power.

Attorneys of the staff of the Division took an active part in the drafting of revisions of Bonneville's wholesale rate schedules, which are discussed in another part of this report, and in the presentation of these schedules to the Federal Power Commission.

The Legal Division attorneys have also taken active part in the negotiations and drafting of power contracts. This work, with the land work, occupies a major portion of the Division's time. The power contracts have also been described and discussed in detail in another part of this report.

In addition to the land-acquisition and power-contract work, the Legal Division has handled a large variety of miscellaneous legal matters. The staff examines and passes upon the numerous procurement contracts of the project. Attorneys on the staff of the Division prepared briefs and aided attorneys of the Department of Justice in various court actions involving Bonneville. Briefs were likewise prepared for presentation to the Comptroller General of the United States on a number of important problems. Numerous legal opinions were also rendered to the Administrator and to the other divisions of the project.

LAND ACQUISITION

During the period covered by this report the Bonneville Administration has been confronted with the necessity of acquiring a right-of-way for construction of approximately 500 miles of transmission lines. The task of obtaining so much right-of-way, which would have been considerable under ordinary circumstances, was seriously

complicated because of the urgent need for getting the program under way in a short time. Not only was construction to be begun on a number of different sections of the transmission-line system at the same time, but in addition the right-of-way had to be obtained in virtually every county at once in order to utilize Works Progress Administration assistance for clearing operations.

It was found that the 500 miles of right-of-way involved the acquisition of approximately 1,800 separate tracts of land and would mean the almost impossible task of handling the required appraisal, negotiating, and title work in sufficient time to meet the construction schedules. During the fall of 1938, therefore, it was concluded that the necessary right-of-way could not be obtained rapidly enough through voluntary negotiations. As a result, steps were taken to secure immediate ownership and possession of all of the necessary land by recourse to condemnation and to the "declaration of taking" procedure available in connection therewith. Petitions accompanied by declarations of taking were filed with the Federal district courts. Single condemnation cases were brought for acquisition of all of the land desired for each transmission line in each county. By means of these county-wide court proceedings, immediate ownership and possession of the land were obtained, thereby making it possible to commence construction on any part of the lines without delay.

In accordance with the statutory procedure, the "estimated just compensation" for the taking of each tract of land was deposited in the registries of the district courts with each declaration of taking. Immediately after the condemnation actions were instituted, work was commenced to assist landowners to withdraw deposited funds and thus to secure payment for the lands taken. The procedure followed in this connection was that, as soon as an amicable settlement was reached with the owner of a particular tract, a "petition for the withdrawal of funds" was drafted for execution by the landowner and other interested parties. When these were signed, the petitions, together with related papers, were forwarded to the Department of Justice for presentation to the district courts. The district judges required a separate hearing on each petition, with testimony as to the value of the land and as to title. Upon completion of the hearing a judgment was entered ordering payment to the landowner.

The tremendous task of following this procedure on approximately 1,800 separate tracts of land has occupied a large part of the time of the Legal and Land Divisions. It was not until the summer of 1939, nearly 6 months after the first condemnation proceedings were instituted, that court orders for payments to the landowners could be effected in substantial numbers. Each month thereafter, however, has seen an increasing number of petitions drawn and executed by the landowners.

During the summer of 1939 it was concluded that in the future Bonneville's rights-of-way could be acquired with less difficulty by means of direct voluntary purchases. Accordingly the policy of instituting general condemnation proceedings has been abandoned and recourse is had to judicial proceedings only when the Administration is unable to agree with a landowner as to the amount of damages to be paid him, or when satisfactory title to a tract cannot be obtained without court action.

The status of land acquisition as of the close of the calendar year 1939 is presented in table 16.

TABLE 16.—*Status of land acquisition*¹

[As of Dec. 31, 1939]

	Tracts	Miles	Acres
Right-of-way acquired:			
By condemnation ²	1, 148	371. 23	8, 491. 17
By direct purchase.....	47	32. 34	1, 149. 73
Right-of-way under contract to purchase.....	1, 195	403. 57	9, 640. 90
Total right-of-way acquired and under contract to purchase.....	339	87. 48	2, 097. 43
Total right-of-way acquired and under contract to purchase.....	1, 534	491. 05	11, 738. 33
Substation sites acquired:			
By condemnation ²	22		252. 60
By direct purchase.....	2		65
Substation sites under contract to purchase.....	24		253. 25
Total substation sites, acquired and under contract to purchase.....	7		63. 75
Total substation sites, acquired and under contract to purchase.....	31		317. 00

¹ Costs of land acquisition are included in the financial statements, ch. V.

² The moneys deposited in court for these tracts are being disbursed as rapidly as petitions for withdrawal of funds and judgments thereon can be secured.

PROCUREMENT

The Procurement Division, responsible for the administration of policies relating to procurement, inspection, storage, issuance, and disposal of materials and property, including property safeguards, accountability of property, and transportation facilities, issued during the fiscal year 416 invitations to bid, and wrote 6,280 purchase orders involving the sum of \$8,400,646.69.

The construction program was of significant interest to 28 States of the Nation, which furnished materials and equipment that went into the Administration's program. The States of New York, Pennsylvania, and Ohio provided over \$6,000,000 of equipment out of a total of \$8,400,646.69 expended during the fiscal year for materials and construction contracts. A statement of the States and money expended in each State follows:

Alabama.....	\$1, 103. 33	New Jersey.....	\$4, 095. 45
California.....	268, 356. 93	New York.....	4, 054, 924. 56
Connecticut.....	15, 412. 71	Ohio.....	243, 370. 12
Delaware.....	13. 05	Oregon.....	335, 082. 28
District of Columbia.....	2, 976. 43	Pennsylvania.....	1, 705, 007. 98
Georgia.....	309. 32	Rhode Island.....	762. 93
Indiana.....	3, 641. 24	Tennessee.....	3. 00
Illinois.....	108, 329. 85	Texas.....	738. 68
Kansas.....	78. 76	Utah.....	57. 97
Maryland.....	6, 114. 50	Virginia.....	27. 00
Massachusetts.....	39, 845. 24	Washington.....	1, 479, 911. 52
Michigan.....	18, 630. 80	West Virginia.....	10, 132. 89
Minnesota.....	55, 092. 81	Wisconsin.....	11, 813. 63
Missouri.....	36, 793. 91		
Nebraska.....	19. 80	Total.....	8, 400, 646. 69

PERSONNEL

The development of the Bonneville project from a small staffed administrative organization into a large construction organization

with an imperative need for immediate construction presented serious recruitment problems.

Faced with the need of obtaining engineers experienced in specialized electrical transmission line construction and other employees with knowledge of Federal Government and utility practices in financing, procurement, land purchases, and other administrative activities, the Administration, with the cooperation of the Civil Service Commission, rapidly developed its staff. Selection of employees was made principally from citizens of the Northwest under authority of the Civil Service Commission and by transfer of employees from other governmental agencies. All employees have been appointed with full regard to the civil-service laws and regulations and in accordance with section 10 of the Bonneville Act. Salaries have been determined in accordance with the Classification Act of 1923.

As the Administration is now entering into power marketing and system operation, special studies are being made in the field of in-service training in order to give qualified employees an opportunity to transfer to the operating phase of the project's activities and for the purpose of advancement. Organizational studies and classification of employees are being given constant attention.

On July 1, 1938, the organization consisted of 84 annual employees, of which number 51 were engaged on construction work. By December 31, 1939, the number had increased to 1,117 full-time annual employees, of which 766 were engaged on construction work. An analysis reveals that 87.8 percent of these employees were from Oregon and Washington, leaving 12.2 percent from other sections of the country.

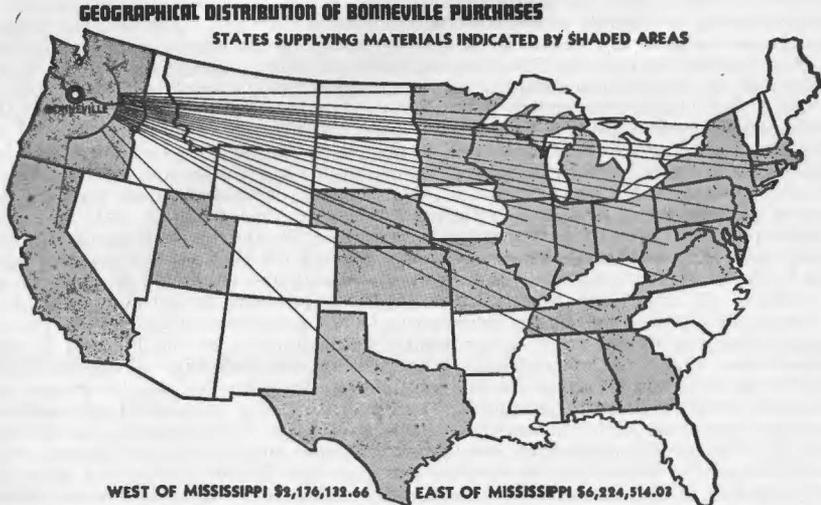


FIGURE 17.

APPENDIXES

APPENDIX A

(Public—No. 329—75th Congress)

(Chapter 720—1st Session)

(H. R. 7642)

AN ACT To authorize the completion, maintenance, and operation of Bonneville project for navigation, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of improving navigation on the Columbia River, and for other purposes incidental thereto, the dam, locks, power plant, and appurtenant works now under construction at Bonneville, Oregon, and North Bonneville, Washington (hereinafter called Bonneville project), shall be completed, maintained, and operated under the direction of the Secretary of War and the supervision of the Chief of Engineers, subject to the provisions of this Act relating to the powers and duties of the Bonneville power administrator provided for in section 2 (a) (hereinafter called the administrator) respecting the transmission and sale of electric energy generated at said project. The Secretary of War shall provide, construct, operate, maintain, and improve at Bonneville project such machinery, equipment, and facilities for the generation of electric energy as the administrator may deem necessary to develop such electric energy as rapidly as markets may be found therefor. The electric energy thus generated and not required for the operation of the dam and locks at such project and the navigation facilities employed in connection therewith shall be delivered to the administrator, for disposition as provided in this Act.

SEC. 2 (a) The electric energy generated in the operation of the said Bonneville project shall be disposed of by the said administrator as hereinafter provided. The administrator shall be appointed by the Secretary of the Interior, shall be responsible to said Secretary of the Interior, shall receive a salary at the rate of \$10,000 per year; and shall maintain his principal office at a place selected by him in the vicinity of the Bonneville project. The administrator shall, as hereinafter provided, make all arrangements for the sale and disposition of electric energy generated at Bonneville project not required for the operation of the dam and locks at such project and the navigation facilities employed in connection therewith. He shall act in consultation with an advisory board composed of a representative designated by the Secretary of War, a representative designated by the Secretary of the Interior, a representative designated by the Federal Power Commission, and a representative designated by the Secretary of Agriculture. The form of administration herein established for the Bonneville project is intended to be provisional pending the establishment of a permanent administration for Bonneville and other projects in the Columbia River Basin. The Secretary of War shall install and maintain additional machinery, equipment, and facilities for the generation of electric energy at the Bonneville project when in the judgment of the administrator such additional generating facilities are desirable to meet actual or potential market requirements for such electric energy. The Secretary of War shall schedule the operations of the several electrical generating units and appurtenant equipment of the Bonneville project in accordance with the requirements of the administrator. The Secretary of War shall provide and maintain for the use of the administrator at said Bonneville project adequate station space and equipment, including such switches, switchboards, instruments, and dispatching facilities as may be required by the administrator for proper reception, handling, and dispatching of the electric energy produced at the said

project, together with transformers and other equipment required by the administrator for the transmission of such energy from that place at suitable voltage to the markets which the administrator desires to serve.

(b) In order to encourage the widest possible use of all electric energy that can be generated and marketed and to provide reasonable outlets therefor, and to prevent the monopolization thereof by limited groups, the administrator is authorized and directed to provide, construct, operate, maintain, and improve such electric transmission lines and substations, and facilities and structures appurtenant thereto, as he finds necessary, desirable, or appropriate for the purpose of transmitting electric energy, available for sale, from the Bonneville project to existing and potential markets, and, for the purpose of interchange of electric energy, to interconnect the Bonneville project with other Federal projects and publicly owned power systems now or hereafter constructed.

(c) The administrator is authorized, in the name of the United States, to acquire, by purchase, lease, condemnation, or donation, such real and personal property, or any interest therein, including lands, easements, rights-of-way, franchises, electric transmission lines, substations, and facilities and structures appurtenant thereto, as the administrator finds necessary or appropriate to carry out the purposes of this Act. Title to all property and property rights acquired by the administrator shall be taken in the name of the United States.

(d) The administrator shall have power to acquire any property or property rights, including patent rights, which, in his opinion, are necessary to carry out the purposes of this Act, by the exercise of the right of eminent domain and to institute condemnation proceedings therefor in the same manner as is provided by law for the condemnation of real estate.

(e) The administrator is authorized, in the name of the United States, to sell, lease, or otherwise dispose of such personal property as in his judgment is not required for the purposes of this Act and such real property and interests in land acquired in connection with construction or operation of electric transmission lines or substations as in his judgment are not required for the purposes of this Act: *Provided, however*, That before the sale, lease, or disposition of real property or transmission lines, as herein provided, the administrator shall secure the approval of the President of the United States.

(f) Subject to the provisions of this Act, the administrator is authorized, in the name to the United States, to negotiate and enter into such contracts, agreements, and arrangements as he shall find necessary or appropriate to carry out the purposes of this Act.

SEC. 3. As employed in this Act, the term "public body," or "public bodies," means States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

As employed in this Act, the term "cooperative," or "cooperatives," means any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

SEC. 4. (a) In order to insure that the facilities for the generation of electric energy at the Bonneville project shall be operated for the benefit of the general public, and particularly of domestic and rural consumers, the administrator shall at all times, in disposing of electric energy generated at said project, give preference and priority to public bodies and cooperatives.

(b) To preserve and protect the preferential rights and priorities of public bodies and cooperatives as provided in section (a) and to effectuate the intent and purpose of this Act that at all times up to January 1, 1941, there shall be available for sale to public bodies and cooperatives not less than 50 per centum of the electric energy produced at the Bonneville project, it shall be the duty of the administrator in making contracts for the sale of such energy to so arrange such contracts as to make such 50 per centum of such energy available to said public bodies and cooperatives until January 1, 1941: *Provided*, That the electric energy so reserved for but not actually purchased by and delivered to such public bodies and cooperatives prior to January 1, 1941, may be disposed of temporarily so long as such temporary disposition will not interfere with the purchase by and delivery to such public bodies and cooperatives at any time prior to January 1, 1941: *Provided further*, That nothing herein contained shall be construed to limit or impair the preferential and priority rights of such public bodies or cooperatives after January 1, 1941; and in the event that after such date there shall be conflicting or competing applications for an allocation of electric energy between any public body or cooperative on the one hand and a

private agency of any character on the other, the application of such public body or cooperative shall be granted.

(c) An application by any public body or cooperative for an allocation of electric energy shall not be denied, or another application competing or in conflict therewith be granted, to any private corporation, company, agency, or person, on the ground that any proposed bond or other security issue of any such public body or cooperative, the sale of which is necessary to enable such prospective purchaser to enter into the public business of selling and distributing the electric energy proposed to be purchased, has not been authorized or marketed, until after a reasonable time, to be determined by the administrator, has been afforded such public body or cooperative to have such bond or other security issue authorized or marketed.

(d) It is declared to be the policy of the Congress, as expressed in this Act, to preserve the said preferential status of the public bodies and cooperatives herein referred to, and to give to the people of the States within economic transmission distance of the Bonneville project reasonable opportunity and time to hold any election or elections or take any action necessary to create such public bodies and cooperatives as the laws of such States authorize and permit, and to afford such public bodies or cooperatives reasonable time and opportunity to take any action necessary to authorize the issuance of bonds or to arrange other financing necessary to construct or acquire necessary and desirable electric distribution facilities, and in all other respects legally to become qualified purchasers and distributors of electric energy available under this Act.

SEC. 5. (a) Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the administrator may cancel such contract upon five years' notice in writing if in the judgment of the administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility.

(b) The administrator is authorized to enter into contracts with public or private power systems for the mutual exchange of unused excess power upon suitable exchange terms for the purpose of economical operation or of providing emergency or break-down relief.

SEC. 6. Schedules of rates and charges for electric energy produced at the Bonneville project and sold to purchasers as in this Act provided shall be

prepared by the administrator and become effective upon confirmation and approval thereof by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission, such rate schedules may be modified from time to time by the administrator, and shall be fixed and established with a view to encouraging the widest possible diversified use of electric energy. The said rate schedules may provide for uniform rates or rates uniform throughout prescribed transmission areas in order to extend the benefits of an integrated transmission system and encourage the equitable distribution of the electric energy developed at the Bonneville project.

SEC. 7. It is the intent of Congress that rate schedules for the sale of electric energy which is or may be generated at the Bonneville project in excess of the amount required for operating the dam, locks, and appurtenant works at said project shall be determined with due regard to and predicated upon the fact that such electric energy is developed from water power created as an incident to the construction of the dam in the Columbia River at the Bonneville project for the purposes set forth in section 1 of this Act. Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of Bonneville project) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment over a reasonable period of years. Rate schedules shall be based upon an allocation of costs made by the Federal Power Commission. In computing the cost of electric energy developed from water power created as an incident to and a byproduct of the construction of the Bonneville project, the Federal Power Commission may allocate to the costs of electric facilities such a share of the cost of facilities having joint value for the production of electric energy and other purposes as the power development may fairly bear as compared with such other purposes.

SEC. 8. Notwithstanding any other provision of law, all purchases and contracts made by the administrator or the Secretary of War for supplies or for services except for personal services, shall be made after advertising, in such manner and at such times, sufficiently in advance of opening bids, as the administrator or Secretary of War, as the case may be, shall determine to be adequate to insure notice and opportunity for competition. Such advertisement shall not be required, however, when (1) an emergency requires immediate delivery of the supplies or performance of the services; or (2) repair parts, accessories, supplemental equipment, or services are required for supplies or services previously furnished or contracted for; or (3) the aggregate amount involved in any purchase of supplies or procurement of services does not exceed \$500; in which cases such purchases of supplies or procurement of services may be made in the open market in the manner common among businessmen. In comparing bids and in making awards, the administrator or the Secretary of War, as the case may be, may consider such factors as relative quality and adaptability of supplies or services, the bidder's financial responsibility, skill, experience, record of integrity in dealing, and ability to furnish repairs and maintenance services, the time of delivery or performance offered, and whether the bidder has complied with the specifications.

SEC. 9. (a) The administrator, subject to the requirements of the Federal Water Power Act, shall keep complete and accurate accounts of operations, including all funds expended and received in connection with transmission and sale of electric energy generated at the Bonneville project.

(b) The administrator may make such expenditures for offices, vehicles, furnishings, equipment, supplies, and books; for attendance at meetings; and for such other facilities and services as he may find necessary for the proper administration of this act.

(c) In December of each year, the administrator shall file with the Congress, through the Secretary of the Interior, a financial statement and a complete report as to the transmission and sale of electric energy generated at the Bonneville project during the preceding governmental fiscal year.

SEC. 10. The administrator, the Secretary of War, and the Federal Power Commission, respectively, shall appoint such attorneys, engineers, and other experts as may be necessary for carrying out the functions entrusted to them under this Act, without regard to the provisions of the civil-service laws and shall fix the compensation of each of such attorneys, engineers, and other experts at not to exceed \$7,500 per annum; and they may, subject to the civil-service laws, appoint such other officers and employees as may be necessary to carry out such

functions and fix their salaries in accordance with the Classification Act of 1923 as amended.

SEC. 11. All receipts from transmission and sale of electric energy generated at the Bonneville project shall be covered into the Treasury of the United States to the credit of miscellaneous receipts, save and except that the Treasury shall set up and maintain from such receipts a continuing fund of \$500,000, to the credit of the administrator and subject to check by him, to defray emergency expenses and to insure continuous operation. There is hereby authorized to be appropriated from time to time, out of moneys in the Treasury not otherwise appropriated, such sums as may be necessary to carry out the provisions of this Act, including installation of equipment and machinery for the generation of electric energy and facilities for its transmission and sale.

SEC. 12. The administrator may, in the name of the United States, under the supervision of the Attorney General, bring such suits at law or in equity as in his judgment may be necessary to carry out the purposes of this Act; and he shall be represented in the prosecution and defense of all litigation affecting the status or operation of Bonneville project by the United States Attorneys for the districts, respectively, in which such litigation may arise, or by such attorney or attorneys as the Attorney General may designate as authorized by law, in conjunction with the regularly employed attorneys of the administrator.

SEC. 13. If any provision of this Act or the application of such provision to any person or circumstance shall be held invalid, the remainder of the Act and the application of such provision to persons or circumstances other than those as to which it is held invalid shall not be affected thereby.

Approved, August 20, 1937.

APPENDIX B

Commissioners:

Clyde L. Seavey, Chairman
 Claude L. Draper
 Basil Manly
 Leland Olds
 John W. Scott

UNITED STATES OF AMERICA,
 FEDERAL POWER COMMISSION,
 September 13, 1939.

In re Bonneville Project, Columbia River, Oregon-Washington. Docket No. IT-5519

ORDER CONFIRMING AND APPROVING RATE SCHEDULES

The Acting Administrator of the Bonneville Project, having prepared certain schedules of rates and charges and general terms and conditions pertaining thereto (hereinafter collectively referred to as "Rate Schedules") with respect to the sale of electric energy produced at said Project as provided in the Act of Congress approved August 20, 1937, Public, No. 329, 75th Congress (hereinafter referred to as the "Bonneville Act") and having submitted said Rate Schedules for confirmation and approval by the Commission;

It appearing to the Commission that—

(a) By order adopted June 8, 1938, the Commission confirmed and approved Wholesale Power Rate Schedules A-1, B-1, C-1, and D-1, and the General Terms and Conditions and Definitions pertaining thereto;

(b) By order adopted July 29, 1938, the Commission confirmed and approved modifications of said Wholesale Power Rate Schedules A-1, B-1, C-1, and D-1, as to the sale and disposition of temporary power for experimental purposes, said modifications extending only until October 31, 1938;

(c) By order adopted December 20, 1938, the Commission confirmed and approved Wholesale Power Rate Schedule E-1, covering the sale and disposition of temporary power for experimental purposes for an indeterminate period of time terminating not later than December 31, 1939;

(d) On July 22, 1939, the Acting Administrator of the Bonneville Project filed with the Commission Rate Schedules designated as Wholesale Power Rate Schedules A-2 and C-2, Optional Wholesale Rate Schedule F-1, Wholesale Energy Rate Schedule H-1, and General Terms and Conditions pertaining to Rate Schedules, such Rate Schedules cancelling and superseding Wholesale Power Rate Schedules A-1, B-1, C-1, and D-1, heretofore confirmed and approved by order of the Commission; said Rate Schedules, as filed with the

Commission on July 22, 1939, were withdrawn by the Acting Administrator of the Bonneville Project on August 3, 1939, before action of the Commission thereon;

(e) On August 3, 1939, the Acting Administrator of the Bonneville Project filed with the Commission new Rate Schedules, also designated as Wholesale Power Rate Schedules A-2 and C-2, Optional Wholesale Rate Schedule F-1, Wholesale Energy Rate Schedule H-1, and General Terms and Conditions pertaining to Rate Schedules; such Rate Schedules cancelling and superseding Wholesale Rate Schedules A-1, B-1, C-1, and D-1, and General Terms and Conditions and Definitions heretofore confirmed and approved by the order of the Commission of June 8, 1938;

(f) The Commission, by letters dated July 28 and August 3, 1939, enclosing copies of the proposed new Rate Schedules, invited the comments of the Governors and state regulatory bodies of the States of Oregon and Washington, and other interested parties, and thereafter gave full consideration to all replies received therefrom; and further caused public notice of the filing of said Rate Schedules to be inserted in the Federal Registers of August 2, 1939, and August 12, 1939;

The Commission, having considered the Rate Schedules filed with the Commission by the Acting Administrator of the Bonneville Project on August 3, 1939, being designated as Wholesale Power Rate Schedules A-2 and C-2, Optional Wholesale Power Rate Schedule F-1, Wholesale Energy Rate Schedule H-1, and General Terms and Conditions pertaining to Rate Schedules and having due regard for the purposes of the Bonneville Act, as set forth therein, and based upon present available information and data pertinent thereto, finds that—

(1) Wholesale Power Rate Schedule A-2, replacing Wholesale Power Rate Schedules A-1 and B-1, retains the basic rate for "at site" prime power of fourteen and one-half dollars (\$14.50) net per year per kilowatt of billing demand but eliminates a rate schedule for "at site" secondary power;

(2) Wholesale Power Rate Schedule C-2, replacing Wholesale Power Rate Schedules C-1 and D-1, retains the basic rate for transmission system prime power of seventeen and one-half dollars (\$17.50) net per year per kilowatt of billing demand but eliminates a rate schedule for transmission system secondary power; said Wholesale Power Rate Schedule C-2 retains a provision under which public bodies or cooperatives purchasing their entire energy requirements from the Bonneville Administrator will be permitted a developmental period of two years, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month;

(3) Optional Wholesale Rate Schedule F-1 covers the sale of prime power and provides for a demand charge of 75 cents net per month per kilowatt of billing demand and an energy charge of 2.5 mills net per kilowatt-hour delivered; said Rate Schedule contains a provision under which public bodies or cooperatives purchasing their entire energy requirements from the Bonneville Administrator will be permitted a developmental period of two years, during which monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month;

(4) Wholesale Energy Rate Schedule H-1 covers the sale of dump energy under restricted circumstances, at a rate of 2.5 mills net per kilowatt-hour delivered;

(5) The General Terms and Conditions filed with the Commission on August 3, 1939, contain, among other changes, a provision that purchasers contracting for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule A-2 or C-2, whichever is applicable;

(6) The said Wholesale Power Rate Schedules A-2 and C-2, Optional Wholesale Power Rate Schedule F-1, Wholesale Energy Rate Schedule H-1, and the General Terms and Conditions pertaining to Rate Schedules, as filed with the Commission on August 3, 1939, represent a development of the rate policy of the Project heretofore approved, are in keeping with the purposes of the Bonneville Act, and should be confirmed and approved by the Commission;

The Commission orders that—

(A) The Rate Schedules, designated as Wholesale Power Rate Schedules A-2 and C-2, Optional Wholesale Power Rate Schedule F-1, Wholesale Energy Rate Schedule H-1, and the General Terms and Conditions pertaining to Rate Schedules, as filed with the Commission on August 3, 1939, all being attached hereto and made a part hereof, be and the same are hereby confirmed and approved, to be effective on and after September 18, 1939;

(B) Said Rate Schedules may be modified from time to time by the Administrator, subject to confirmation and approval by the Federal Power Commission.

By the Commission.

[SEAL]

LEON M. FUQUAY, *Secretary.*

SEPTEMBER 13, 1939.

In re Bonneville Project, Columbia River, Oregon-Washington. Docket No. IT-5519

SCOTT, *Commissioner* (concurring):

Cognizant that rate making is a continuous process, I concur in the approval and confirmation of the proposed rate schedules only with the hope that they will be considered an initial step in the eventual evolution of a permanent rate policy for the Bonneville project, and that reappraisal of the schedules herein approved, in the light of subsequent operating experience, would appear desirable in order to assure the accomplishment of the intent of Congress expressed in the Bonneville Act.

JOHN W. SCOTT, *Commissioner.*

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE A-2

(At Site Prime Power)

Availability.—This schedule covers Prime Power delivered at the bus bars of the Bonneville Project power plant, or at such point or points adjacent thereto, as may be designated by the Administrator, available either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Power under this schedule made available for direct consumption shall be consumed within fifteen miles of the Bonneville Project power plant, and power under this schedule made available for resale shall remain available only to a purchaser the principal part of whose load is consumed within fifteen miles of the Bonneville Project power plant.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60-cycle power at a nominal voltage of 13,800 volts, or such other type of service as may be available.

Rate.—Power sold under this schedule shall be at the rate of fourteen and one-half dollars (\$14.50) net per year per kilowatt of billing demand.

Minimum charge.—The net minimum monthly charge for service under this schedule shall be one-twelfth ($\frac{1}{12}$ th) of fourteen and one-half dollars (\$14.50) per kilowatt of contract demand.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that the billing demand for any month shall not be less than the highest actual demand which occurred during the immediately preceding eleven months.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, the actual demand for the month shall be defined

as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills shall be rendered monthly on the basis of one-twelfth ($\frac{1}{12}$ th) of the annual rate.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels Wholesale Power Rate Schedules A-1 and B-1 confirmed and approved June 8, 1933.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE C-2 TRANSMISSION SYSTEM PRIME POWER

Availability.—This schedule covers Prime Power delivered from the Bonneville transmission system at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private persons or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be three-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power sold under this schedule shall be at the rate of seventeen and one-half dollars (\$17.50) net per year per kilowatt of billing demand. Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—The net minimum monthly charge for service under this schedule shall be one-twelfth ($\frac{1}{12}$ th) of seventeen and one-half dollars (\$17.50) per kilowatt of contract demand, except in the case of customers entitled to the five mill developmental rate referred to above.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that the billing demand for any month shall not be less than the highest actual demand which occurred during the immediately preceding eleven months.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of 0.85 or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills shall be rendered monthly on the basis of one-twelfth (1/12th) of the annual rate.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels Wholesale Power Rate Schedules C-1 and D-1 confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

OPTIONAL WHOLESALE POWER RATE SCHEDULE F-1

(Prime Power)

Availability.—This schedule covers prime power, delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power shall be sold under this schedule at the following rate:

Demand Charge: 75 cents net per month per kilowatt of billing demand.
Energy Charge: 2.5 mills net per kilowatt-hour delivered.

Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—Except in the case of customers entitled to the five-mill developmental rate referred to above, the total net minimum monthly charge for service under this schedule shall be 75 cents per month per kilowatt of contract demand, but not less than 75 percent of the highest demand charge billed during the preceding eleven months. The Administrator may also require a minimum guaranteed load factor except in the case of public bodies and cooperatives taking all their requirements under this rate schedule.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is

obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that in the case of public bodies and cooperatives taking all their power requirements under this rate schedule the billing demand shall be the actual demand.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

WHOLESALE ENERGY RATE SCHEDULE H-1

(Dump Energy)

Availability.—This schedule covers Dump Energy delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons: *Provided, however,* That energy sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public: *Provided further,* That energy will be available under this schedule only in cases where the Administrator determines that the purchaser maintains available generating facilities or has firm stand-by contracts or other sources of energy satisfactory to the Administrator ample to supply its requirements when dump energy is not available.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Delivery of Dump Energy is not assured. The Administrator shall be the sole judge of whether and when Dump Energy will be delivered, and, if delivered, the amount thereof.

In the event that the Dump Energy to be delivered is insufficient to supply the requirements of all purchasers thereof, the Administrator shall, in his sole discretion, designate the purchasers to whom such Dump Energy shall be delivered and the amount thereof to be delivered to each such purchaser.

Rate.—Energy shall be sold under this schedule at two and one-half (2.5) mills net per kilowatt-hour delivered.

Minimum charge.—If it is necessary for the Government to install extra equipment or extra capacity for the purpose of delivering dump energy, the contract for the sale thereof shall provide a minimum charge sufficient, in the judgment of the Administrator, to protect the Government from loss due to the installation of such extra equipment or extra capacity.

Energy delivered.—Whenever energy is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, billing shall be based upon the number of kilowatt-hours registered by the metering equipment. Whenever the monthly weighted average power factor is less than 0.85, then the energy shall be determined by taking 0.85 of the kilowatt-hours delivered and dividing this amount by the monthly weighted average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills for energy shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such

period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges against the purchaser for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past-due bills are paid. Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2 whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees shall be liable for damages if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancelation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator

may deem necessary, desirable or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended:

Administrator: The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At Site: At the Bonneville Project Power House, or points adjacent thereto.

Bonneville Project: The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and Cooperatives: Any form of nonprofit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump Energy: Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy: Electric energy, measured in kilowatt-hours.

Government: The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt: The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour: The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power: The rate of transferring or transforming energy measured in kilowatts.

Power factor: The ratio of kilowatts to kilovolt-amperes.

Prime Power: The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power-plant site is less than 800,000 cubic feet per second.

Public Bodies: States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

Commissioners:
Clyde L. Seavey, Acting Chairman
Claude L. Draper
Basil Manly
John W. Scott

UNITED STATES OF AMERICA,
FEDERAL POWER COMMISSION,
December 20, 1938.

In re Bonneville Project, Columbia River, Oregon-Washington. Docket No. IT-5519

ORDER CONFIRMING AND APPROVING RATE SCHEDULE

The Administrator of the Bonneville Project, having prepared Wholesale Power Rate Schedule E-1 (hereinafter referred to as "Rate Schedule E-1") with respect to the sale of electric energy produced at said Project as provided

in the Act of Congress approved August 20, 1937, Public, No. 329, 75th Congress (hereinafter referred to as the "Bonneville Act") and having submitted said Rate Schedule E-1 for confirmation and approval by the Commission retroactively as of November 1, 1938.

It appearing to the Commission that:

(a) By order adopted June 8, 1938, the Commission confirmed and approved Wholesale Power Rate Schedules A-1, B-1, C-1, and D-1, and the General Terms and Conditions and Definitions pertaining thereto;

(b) By order adopted July 29, 1938, the Commission confirmed and approved modifications of said Wholesale Power Rate Schedules A-1, B-1, C-1, and D-1, as to the sale and disposition of temporary power for experimental purposes for a period not to extend beyond October 31, 1938, in the manner contained in the contract dated July 26, 1938, between the United States of America, Department of the Interior, Bonneville Project, by J. D. Ross, Administrator, and the Northwestern Electric Company;

(c) Rate Schedule E-1 covers the sale and disposition of temporary power for experimental purposes, being an addition to the aforesaid rate schedules heretofore approved, and permits the extension of the aforesaid contract with the Northwestern Electric Company for a period of time beyond October 31, 1938;

(d) The General Terms and Conditions and Definitions, heretofore confirmed and approved, are made a part of said Rate Schedule E-1, except as modified therein;

(e) The aforesaid Rate Schedule E-1 will be effective between the date of November 1, 1938, and the date of completion of the Bonneville-Vancouver Transmission Facilities, but in no event later than December 31, 1939;

(f) Due to conditions of an emergent nature, set forth in the Administrator's letter to the Commission under date of December 14, 1938, it is necessary that said Rate Schedule E-1 be confirmed and approved retroactively, as of November 1, 1938.

The Commission, having considered said Rate Schedule E-1, and having due regard for the purposes of the aforesaid Bonneville Act, as set forth therein, and based on present available information and data pertinent thereto, *finds* that:

(1) The said Rate Schedule E-1 is reasonable and in keeping with the purposes of the Bonneville Act;

(2) The said Rate Schedule E-1 should be confirmed and approved retroactively as of November 1, 1938.

Now, therefore, the Commission *orders* that:

(A) The Rate Schedule, designated as Wholesale Power Rate Schedule E-1, being attached hereto and made a part hereof, be and the same is hereby confirmed and approved retroactively, as of November 1, 1938:

(B) Said Rate Schedule may be modified from time to time by the Administrator, subject to confirmation and approval by the Federal Power Commission.

By the Commission:

LEON M. FUQUAY, *Secretary.*

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—THE BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE E-1

(Transmission System, Temporary Prime and Secondary Power)

Availability.—This rate schedule covers the sale of Prime and Secondary Power to public bodies, cooperatives, and privately owned electric utilities for resale.

For the limited period covered by contracts made under this schedule, the above-named agencies shall provide adequate facilities for the transmission of power to the purchaser's distribution system from such point at or adjacent to the Bonneville Project Power Plant as may be designated by the Administrator.

Due to the experimental nature of the service, this schedule shall be effective between the dates of November 1, 1938, and the date of completion of the Bonneville-Vancouver Transmission facilities, but in no event later than December 31, 1939.

Rate.—

1. Prime Power, 1/365th of \$17.50, per day, per kilowatt of billing demand.
2. Secondary Power, 1/365th of \$11.50, per day, per kilowatt of billing demand.

Determination of demand.—The demand shall be determined by suitable indicating and recording instruments installed at such locations as may be designated by the Administrator. The demand for any calendar day shall be defined as the highest integrated load during any thirty-minute (30-minute) period occurring during the twenty-four hours from midnight to midnight; provided, that all demands so determined shall be adjusted by deduction of a free allowance, expressed as a percentage of the registered demand and specified in the contract, to compensate the purchaser for the transformation and transmission losses from the point of metering to the specified theoretical point of delivery; provided further, that provision shall be made in the contract for special treatment of unusual or abnormal demands, in excess of the contract demand, which may be occasioned by the operation of the Bonneville Project Power System in parallel with the purchaser's system; or by accident to, failure of, or abnormal conditions on, the facilities of either party. For billing purposes, one-half of the purchaser's demand, as of any calendar day, excluding such free allowance for losses, shall be considered as "prime power," and the other one-half shall be considered as "secondary power."

Maximum billing demand.—The billing demand for each day shall be the contract demand or the registered demand, whichever is higher, both being subject to adjustment for transformation and transmission losses as above noted; provided, that when the adjusted registered demand exceeds the adjusted contract demand, it shall be considered to do so, in the determination of billing demand, in blocks of 500 kilowatts or multiples thereof, such blocks being in turn subject to the above-specified adjustment for losses.

Contract demand.—Each contract under this schedule shall specify the amount of capacity in kilowatts to be made available to the purchaser during the term of such contract. This capacity in kilowatts shall be termed the contract demand. For billing purposes, one-half of such contract demand, excluding such free allowance as shall be specified in the contract for transformation and transmission losses from the point of metering to the theoretical point of delivery, shall be considered and taken to be "prime power," and the other one-half shall be considered and taken to be "secondary power." The purchaser may not exceed the contract demand by more than ten percent (10%) without the written consent of the Administrator.

Minimum charge.—The minimum charge for service under this schedule shall be the Prime Power portion of the contract demand, as adjusted for losses, at 1/365th of \$17.50 net per kilowatt per day, plus the Secondary Power portion of the contract demand, as adjusted for losses, at 1/365th of \$11.50 net per kilowatt per day.

Point of delivery.—For billing purposes the point of delivery shall be considered as such point on the transmission system of the purchaser as is designated by the Administrator and specified in the contract. An allowance will be made in the contract for transmission losses from the point of metering to such point of delivery.

Service shall be measured at the Bonneville Project Power Plant bus bars, at generating voltage (approximately 13,800 volts).

Character or service.—Power delivered hereunder shall be three phase and sixty cycles, at a voltage which shall be specified in the contract.

Payments.—Bills shall be rendered monthly, the amount of each monthly bill being the sum of the amounts of the daily bills incurred during the current month, as derived by applying the above rates to the daily billing demand; such monthly bills shall be due and payable at the office of the Administrator within fifteen (15) days from the date thereof.

The above rate is net. If payment is not received on or before the close of business on the date due, a penalty of two percent (2%) of the bill rendered will be added, for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Administrator may, at any time thereafter, and after giving the purchaser ten (10) days' advance notice in writing, discontinue service under this rate schedule.

Contract and term.—Service under this schedule shall, in each case, be covered by a contract entered into with each purchaser by the Administrator.

Due to the temporary and experimental nature of the service rendered hereunder, such contracts shall be for terms specified in each contract by the Administrator, but in no case shall such term or extensions thereof exceed the expiration date of this schedule. All such contracts shall be subject to termination, by either party at any time, by two weeks notice in writing given to the other party of intention to terminate at the time specified in such notice.

Rules and regulations.—Purchase of power under this schedule shall be subject to all the provisions of the Bonneville Act, and to the rules and regulations prescribed by the Administrator in the General Terms and Conditions which, by reference, are made a part of this schedule, except as such General Terms and Conditions may be modified by the terms of this schedule.

J. D. ROSS,
Administrator, The Bonneville Project.

APPENDIX C

POWER CONTRACTS AND RELATED AGREEMENTS

MUNICIPALITIES

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR, BONNEVILLE POWER ADMINISTRATOR, AND THE CITY OF CANBY, OREGON

THIS AGREEMENT, executed on December 22, 1939, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Power Administrator, hereinafter called "the Administrator," and the CITY OF CANBY, a municipal corporation of the State of Oregon, hereinafter called "the City,"

WITNESSETH:

WHEREAS the City owns and operates an electric power system, serving customers in the City of Canby, Oregon, and vicinity; and

WHEREAS the City intends to operate an efficient and economical system for the distribution of power to its ultimate consumers on a non-profit basis and desires to purchase its power requirements from the Administrator, and the Administrator expects to be able to supply such requirements; and

WHEREAS all acts, things, and conditions necessary under law and the City's charter to make this agreement the valid and binding obligation of the parties have been duly done, performed, and complied with:

Now, THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for twenty years from the date of its execution.

2. *Sale of power.*—The Administrator shall sell power to the City and the City shall purchase such power from the Administrator, as hereinafter provided.

The Administrator shall furnish, and the City shall purchase from the Administrator, all of the power requirements of the City, except that in the event of delay or failure on the part of the Administrator to increase the Contract Demand after reasonable notice, or to meet the City's requirements for increased power supplies, the City shall have the right to make such temporary arrangements as may be necessary to meet its requirements.

All obligations of the parties hereto with respect to delivery of such power, and payment therefor, shall begin on the date (hereinafter called the "date of initial delivery") upon which the Administrator shall be prepared to deliver power to the City.

Beginning on the date of initial delivery and throughout the term of this contract, the Administrator shall make available to the City 300 kilowatts of prime power, which shall be the Contract Demand. Such Contract Demand may be increased or decreased whenever the parties hereto mutually so agree in writing.

All power shall be delivered in the form of three-phase, alternating current at approximately 60 cycles per second and approximately 7,200 volts.

3. *Point of delivery.*—The Administrator shall deliver and meter power to the City at a mutually suitable point at or adjacent to the City limits. It is understood that the Administrator will proceed with reasonable diligence to conclude satisfactory arrangements for the transfer of Bonneville power to

serve the City over existing transmission facilities, or, in the event such arrangements cannot be concluded with dispatch, to construct transmission and transformation facilities for delivering such power to the City.

4. *Rate to purchaser.*—Bonneville Wholesale Power Rate Schedule F-1 (Optional Prime Power Rate), together with the General Terms and Conditions applicable to such Schedule, as confirmed by order of the Federal Power Commission dated September 18, 1939, are hereby made a part of this contract. Copies of said Schedule F-1 and General Terms and Conditions are attached hereto and marked Exhibits A and B, respectively. The City shall pay the Administrator for Prime Power at the rate specified in Exhibit A.

5. *Equitable adjustment of rates.*—After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rate specified in Bonneville Wholesale Power Rate Schedule F-1, and at five-year intervals thereafter the administrator shall reexamine the rate then in effect under said Schedule. The Administrator may make an equitable adjustment in such rate, but prior to such adjustment, the Administrator shall hold a hearing at which the City shall have an opportunity to be heard. The City shall be given fifteen days' written notice of the time and place of such hearing. In the event the Administrator determines that such rate shall be increased, he shall furnish the City with a copy of such increased rate at least two weeks prior to the submission of the same for approval by the Federal Power Commission.

If such increased rate is approved by said Commission and adopted by the Administrator, such changed rate shall thereafter be binding upon the parties hereto, and thereafter the City shall pay the Government for Prime Power at such changed rate.

In the event that such rate is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the City may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate, and such notice shall specify the date upon which such cancellation shall become effective; provided, however, that the effective date of such cancellation shall be not sooner than six months nor later than two years after the date such notice is received by the Administrator.

6. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator, within sixty days after receipt from the City of a written request therefor, shall submit to the City a contract, for the sale of power under such schedule containing such lower rate, to be substituted for this contract. The term of such substituted contract shall be the same as the unexpired term of this contract. The City's Contract Demand and minimum charge under such substituted contract shall not be less than the Purchaser's Contract Demand and minimum charge under this contract immediately prior to such substitution, unless the Administrator, in his discretion, determines that such Contract Demand and minimum charge, or either of them, may be reduced without prejudice to the Government.

7. *Resale rates.*—The City shall so manage and operate its electric system, and handle the revenues derived therefrom as to resell power purchased from the Administrator at rates which reflect the low cost of Bonneville power, and at the same time are consistent with sound and economical operation.

The City shall charge consumers the rates set forth in the resale rate schedules (hereinafter called "resale schedules") attached hereto as Exhibit C, and hereby made a part of this contract. Additional resale schedules for special classes of consumers, or special uses of electricity, may be added from time to time upon mutual agreement of the parties.

If at any time during the term of this contract it should appear that the rates set forth in the said resale schedules, together with such surcharge as may be provided for therein, do not produce revenues sufficient to operate and maintain the City's electric system on a self-supporting and financially sound basis, then the City and the Administrator shall agree upon, and the City shall put into effect such changes in resale rates as will provide the increased revenues necessary to place the system upon such a self-supporting and financially sound basis. To the extent that the City has surplus revenues available therefor, the City shall reduce its rates to consumers; provided, however, that unless the written consent of the Administrator is first obtained, such reduction shall be uniform as between the several resale schedules for different classes of consumers, and no substantial alteration shall be made in the rate structure of any resale schedule. The City shall keep on file in

the office of the Administrator a schedule of all its rates and charges to the public for electric energy, and such alterations and changes therein as may be put into effect pursuant to the terms of this contract.

The City shall sell electric energy to the ultimate consumer without discrimination between consumers of the same class, and shall not give or make as between consumers of the same class any discriminatory rate, rebate, or other special concession.

8. *Electric energy or service furnished City or other public body.*—The City shall pay into its electric funds from appropriate general or special funds for all electric service required by the City for street lighting, water pumping, and other operations and uses, and the City shall be reimbursed for all electric energy and service furnished to any other public body, at the resale rates as set forth in the attached resale rate schedules, with such modifications and additions as may from time to time be agreed upon by the parties hereto.

9. *Principles of operation.*—The City shall—

(a) Administer its electric system as a separate department and establish and maintain a separate fund for its revenues from electrical operations; and shall not mingle funds or accounts with those of any other of its operations:

(b) Maintain and operate its electric system on a nonprofit, self-supporting, and financially sound basis, and dispose of its gross revenues from electric operations in the following manner:

(1) Revenues shall first be used for the payment of all current operating expenses, including salaries, wages, cost of materials and supplies, power at wholesale, and insurance.

(2) From remaining revenues, the City shall next currently provide for the payment of interest due on system indebtedness, and for debt amortization charges and/or sinking fund payments thereon.

(3) Thereafter revenues shall be used to make reasonable provision (including reserves) for replacements of plant, new construction, contingencies, and cash working capital.

(4) From remaining revenues the City may, if it so elects, and to the extent permitted by law, pay into its General Fund a tax equivalent and a return on its investment as defined by the supplementary memorandum attached hereto as Exhibit D.

(5) All remaining revenues shall be considered surplus revenues and shall serve as a basis for the reduction of rates. Surplus revenues shall be computed as of June 30 of each year. The City may devote surplus revenues earned in any year to the purchase or retirement of system indebtedness before maturity if, and to the extent that, such use thereof is consistent with all the requirements of this section.

(c) Maintain and operate its system in accordance with reasonable standards of safety, reliability, and efficiency.

(d) Keep the general books of accounts of its electric system according to the system of accounts prescribed for public utilities and licensees by the Federal Power Commission, and shall allow the duly authorized agents of the Government to have free access at all reasonable times to all books and records relating to electric system operations. The City shall cause its books of account to be audited at least once every twelve months by independent certified public accountants, if requested by the Administrator.

(e) Furnish promptly to the Government such operating and financial statements relating to electric system operations as may reasonably be requested by the Government. In the event of failure to furnish promptly such operating and financial statements, the Administrator, following written notification to the City of the Administrator's intention so to do, may with his own staff perform all work necessary to collect such data as is reasonably desired.

10. *Cancellation by the Administrator.*—In the event that the City does not comply with the provisions and requirements of Sections 7 to 9, inclusive, of this contract, or any of such provisions and requirements, the Administrator may, at his option, cancel this contract, after such reasonable notice (but not to exceed eighteen months) as may be required for the City to obtain substitute power supplies.

Nothing contained in this contract shall be so construed as, in any manner, to abridge, limit, or deprive the Government of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have.

11. *Assignment of contract.*—This contract shall inure to the benefit of, and shall be binding upon the respective successors and assigns of the parties hereto; provided, however, that neither the contract nor any interest therein shall be transferred or assigned by the City without the written consent of the Administrator.

12. *Waiver of default.*—Any waiver at any time by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

13. *Interest of Member of Congress.*—No Member of, or Delegate to, Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

IN WITNESS WHEREOF the parties hereto have executed this agreement in triplicate, the said City by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Department of the Interior.

By PAUL J. RAVEN,
Bonneville Power Administrator.
THE CITY OF CANBY, OREGON,
By J. R. VINYARD.

Attest:

[OFFICIAL SEAL] RAY L. MANGUS.

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

OPTIONAL WHOLESALE POWER RATE SCHEDULE F-1

(Prime Power)

Availability.—This schedule covers prime power, delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power shall be sold under this schedule at the following rate:

Demand charge: 75 cents net per month per kilowatt of billing demand.

Energy charge: 2.5 mills net per kilowatt-hour delivered.

Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—Except in the case of customers entitled to the five-mill developmental rate referred to above, the total net minimum monthly charge for service under this schedule shall be 75 cents per month per kilowatt of contract demand, but not less than 75 percent of the highest demand charge billed during the preceding eleven months. The Administrator may also require a minimum guaranteed load factor except in the case of public bodies and cooperatives taking all their requirements under this rate schedule.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated

to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that in the case of public bodies and cooperatives taking all their power requirements under this rate schedule the billing demand shall be the actual demand.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser.

The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent, slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges against the purchaser for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past due bills are paid. Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would

have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages, if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any pre-determined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate

intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended.

Administrator: The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At Site: At the Bonneville Project Power House, or points adjacent thereto.

Bonneville Project: The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and Cooperatives: Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump Energy: Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy: Electric energy, measured in kilowatt-hours.

Government: The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt: The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour: The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power: The rate of transferring or transforming energy measured in kilowatts.

Power factor: The ratio of kilowatts to kilovolt-amperes.

Prime Power: The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 cubic feet per second.

Public Bodies: States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

EXHIBIT C. RESALE RATE SCHEDULES

RESIDENTIAL RATE—SCHEDULE 1

Availability.—Applicable to domestic use of all residential customers, including meters with individual rated capacity of $7\frac{1}{2}$ H. P. or less. Service under the Residential Rate shall apply only to electric service in a single private dwelling and its appurtenances, or for general farm service, including water heating, and not for resale to others. Private dwellings in which space is occasionally used for the conduct of business by a person residing therein will be served under the Residential Rate. Where a portion of a dwelling is used regularly for the conduct of business, the electricity consumed in that portion so used will be separately metered and billed under the Commercial Lighting and Power Rate. If separate circuits are not provided by the customer, the entire premises shall be classified as nonresidential and billed accordingly. The Residential Rate shall not apply to service to institutions such as clubs, fraternities, orphanages, or homes; recognized rooming or boarding houses; the space in an apartment or other residential building primarily devoted to use as an office or studio for professional or other gainful purposes.

Rates.—

First 50 kilowatt-hours used per month at 3 cents per kilowatt-hour.

Next 50 kilowatt-hours used per month at 2 cents per kilowatt-hour.

Next 200 kilowatt-hours used per month at 1 cent per kilowatt-hour.

Next 900 kilowatt-hours used per month at $\frac{1}{2}$ cent per kilowatt-hour.

Over 1,200 kilowatt-hours used per month at $\frac{3}{4}$ cent per kilowatt-hour.

Minimum monthly bill.—\$1.00 net per month for each meter.

Payment.—The above rates are net, the gross rates being 5% higher. In the event that the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

Delivery point.—The above rates are based upon the supply of service through a single delivery and metering point, and at a single voltage. Separate supply for the same customer at other points of consumption, or at a different voltage, shall be separately metered and billed.

Rules and regulations.—Service under this classification is subject to the Rules and Regulations of the City.

COMMERCIAL LIGHTING AND POWER RATE—SCHEDULE 2

Availability.—Applicable to all commercial and nonresidential light, heat, and power customers. Energy supplied under this schedule shall not be submetered for resale or resold to others.

Rates.—

Energy Charge:

First 150 kilowatt-hours used per month at 3 cents per kilowatt-hour.

Next 350 kilowatt-hours used per month at 2 cents per kilowatt-hour.

Next 1,000 kilowatt-hours used per month at 1 cent per kilowatt-hour.

Next 13,500 kilowatt-hours used per month at 0.8 cent per kilowatt-hour.

Next 25,000 kilowatt-hours used per month at 0.6 cent per kilowatt-hour.

Next 60,000 kilowatt-hours used per month at 0.4 cent per kilowatt-hour.

Excess above 100,000 kilowatt-hours used per month at 0.3 cent per kilowatt-hour.

Demand Charge:

First 10 kilowatts of demand per month, no demand charge.

Excess above 10 kilowatts of demand per month, at 95 cents per kilowatt.

The energy charge for use in excess of 360 times the demand shall be subject to a reduction of 0.5 mill per kilowatt-hour from the otherwise applicable rate.

Determination of demand.—Demand measurement shall be made by suitable instruments at the point of delivery. Demand for any month shall be defined as the average kilowatt delivery during the 30-minute period in which the consumption of energy is the greatest during the month for which determination is made.

Adjustment of demand charges for power factor.—Demand charges shall be adjusted for customers with 50 kilowatts or more of measured demand to correct for weighted average power factors lower than 85 percent, and may be so adjusted for other customers if and when the City deems necessary.

Such adjustments will be made by taking 0.85 of the demand determined as stated above, and dividing this amount by the weighted monthly average power factor.

Minimum charges.—For customers with 10 kilowatts or less of measured demand the net monthly minimum bill shall be \$1 for each meter.

For users whose measured demand in any of the past eleven months exceeds 10 kilowatts, the minimum charges shall be as follows:

The minimum monthly bill during the service period shall be 60 percent of 95 cents times the highest demand during the preceding eleven calendar months.

For seasonal customers taking service for less than one full year minimum charge during the period when service is not taken shall be sufficient to pay the carrying charges on all equipment provided solely for service to such customers. This carrying charge shall be the specific charges applicable to such equipment, if these are determinable; otherwise, the carrying charge shall be computed as $\frac{3}{4}$ of 1 percent per month of the investment provided solely for such service, excluding equipment which can be used elsewhere during the period when service is discontinued by the seasonal customer; provided that the minimum charges shall not exceed \$6.84 (60 percent of 95 cents times 12) per kilowatt of the highest measured demand occurring during any month of each year of service, less bills paid during the service period. The estimated minimum annual charge will be collected in equal installments during the estimated months of service, and will be adjusted at the end of the service period, at which time customer shall pay the excess, if any, of the minimum charge over the total amount previously billed to and paid by customer. Seasonal customers shall pay in addition the actual cost of connections and disconnections in excess of one of each per year.

Payment.—The above rates are net, the gross rates being 5 percent higher on the first \$25 and 1 percent on the remainder of the bill. In the event the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

Delivery point.—The above rates are based upon the supply of service through a single delivery and metering point, and at a single voltage and phase. Separate supply for the same customer at other points of consumption, or at a different voltage, or phase, shall be separately metered and billed.

Contract requirement.—Customers whose measured demand in any month exceeds 10 kilowatts may be required to execute a contract for a minimum term of one year.

Rules and regulations.—Service under this classification is subject to the Rules and Regulations of the City.

STREET LIGHTING RATE—SCHEDULE 3

Availability.—Applicable to service for street lighting systems, including street lighting, signal systems and roadway and park lighting for a term of not less than one year.

Character of service.—Alternating-current service, either series or multiple system, or in combination, at option of the City.

Rate.—The rates for this service consist of two parts, as follows:

I. Energy charge:

- First 150 kilowatt-hours used per month at 3 cents per kilowatt-hour.
- Next 350 kilowatt-hours used per month at 2 cents per kilowatt-hour.
- Excess above 500 kilowatt-hours used per month at 1 cent per kilowatt-hour.

II. Investment charge: The annual investment charge (for the cost of operation, maintenance and fixed charges on the City's special investment for street lighting service) shall be 9 percent of such special investment, determined as set forth below. This charge will be recomputed on January 1 of each year and one-twelfth of the total annual charge so computed will be billed customer monthly.

Method of determining distributor's investment.—The investment in property and equipment used as a basis for the investment charge contained in this schedule shall consist of the cost of property and equipment used solely for street lighting purposes, such as lamps, fixtures, brackets, mast arms, conductors, poles, posts, standards, control equipment, switches, transformers, etc.

Lamp renewals.—Distributor shall keep a record of the number and type of lamp replacements and customer shall be billed monthly for the replacements during the month at actual cost to the City, including appropriate overheads.

Relocation of lamps.—The City shall, at the request of customer, relocate or change existing equipment. Customer shall reimburse the City for such changes at actual cost, including appropriate overheads.

Metering.—All energy consumed under this schedule shall be metered excepting installations where, in the opinion of the City metering would be impracticable.

When the consumption is metered, the meters shall be installed in or connected to the lighting circuit and the billing shall include the energy delivered to and consumed in all circuits and equipment used exclusively for street lighting purposes. If more than one meter is used, the readings shall be consolidated for billing purposes.

When the energy is not metered and also when a meter reading is found to be in error, the consumption for billing purposes shall be computed from the rated capacity of the lamps plus 5 percent for losses, multiplied by the number of hours of use.

Payment.—The rates included herein are net, the gross rates being five percent (5%) higher on the first \$25 and one percent (1%) on the remainder of the bill. In the event the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

EXHIBIT D

MEMORANDUM

Pursuant to Section 9 (b) (4) of the contract of December 22, 1939, between the United States of America, Department of the Interior, Bonneville Power Administrator, and the City of Canby, Oregon, it is understood and agreed that the maximum amount of the payments to the General Fund of the City, referred to in said section, shall be determined in the following manner:

A. *Return on investment.*—The City may pay into its General Fund each month, from electric revenues available therefor under this contract, a return of one-half of one percent on the investment of the General Fund in the electric system.

Inasmuch as no outstanding bonds are allocated to the electric system for the purposes of this section, the investment of the General Fund in the electric system as of the date of execution of the contract shall be the depreciated present value of the system. For the purposes of this provision the depreciated present value of said system shall be deemed to be \$25,000, but that amount shall be subject to adjustment upon completion of an appraisal and inventory of the system and agreement upon a corrected figure.

The investment of the General Fund in the electric system shall be increased only by and to the extent that money is transferred to the electric fund (other than for services rendered) from other funds of the City, or debts hereafter incurred by or for the account of the electric system are retired out of the proceeds of funds of the City other than the electric fund.

The amount the City may transfer to its General Fund each month as return on investment shall be computed on the basis of the investment as of the last day of the month next preceding.

B. *Payments in lieu of taxes.*—The City may pay into its General Fund from electric revenues available therefor an amount in lieu of taxes, to be determined as follows:

(1) The prevailing municipal property tax rate shall be applied to the equalized value of the property used in electric operations within the municipal limits.

(2) The tax equivalent paid to the City's General Funds under (1) above shall be increased by application of the county and State tax rates to the equalized value of the electric system, unless the county and/or state government levy property taxes upon the electric system, in which case the City shall not take the county and state tax equivalents for such taxes as are assessed.

(3) In determining the amount to which the City is entitled in lieu of taxes under (1) and (2) above, the tax rate shall be applied to the present value of the system plus net additions, less the depreciation reserve equalized according to the same ratio applied to taxable property in the county.

MEMORANDUM AGREEMENT

IT IS AGREED as of the 20th day of December 1939, between the PORTLAND GENERAL ELECTRIC COMPANY (hereinafter called the Company) and the UNITED STATES OF AMERICA (hereinafter called the Government), represented by the Department of the Interior, Bonneville Power Administrator (hereinafter called the Administrator), as follows:

WHEREAS the City of Canby, Oregon (hereinafter called the City), has requested the Administrator to supply the entire wholesale power requirements of the City, which are at the present time approximately 300 kilowatts; and

WHEREAS the Company owns transmission and transformation facilities extending to and interconnected with the distribution system of the City and capable of carrying and delivering the power needed by the City, and an interconnection has been established between the transmission systems of the Government and the Company at the Government's St. Johns substation; and

WHEREAS the Administrator has requested the Company to transfer the Government's power over the existing lines of the Company in order to supply the City's requirements;

IT IS THEREFORE MUTUALLY AGREED between the parties hereto that:

1. Beginning on February 1, 1940, the Company will transfer the Government's power over its transmission and transformation facilities for delivery to the City at 7,200 volts to meet its wholesale power requirements.

2. Meters recording power supplied to the City shall be read each month by agents of the Administrator and the Company. The City will be billed directly by the Administrator for power supplied to the City, and payment for such power will be made directly to the Administrator in accordance with the power contract to be executed between the Government and the City. The Company will be reimbursed by the Administrator for power supplied to the City hereunder, and for transmission and transformation of such power, by the delivery by the Government to the Company at the St. Johns substation of two kilowatt-hours of dump energy for each kilowatt-hour of energy delivered by the Company to the City. For the purpose of simplifying the adjustment of accounts between the Government and the Company, the amount of energy to be delivered by the Government to the Company under this agreement each month will be deducted from the total amount of dump energy sold to the Company by the Government during that month under the Power Contract between the Company and the Government dated December 1, 1939.

3. The Administrator agrees to purchase the metering equipment of the Company which is now located in the Company's Canby substation and used for measuring the power delivered to the City, except that the Administrator will not purchase the watt-hour meter located in said substation, but will furnish a suitable meter owned by the Government. An itemized statement of said metering equipment to be purchased by the Government and the price therefor is attached hereto as Exhibit A. Upon the execution of this agreement said equipment shall become the property of the Government and the Government will pay the Company for said equipment within thirty days after the date hereof.

4. No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom.

5. This agreement shall terminate upon one year's notice in writing given by either party hereto, or as soon as the Government has completed permanent arrangements for supplying power to the City, whichever date is the earlier.

IN WITNESS WHEREOF, the parties have executed this agreement in triplicate, the Company by the signatures and attest of its duly authorized officers, this 11th day of January 1940.

PORTLAND GENERAL ELECTRIC COMPANY,
By FRANKLIN T. GRIFFITH, *President*.

UNITED STATES OF AMERICA,
Represented by the Department of the Interior,
By PAUL J. RAVER,
Bonneville Power Administrator.

Attest:

CLARENCE D. PHILLIPS, *Asst. Secretary.*

EXHIBIT A

Canby Substation metering equipment to be sold to the Bonneville Administration

	<i>Quantity</i>
Type MA 25/5 ampere, style No. 242304, Current Transformers, Westinghouse Elec. & Mfg. Co.....	2
Type E-26, Cat. No. 86x-47, 200 volt amperes 6900/115 volts, serial No. 5801561 and 5801562 potential transformers, Gen. Elec. Co.....	2
40 feet of four conductor Kerite (Lot).....	1
Labor for installation.....	1
Total cost.....	\$285

(Contract No. Ib-152)

POWER CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE BONNEVILLE PROJECT, DEPARTMENT OF THE INTERIOR, J. D. ROSS, ADMINISTRATOR, AND THE CITY OF CASCADE LOCKS, OREGON

THIS AGREEMENT, executed on February 14, 1939, between the UNITED STATES OF AMERICA, represented by the Bonneville Project, Department of the Interior, J. D. ROSS, Administrator, hereinafter called "the Government," and the CITY OF CASCADE LOCKS, OREGON, a municipal corporation organized and existing under and by virtue of the laws of the State of Oregon, hereinafter called "the Municipality,"

WITNESSETH:

WHEREAS, by a resolution passed by the Common Council of the City of Cascade Locks on February 14, 1939, and thereafter approved by the Mayor, to take effect immediately, the Mayor and City Recorder of the Municipality are authorized to enter into this contract:

Now, THEREFORE, the parties hereto (subject to all the provisions of the Bonneville Act of August 20, 1937, Title 16, U. S. Code, Section 832 et seq.) mutually covenant and agree as follows:

1. *Sale of power.*—The Government shall sell electric power to the Municipality, and the Municipality shall purchase electric power from the Government, as hereinafter provided.

2. *Power supply.*—During the term of this contract, the Government shall make available to the Municipality seventy-five (75) kilowatts of "At Site" Prime Power and seventy-five (75) kilowatts of "At Site" Secondary Power, which seventy-five (75) kilowatts of "At Site" Prime Power and seventy-five (75) kilowatts of "At Site" Secondary Power shall be the contract demand.

The contract demand hereunder may be increased whenever the parties hereto mutually so agree in writing.

All electric power supplied to the Municipality, pursuant to this contract, shall be delivered in the form of three-phase, alternating current, at approximately sixty (60) cycles per second and approximately thirteen thousand eight hundred (13,800) volts.

3. *Term of contract.*—This contract shall continue in effect for twenty (20) years from the date of its execution.

4. *Schedules of rates.*—The Bonneville Project Wholesale Power Rate Schedules A-1 ("At Site" Prime Power) and B-1 ("At Site" Secondary Power), together with the "General Terms and Conditions" and the "Definitions" applicable to such schedules, as confirmed by order of the Federal Power Commission, dated June 8, 1938, are hereby made a part of this contract. Copies of said Power Rate Schedules A-1 and B-1, said "General Terms and Conditions," and said "Definitions" are attached hereto and marked Exhibits A, B, C, and D, respectively.

5. *Power metering and delivery.*—All electric power supplied to the Municipality, pursuant to this contract, shall be delivered through one meter and at a single point of delivery at the western limits of the Municipality, or such other point as the Administrator may designate.

6. *Payment.*—The Municipality shall pay the Government for all electric power supplied, pursuant to this contract, at the rates fixed in said Wholesale Power Rate Schedules A-1 and B-1.

As long as the point of delivery is the western limits of the Municipality, the Municipality shall pay the Government an additional monthly service charge, on the basis of One Dollar and Twenty-five Cents (\$1.25) per year per kilowatt of billing demand, as the annual cost of facilities provided by the Government to the Municipality for the delivery of power at a point removed from the generator bus at the Bonneville Project Power Plant, or substation adjacent thereto, and as the annual cost of that portion of the capacity of the Government's transformer utilized by the Municipality.

Charges to be made against the Municipality for electric power furnished, pursuant to this contract, and for the additional monthly service charge hereinbefore mentioned, shall begin as of the first day of the Municipality's demand for electric power, but in no event later than December 31, 1940.

7. *Equitable adjustment of rates.*—Said Wholesale Power Rate Schedules A-1 and B-1 shall be equitably adjusted at intervals deemed appropriate by the Administrator, and such adjustments shall, upon confirmation and approval by the Federal Power Commission, become a part of this contract; provided, however, that such adjustments shall not be made less frequently than once in every five (5) years.

8. *Revenues to be kept separate.*—The Municipality shall keep all revenues, derived from the operation of its electric system, separate and apart from any moneys derived from any other source.

9. *Accounting methods.*—The Municipality shall establish and maintain a system of accounting which complies with all applicable laws and regulations, and which has been approved by the Administrator.

The duly authorized agents of the Government shall have free access, at all reasonable times, to all books and records pertaining to the operation of the Municipality's electric system. Such agents will render such advisory and other service in the establishment and maintenance of the accounting system of the Municipality as the Administrator shall designate.

The Municipality shall furnish to the Administrator annual reports of the physical and financial operation of its electric system, together with such other interim reports as may mutually be deemed proper.

10. *Disposition of revenues.*—The Municipality shall maintain its electric system operations on a self-supporting and otherwise financially sound basis. It shall endeavor to sell electric energy at such rates and charges as will produce sufficient gross annual revenues for the payment of the following items of annual expenses:

- (a) Cost of power purchased.
- (b) Interest payments on all outstanding bonds.
- (c) Redemption of all matured bonds.
- (d) Redemption and Reserve Fund allocations.
- (e) Operating expenses—including salaries, wages, supplies, and materials; and insurance premiums, if insurance be in force.
- (f) Maintenance of all electric system property and equipment.
- (g) Interest and principal on obligations other than bonds.
- (h) Adequate appropriations to the Renewal, Replacement, and Emergency Fund.

11. *Disposition of surplus.*—Any or all revenues remaining after proper allocations have been made to cover the items listed in Section 10 hereof, may, in the discretion of the Common Council of the Municipality, be applied to any of the following:

- (a) Reduction of rates.
- (b) New construction, renewals, and replacements.
- (c) Redemption of unmatured bonds and other obligations.

12. *Renewal, replacement, and emergency fund.*—The Municipality shall establish and maintain, and from the revenues derived from the operation of its electric system shall make adequate appropriations to, a fund from which expenditures shall be made for ordinary and extraordinary renewals, replacements, and emergencies, in connection with the operation of its electric system.

13. *Resale rates.*—The Municipality covenants and agrees to so manage and operate its electric system, and to so handle the revenues derived from the operation of its electric system, as to resell, as soon as practical, the electric energy purchased from the Government, pursuant to this contract, at rates no higher than those contained in the Bonneville Objective Resale Rate Schedules.

The Municipality shall not discriminate among purchasers of the same class.

During the term of this contract, the Municipality shall keep on file with the Administrator a schedule of all the Municipality's rates and charges to the public for electric energy, together with such alterations and changes therein as may be put into effect by the Municipality.

14. *Electric power or service furnished Municipality.*—The Municipality's electric system shall be reimbursed by the Municipality for any and all services and electric power furnished to the Municipality by said electric system.

15. *Change of schedules.*—The parties hereto may, at any time during the term of this contract, mutually agree to substitute electric power sold under a Bonneville Project Wholesale Rate Schedule, or Schedules, other than A-1 and B-1, for the electric power to be made available under said Schedules A-1 and B-1, or either of them, pursuant to this contract; provided, however, that the amount of electric power so substituted shall not be less than the amount of electric power then being made available to the Municipality by the Government.

16. *Interest of Member of Congress.*—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise thereupon.

17. *Contract not transferable.*—Neither this contract nor any interest therein shall be transferable or assignable by the Municipality.

18. *Default.*—In the event that the Municipality shall not comply with all the terms and conditions herein contained on its part to be kept and performed, the Administrator may, at his option, cancel and terminate this contract. Any waiver at any time by the Government of its rights with respect to any defaults of the Municipality, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

19. *Contract contingent upon acquisition of electric system.*—In the event that the Municipality does not acquire the electric generating and distributing system of the West Coast Power Company in Hood River County, Oregon, on or before December 31, 1940, this contract shall terminate and be of no further force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this instrument, the said Municipality by the signature and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Bonneville Project, Department of the Interior.
 By CHARLES E. CARY,
Acting Administrator.

Approved as to form: J. C. F. Legal Department (Initialed).

CITY OF CASCADE LOCKS, OREGON,
 By G. E. MANCHESTER, *Mayor.*

Attest:

W. J. CARLSON, *City Recorder.*

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE A-1

("At Site" Prime Power)

Availability.—This rate schedule covers Prime Power delivered at the bus bars of the Bonneville Project Power Plant, or at such point or points adjacent thereto, as may be designated by the Administrator.

Power under this rate schedule shall be available to private purchasers for their own use, but not for resale, and to public bodies, co-operatives, and privately owned electric utilities at 13,800 volts (nominal), for distribution within fifteen miles of the Bonneville Project Power Plant.

Rate.—Fourteen and one-half dollars (\$14.50) net per year, per kilowatt of contract demand or maximum billing demand, whichever is higher.

Determination of demand.—The demand shall be determined by suitable indicating and recording instruments installed at such locations as may be designated by the Administrator. The demand for any month shall be defined as the highest integrated load during any thirty-minute (30 minute) period occurring in the calendar month for which the determination is made.

Maximum billing demand.—Purchaser shall maintain as nearly 100 percent (100%) power factor as practicable. Whenever the purchaser's power factor at the time of maximum monthly demand is less than eighty-five percent (85%), the demand for billing purposes shall be determined by taking eighty-five percent (85%) of the kilovolt-amperes indicated at the time of the maximum monthly demand. In no case shall the billing demand for any month be less than the contract demand, nor less than the highest billing demand that has occurred during the preceding eleven months.

Contract demand.—Each contract under this schedule shall specify the amount of capacity in kilowatts to be made available to the purchaser each year of the contract term. This capacity in kilowatts shall be termed the contract demand. The purchaser may not exceed the contract demand by more than 10 percent, without the written consent of the Administrator.

Minimum charge.—The minimum charge for service under this schedule shall be the contract demand at \$14.50 net per kilowatt per year.

Point of delivery.—The purchaser shall accept delivery of power at approximately 13,800 volts at the transmission-line side of the circuit breakers connecting the purchaser's cables to the generator bus at the Bonneville Project Power Plant, or at such substation adjacent thereto, located on either the north bank or the south bank of the Columbia River, as may be designated by the Administrator.

The purchaser shall accept delivery as provided above; and shall install, at his own expense, such necessary switches, cables, transmission lines, lightning arresters, and other equipment, as may be designated by the Administrator. If, however, facilities are provided by the Administrator for the delivery of power at a point removed from those specified above, the purchaser shall pay the capital or annual cost of such facilities.

Character of service.—Delivery of power hereunder shall be at approximately 13,800 volts, three phase, and sixty cycles.

Payments.—Bills shall be rendered monthly, on the basis of one-twelfth of the annual rate, and shall be due and payable at the office of the Administrator within fifteen days from the date of the bill.

The above rate is net. If payment is not received on or before the close of business on the date due a penalty of two percent (2%) of the bill rendered will be added for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Administrator may, at any time thereafter, and after giving the purchaser ten days advance notice in writing, discontinue service.

Contract and term.—Service under this schedule shall, in each case, be covered by a contract entered into with each purchaser by the Administrator.

Contracts shall be for a period of not less than five years, nor more than twenty years in the aggregate, including renewals or extensions provided for therein, from date of making.

Adjustment of rates.—Contracts shall contain such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years. Such adjustments of rates shall be subject to the approval of the Federal Power Commission.

Rules and regulations.—Purchase of power under the rate schedule shall be subject to the rules and regulations prescribed by the Administrator, contained in the General Terms and Conditions, which by reference are made a part of the schedule and to all the provisions of the Bonneville Act.

J. D. Ross,

Administrator, The Bonneville Project.

Confirmed and Approved by the Federal Power Commission June 8, 1938.

LEON M. FUQUAY, Secretary.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE B-1

("At Site" Secondary Power)

Availability.—This rate schedule covers Secondary Power delivered at the bus bars of the Bonneville Project Power Plant, or at such point or points adjacent thereto, as may be designated by the Administrator.

Power under this rate schedule shall be available to private purchasers for their own use, but not for resale; and to public bodies, cooperatives, and privately owned electric utilities at 13,800 volts (nominal), for distribution within fifteen miles of the Bonneville Project Power Plant. However, service under this schedule shall be available only to purchasers having contracts with the United States for prime power.

Rate.—Nine and one-half dollars (\$9.50) net per year, per kilowatt of contract or maximum billing demand, whichever is higher.

Determination of demand.—The demand shall be determined by suitable indicating and recording instruments installed at such locations as may be designated by the Administrator. The demand for any month shall be defined as the highest integrated load during any thirty-minute (30-minute) period occurring in the calendar month for which the determination is made.

Maximum billing demand.—Purchaser shall maintain as nearly 100 percent (100%) power factor as practicable. Whenever the purchaser's power factor at the time of maximum monthly demand is less than eighty-five percent (85%), the demand for billing purposes shall be determined by taking eighty-five percent (85%) of the kilovolt-amperes indicated at the time of the maximum monthly demand. In no case shall the billing demand for any month be less than the contract demand, nor less than the highest billing demand that has occurred during the preceding eleven months.

Limitation of demand.—Purchaser's contract demand for service under this schedule shall not exceed the contract demand under the purchaser's contract for Prime Power.

Contract demand.—Each contract under this schedule shall specify the amount of capacity in kilowatts to be made available to purchaser each year of the contract term. This capacity in kilowatts shall be termed the contract demand. The purchaser may not exceed his contract demand by more than 10 percent, without the written consent of the Administrator.

Whenever it becomes necessary for the Administrator to curtail, for any period, deliveries of power hereunder below the contract demand specified, the curtailed demand shall be substituted for the contract demand for the period.

Minimum charge.—The minimum charge for service under this schedule shall be the contract demand at \$9.50 net per kilowatt per year.

Point of delivery.—The purchaser shall accept delivery of power at approximately 13,800 volts at the transmission-line side of the circuit breakers connecting the purchaser's cables to the generator bus at the Bonneville Project Power Plant, or at such substation adjacent thereto, located on either the north bank or the south bank of the Columbia River, as may be designated by the Administrator.

The purchaser shall accept delivery as provided above; and shall install, at his own expense, such necessary switches, cables, transmission lines, lightning arresters, and other equipment, as may be designated by the Administrator. If, however, facilities are provided by the Administrator for the delivery of power at a point removed from those specified above, the purchaser shall pay the capital or annual cost of such facilities.

Character of service.—Delivery of power hereunder shall be at approximately 13,800 volts, three phase, and sixty cycles.

Payments.—Bills shall be rendered monthly, on the basis of one-twelfth of the annual rate, and shall be due and payable at the office of the Administrator within fifteen days from the date of the bill.

The above rate is net. If payment is not received on or before the close of business on the date due a penalty of two percent (2%) of the bill rendered will be added for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Administrator may, at any time thereafter, and after giving the purchaser ten days advance notice in writing, discontinue service.

Delivery of power.—Power delivery is not guaranteed under this schedule, and in case of power shortage the amount of power available will be prorated among purchasers on the basis of the amounts contracted for.

Contract and term.—Service under this schedule shall, in each case, be covered by a contract entered into with each purchaser by the Administrator.

Contracts shall be for a period of not less than one year, nor more than twenty years in the aggregate, including renewals or extensions provided for therein, from date of making.

Adjustment of rates.—Contracts shall contain such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years. Such adjustments of rates shall be subject to the approval of the Federal Power Commission.

Rules and regulations.—Purchase of power under the rate schedule shall be subject to the rules and regulations prescribed by the Administrator, contained in the General Terms and Conditions, which by reference are made a part of the schedule and to all the provisions of the Bonneville Act.

J. D. ROSS,
Administrator, The Bonneville Project.

Confirmed and Approved by the Federal Power Commission June 8, 1938.

LEON M. FUQUAY, Secretary.

EXHIBIT C

UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR—THE BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

SCHEDULES OF RATES AND CHARGES

GENERAL TERMS AND CONDITIONS

Purchase of power under all rate schedules and contracts shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power from the Bonneville Project Power Plant shall be available only to those purchasers, the waste products from whose plants or operations shall not be harmful to, or destructive of, the fish or other aquatic life of the Columbia River; nor otherwise pollute the stream; nor detract from the scenic beauties of the Columbia River Gorge.

Measurement of demand, energy, and power factor.—Demand and energy measurements shall be made by suitable instruments at the point, or points, of delivery; or may, at the option of the Administrator, be made at some other point, or points, where housing facilities are available or may be made available, or operation simplified: *Provided, however,* That in the event the metering is effected at some other location than at the point of delivery, suitable correction shall be made by the Administrator, of the amounts determined at such location, so that the adjusted amounts will, so far as possible, reflect the exact quantities delivered at the actual point, or points, of delivery.

The Administrator shall, without charge to the purchaser, install and maintain the necessary meters for measuring the maximum demand, and the amount of energy furnished to purchasers: *Provided, however,* That should these meters fail, or be found inaccurate, the maximum demand, and the amount of energy delivered, will be estimated by the Administrator from the best information available. The Administrator may also measure power factor. The purchaser shall permit the use of his housing and other facilities for Administrator's metering equipment.

Whenever a purchaser contracts for Secondary power in addition to Prime power, computation of his billing demands under the two classes of service shall be made as follows: When the sum of the purchaser's billing demands exceeds the sum of his contract demands, the excess of his billing demands above his contract demands shall be billed as Prime power or Secondary power, in the ratio that each contract demand bears to the sum of the contract demands: *Provided, however,* That the amount billed as Prime power shall, in no case, be less than the highest billing demand established for Prime power during the preceding eleven months; nor, in the case of curtailed Secondary power deliveries, shall the amount billed as Prime power be less than the difference between the total of the Prime and Secondary demands, and the curtailed Secondary power demand as prorated to the purchaser by the Administrator.

At site power.—The aggregate contract demands for "At Site" power, prime and secondary, shall not exceed 20 percent of the installed generating capacity of the plant.

Meter tests.—The Administrator shall, not less frequently than once a year, make periodical tests and inspections of metering equipment installed by him, in order to maintain a high standard of accuracy. At the request of purchaser, the Administrator may make additional tests or inspection of such equipment in the presence of representatives of purchaser. If such additional tests show that the metering equipment does not register or indicate within 2 percent of the correct reading, the metering equipment shall be corrected, and an adjustment will be made in purchaser's bill over a period of not more than 30 days prior to date of such test unless the period of faulty registration can be definitely established. Such tests shall be made without charge to the purchaser.

Inspections.—The Administrator shall have the right, but shall not be obligated, to inspect purchaser's installation at any time, and reserves the right to reject any wiring or equipment not in accordance with the Administrator's reasonable standards; but such inspection, or failure to inspect, or to reject, shall not render the Administrator, his agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in the installation of any electrical equipment, or from violation of the contract of which these terms and conditions are a part.

Purchaser's responsibility for property installed by the Administrator.—All meters, services, and other equipment furnished by the Administrator shall be and remain the property of the United States, and the right to remove, replace, or repair all such equipment is expressly reserved. The purchaser shall exercise proper care to protect the property of the United States on purchaser's premises, and in the event of loss or damage to property of the United States, arising from neglect of purchaser, the cost of necessary repairs or replacement shall be paid by purchaser.

Right of access.—Administrator's identified employees shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator.

Additional loads.—No change shall be made in purchaser's installation that may cause his demand to exceed his contract demand by 10 percent except after notice to and written permission from the Administrator. Additions to, or material changes in the characteristics of load, made without permission from the Administrator, shall render purchaser liable for any damage caused by the additional or changed installation, and to cancellation of the contract.

Purchaser's lines and equipment.—All lines and substations from point of delivery (as defined in the contract of which these terms and conditions are a part), and all electrical equipment, except the metering equipment installed by the Administrator, located on purchaser's side of such point of delivery, shall be furnished, installed, and maintained by purchaser.

Purchaser's lines and equipment—Standards.—All lines and equipment of purchaser must conform to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code, and to such State and local regulations as may apply.

Billing.—Bills will be rendered monthly and shall be due and payable at the office of the Administrator within fifteen days from the date of the bill. Failure to receive bill shall not release purchaser from payment obligation. If payment is not made on or before the close of business on the date due a penalty of two percent (2%) of the bill rendered will be added for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Admin-

istrator may, at any time thereafter, and after giving the purchaser ten days' advance notice in writing, discontinue service.

Should the final date for payment of the bill fall on a Sunday or holiday, the business day next following the final date will be held as a day of grace for delivery of payment. Remittances received by mail after expiration of the time limit for payment, will be accepted by Administrator as made in time if the incoming envelope bears United States Post Office date stamp of the final date for payment, or any date prior thereto.

Discontinuance of supply under this section shall not relieve the purchaser of his liability for the agreed minimum monthly payment during the time the supply of energy is so discontinued.

Interruption of service.—Administrator will furnish energy as agreed upon continuously so far as reasonable diligence will permit; but neither the United States, the Administrator, nor his duly authorized employees shall be liable for damages when, for any reason, suspensions of the operation of the generation and transmission system serving purchaser, or any part thereof, shall interfere with the delivery of electric energy to purchaser; nor shall such an interruption constitute a breach of contract on the part of the Administrator. Administrator will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service; and, in event of curtailment of power, shall give preference to purchasers of Prime power for resale.

Voltage fluctuations caused by purchaser.—Electric service must not be used in such a manner as to cause unusual fluctuations or disturbances to the system of the Bonneville project. Administrator may require purchaser at his own expense to install suitable apparatus to reasonably limit such fluctuation.

Balancing of loads.—Purchaser shall at all times take and use energy in such manner that the load will be balanced between phases as nearly as practicable to within 10 percent. In the event of unbalanced polyphase loads, Administrator reserves the right to require purchaser at his own expense to make the necessary changes to correct this condition, or to compute the kilowatt demand on the assumption that the load on each phase is equal to the greatest load on any phase.

Notice of trouble.—Purchaser shall notify the Administrator immediately should the service be unsatisfactory for any reason; or should there be any defects, trouble, or accidents affecting the supply of electricity. Such notices, if verbal, should be confirmed in writing.

Single point delivery.—Unless otherwise specifically provided in the contract, if service is rendered from more than one substation, or through more than one transformation at the same substation, Administrator will bill purchaser for power at each substation or additional transformation separately.

Contracts.—(1) Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate cancelling of such contract of sale in the event of violation of such provision.

(2) Contracts shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided by the rate schedule under which service is rendered, but not exceeding in the aggregate twenty years from the dates of the making of such contracts.

(3) Contracts shall contain such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years. Such adjustments of rates shall be subject to the approval of the Federal Power Commission.

(4) Contracts with purchasers engaged in selling electric energy to the general public shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of public bodies or cooperatives, and that such cancellation may be with respect to all or any part of the electric energy so purchased under the contract.

(5) Contracts with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things, stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to insure that

resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility.

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville project and sold to purchasers shall become effective only after confirmation and approval of the Federal Power Commission. Subject to confirmation and approval of the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

EXHIBIT D

DEFINITIONS

The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings:

Administrator.—Means the Bonneville Project Administrator.

"At Site."—Refers to the Bonneville Project Power House, or points adjacent thereto.

Billing demand.—Purchaser's maximum or contract demand used for computing power bill.

Bonneville Project.—Means dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington; and such other facilities as may be constructed, leased, or acquired in accordance with the Bonneville Act.

Contract demand.—The kilowatts of demand specified in the purchaser's contract for power, to establish the amount of power that will be sold the customer under the particular agreement.

Cooperative and cooperatives.—Any form of non-profit-making organization or organizations, of citizens supplying or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dollars per year per kilowatt.—The amount of money charged annually for each kilowatt of contract demand, or maximum billing demand.

Electric energy.—(See Energy.)

Energy.—Electric energy, measured in kilowatt-hours.

Kilowatt.—The rate of power generation, or delivery, equal to approximately 1,341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour.—The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Load.—Power requirements of a purchaser, or purchasers, supplied by the Bonneville Project.

Point of delivery.—Unless otherwise specifically defined in the power schedules or contracts with the purchaser, means at the point of connection of the purchaser's lines with the switch on the feeder through which the purchaser receives power delivery.

Power.—When used in text refers to either kilowatts of demand, or kilowatt-hours of energy, or both; when reference is made to definite amounts of energy, or to a rate of power generation or power delivery, it is expressed in kilowatt-hours, or kilowatts, as required.

Power factor.—Defined as the ratio of the kilowatts to the kilovolt-amperes supplied to a system determined at the time of the purchaser's maximum monthly demand.

Prime power.—Prime Power, as referred to herein, is defined as the kilowatt output capacity that is estimated to be available at the Bonneville Project Power Plant (based on stream-flow records 1879 to 1934) 99.5 percent of the time; viz, whenever the flow in the Columbia River at the Bonneville Project Power Plant site is less than 800,000 c. f. s. and greater than 35,000 c. f. s. (the minimum unregulated flow of record).

Private purchasers.—Persons, firms or corporations, other than privately owned utilities, public bodies, or cooperatives, requiring power for use in their own plants and operations.

Public body or public bodies.—Means States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

Secondary power.—All power that can be produced at the Bonneville Project Power Plant in excess of that defined as Prime. Secondary power is not continuously available. When it is produced, but in less than the aggregate contract demands, the Administrator may curtail deliveries to purchasers.

Year.—Twelve consecutive calendar months.

AGREEMENT SUPPLEMENTARY TO POWER CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY BONNEVILLE PROJECT, DEPARTMENT OF THE INTERIOR, J. D. ROSS, ADMINISTRATOR, AND CITY OF CASCADE LOCKS, OREGON, EXECUTED ON FEBRUARY 14, 1939

Pursuant to Section 2 of agreement supplementary to power contract between the UNITED STATES OF AMERICA, represented by The Bonneville Project, Department of the Interior, J. D. ROSS, Administrator, and THE CITY OF CASCADE LOCKS, OREGON, executed on February 14, 1939, the parties hereto agree that the contract demand under such contract shall be increased to one hundred (100) kilowatts of "At Site" Prime Power and one hundred (100) kilowatts of "At Site" Secondary Power.

IN WITNESS WHEREOF the parties hereto have executed on this 16th day of September 1939 this instrument in triplicate, by the signatures and attests of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by The Bonneville Project, Department of the Interior.

By FRANK A. BANKS, *Acting Administrator.*

CITY OF CASCADE LOCKS, OREGON,

By G. E. MANCHESTER, *Mayor.*

Attest:

W. J. CARLSON, *City Recorder.*

RATE SCHEDULES, CASCADE LOCKS ELECTRIC DEPARTMENT

Residential rate.—

First 50 kilowatt-hours, used per month, at 4½ cents per kilowatt-hour.
Next 50 kilowatt-hours, used per month, at 2 cents per kilowatt-hour.
Next 200 kilowatt-hours, used per month, at 1 cent per kilowatt-hour.
Next 900 kilowatt-hours, used per month, at ½ cent per kilowatt-hour.
Over 1,200 kilowatt-hours, used per month, at ¾ cent per kilowatt-hour.
Minimum monthly bill: \$1.00.

Commercial lighting and power rate.—Applicable to all commercial and non-residential light, heat, and power customers, including beacon lights, city hall, etc.

Energy charge:

First 150 kilowatt-hours, used per month, at 4½ cents per kilowatt-hour.
Next 350 kilowatt-hours, used per month, at 3 cents per kilowatt-hour.
Next 1,000 kilowatt-hours, used per month, at 2 cents per kilowatt-hour.
Next 3,500 kilowatt-hours, used per month, at 1.8 cents per kilowatt-hour.
Next 10,000 kilowatt-hours, used per month, at 0.8 cent per kilowatt-hour.
Next 25,000 kilowatt-hours, used per month, at 0.6 cent per kilowatt-hour.
Next 60,000 kilowatt-hours, used per month, at 0.4 cent per kilowatt-hour.
Over 100,000 kilowatt-hours, used per month, at 0.3 cent per kilowatt-hour.

Demand charge: First 10 kilowatts of demand per month, no demand charge. Excess above 10 kilowatts of demand per month, 95 cents per kilowatt.

Minimum bill:

Customers, 10 kilowatts or less, \$1.

Customers, over 10 kilowatts demand, 60 percent of highest demand charge in preceding 11 months, but not less than \$1.

General power rate.—

Energy charge:

First 50 kilowatt-hours, per month per horsepower of demand, at 6 cents per kilowatt-hour.

Next 50 kilowatt-hours, per month per horsepower of demand, at 2 cents per kilowatt-hour.

Balance of kilowatt-hours, per month per horsepower of demand, at 1 cent per kilowatt-hour.

Minimum charge:

First 3 horsepower of demand, at \$1.50 per horsepower.

Next 12 horsepower of demand, at \$1.25 per horsepower.

Balance of demand, at \$1 per horsepower.

Discount:

For service at the primary voltage available, all transformers being furnished and installed by the customer—5 percent of energy charge.

For Off-Peak service as defined below—10 percent of energy charge.

Determination of demand:

Installations totalling 25 horsepower or less:

The demand shall be taken as equal to the sum of the manufacturer's name-plate ratings of all motors connected to the line, except when a measurement shows a greater demand such greater demand shall be used instead of the name-plate ratings.

Installations totalling over 25 horsepower:

The demand shall be assessed by agreement between the consumer and the Company or measured at the Company's option.

Water-heating rate.—Available to all residential and commercial customers for electric water-heating service through a separate meter. The city may require that wires between the meter and the water heater shall be enclosed in armored cable or metallic conduit, with no exposed wires.

All energy at 1 cent per kilowatt-hour.

Minimum bill at \$1 per month.

Commercial cooking and heating rate.—Available to commercial customers for electric service for cooking, water heating, and space heating through a separate meter. This rate shall not be available to customers using less than 150 kilowatt-hours per month on the regular commercial schedule. All wires between the meter and the appliances shall be enclosed in armored cable or metallic conduit, with no exposed wires.

Energy charge:

First 200 kilowatt-hours per month at 2 cents per kilowatt-hour.

Next 400 kilowatt-hours per month at 1 cent per kilowatt-hour.

Next 400 kilowatt-hours per month at 0.5 cent per kilowatt-hour.

Over 1,000 kilowatt-hours per month at 0.8 cent per kilowatt-hour.

Minimum bill: \$1 per month for first 10 kilowatts or less of connected load, plus 50 cents per kilowatt of connected load above 10 kilowatts.

Street-lighting rate.—

Energy charge:

First 150 kilowatt-hours used per month at 3 cents per kilowatt-hour.

Next 350 kilowatt-hours used per month at 2 cents per kilowatt-hour.

Over 500 kilowatt-hours used per month at 1 cent per kilowatt-hour.

Investment charge: The monthly investment charge (for the cost of operation, maintenance, and fixed charges on the special investment for street-lighting service) shall be one-half of 1 percent of such special investment.

Lamp renewals: The city shall be billed monthly for the cost of all lamp renewals during the month.

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR, BONNEVILLE POWER ADMINISTRATOR, AND THE CITY OF FOREST GROVE, OREGON

THIS AGREEMENT, executed on November 7, 1939, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Power Administrator, hereinafter called "the Administrator," and the CITY OF FOREST GROVE, a municipal corporation of the State of Oregon, hereinafter called "the City,"

WITNESSETH :

WHEREAS the City owns and operates an electric power system, serving customers in the City of Forest Grove, Oregon, and vicinity, which system includes a diesel generating plant with a rated capacity of 666 kilowatts, and an electric transmission and distribution system; and

WHEREAS the City intends to operate an efficient and economical system for the distribution of power to its ultimate consumers on a nonprofit basis and desires to purchase its power requirements from the Administrator, and the Administrator expects to be able to supply such requirements; and

WHEREAS, by a resolution passed by the Common Council of Forest Grove, Ore., on November 6, 1939, the mayor and recorder are authorized to execute this contract on behalf of the City;

NOW THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for twenty years from the date of its execution.

2. *Sale of power.*—The Administrator shall sell power to the City and the City shall purchase such power from the Administrator, as hereinafter provided.

The Administrator shall furnish, and the City shall purchase from the Administrator, all of the power requirements of the City, with the following exceptions:

(a) In the event of a failure or break-down of the Government's facilities, the City may utilize the generating equipment it now owns;

(b) Until the generating equipment now owned by the City is disposed of by it, the City agrees to operate such equipment for the Government's account when so requested by the Administrator, such power to be paid for on the basis of recovery of incremental production expenses to be determined in advance by the Administrator and the City;

(c) In the event of delay or failure on the part of the Administrator to increase the contract demand after reasonable notice, or to meet the City's requirements for increased power supplies, the City shall have the right to make such temporary arrangements as may be necessary to meet its requirements.

All obligations of the parties hereto with respect to the delivery of such power, and payment therefor, shall begin on the date (hereinafter called the "date of initial delivery") upon which the Administrator shall be prepared to deliver power to the City.

Beginning on the date of initial delivery and throughout the term of this contract, the Administrator shall make available to the City 750 kilowatts of prime power, which shall be the Contract Demand. Such Contract Demand may be increased or decreased whenever the parties hereto mutually so agree in writing.

All power shall be delivered in the form of three-phase, alternating current at approximately 60 cycles per second, and approximately 2,400 volts.

3. *Point of delivery.*—Pending completion of the transmission line which the Administrator plans to construct to the vicinity of the City, the power supplied hereunder by the Government will be carried over the existing transmission facilities of the Portland General Electric Company and delivered at a mutually satisfactory point on the City's system. The Administrator will, at his expense, install or cause to be installed the necessary facilities for connecting the existing lines of said company to the system of the City and power will be metered on the low-tension side of the transformers so installed by the Administrator. The date of initial delivery hereunder shall be not later than November 22, 1939.

4. *Rate to purchaser.*—Bonneville Wholesale Power Rate Schedule F-1 (Optional Prime Power Rate), together with the General Terms and Conditions applicable to such Schedule, as confirmed by order of the Federal Power Commission dated September 18, 1939, are hereby made a part of this contract. Copies of said Schedule F-1 and General Terms and Conditions are attached hereto and marked Exhibits A and B, respectively. The City shall pay the Administrator for Prime Power at the rate specified in Exhibit A.

5. *Equitable adjustment of rates.*—After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rate specified in Bonneville Wholesale Power Rate Schedule F-1, and at five-year intervals thereafter the Administrator shall reexamine the rate then in effect under said Schedule. The Administrator may make an equitable adjustment in such rate, but prior to such adjustment, the Administrator shall hold a hearing at which the City shall have an opportunity to be heard. The City shall be given fifteen days' written notice of the time and place of such hearing. In the event the

Administrator determines that such rate shall be increased, he shall furnish the City with a copy of such increased rate at least two weeks prior to the submission of the same for approval by the Federal Power Commission, or any other governmental official, department, or agency having the power to confirm and approve such rate.

If such increased rate is approved by said Commission and adopted by the Administrator, such changed rate shall thereafter be binding upon the parties hereto, and thereafter the City shall pay the Government for Prime Power at such changed rate.

In the event that such rate is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the City may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate, and such notice shall specify the date upon which such cancellation shall become effective; provided, however, that the effective date of such cancellation shall be not sooner than six months nor later than two years after the date such notice is received by the Administrator.

6. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator, within sixty days after receipt from the City of a written request therefor, shall submit to the City a contract, for the sale of power under such schedule containing such lower rate, to be substituted for this contract. The term of such substituted contract shall be the same as the unexpired term of this contract. The City's contract demand and minimum charge under such substituted contract shall not be less than the Purchaser's contract demand and minimum charge under this contract immediately prior to such substitution, unless the Administrator, in his discretion, determines that such contract demand and minimum charge, or either of them, may be reduced without prejudice to the Government.

7. *Resale rates.*—The City shall so manage and operate its electric system, and handle the revenues derived therefrom as to resell power purchased from the Administrator at rates which reflect the low cost of Bonneville power, and at the same time are consistent with sound and economical operation.

The City shall charge consumers the rates set forth in the resale rate schedules (hereinafter called resale schedules) attached hereto as Exhibit C, and hereby made a part of this contract. Additional resale schedules for special classes of consumers, or special uses of electricity, may be added from time to time upon mutual agreement of the parties.

If at any time during the term of this contract it should appear that the rates set forth in the said resale schedules, together with such surcharge as may be provided for therein, do not produce revenues sufficient to operate and maintain the City's electric system on a self-supporting and financially sound basis, then the City and the Administrator shall agree upon, and the City shall put into effect, such changes in resale rates as will provide the increased revenues necessary to place the system upon such a self-supporting and financially sound basis. To the extent that the City has surplus revenues available therefor, the City shall reduce its rates to consumers; provided, however, that unless the written consent of the Administrator is first obtained, such reduction shall be uniform as between the several resale schedules for different classes of consumers, and no substantial alteration shall be made in the rate structure of any resale schedule. The City shall keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy, and such alterations and changes therein as may be put into effect pursuant to the terms of this contract.

The City shall sell electric energy to the ultimate consumer without discrimination between consumers of the same class, and shall not give or make as between consumers of the same class any discriminatory rate, rebate, or other special concession.

8. *Electric energy or service furnished city or other public body.*—The City shall pay into its electric funds from appropriate general or special funds for all electric service required by the City for street lighting, water pumping, and other operations and uses, and the City shall be reimbursed for all electric energy and service furnished to any other public body, at the resale rates as set forth in the attached resale rate schedules, with such modifications and additions as may from time to time be agreed upon by the parties hereto.

9. *Special contracts.*—The Purchaser agrees not to sell or offer to sell power under special contract without the consent of the Administrator. The Administrator agrees that unless the consent of the City is first obtained, the Administrator will not sell power to any privately owned industry located in the territory now served by the distribution unit of the City, or to any agency for distribution to consumers located within the City limits of the City.

10. *Principles of operation.*—The City shall—

(a) Administer its electric system as a separate department and establish and maintain a separate fund for its revenues from electrical operations, and shall not mingle funds or accounts with those of any other of its operations.

(b) Maintain and operate its electric system on a nonprofit, self-supporting and financially sound basis, and dispose of its gross revenues from electric operations in the following manner:

(1) Revenues shall first be used for the payment of all current operating expenses, including salaries, wages, cost of materials and supplies, power at wholesale, and insurance.

(2) From remaining revenues, the City shall next currently provide for the payment at maturity of interest accrued on all system indebtedness, and for amortization charges and/or sinking-fund payments thereon.

(3) Thereafter revenues shall be used currently to set up reasonable reserves for replacements, new construction, and for contingencies, and to provide a reasonable amount of cash working capital.

(4) From remaining revenues the City may if it so elects, and to the extent permitted by law, pay into its General Fund a return on its investment and a tax equivalent as defined by the supplementary memorandum hereto attached as Exhibit D.

(5) All remaining revenues shall be considered surplus revenues and shall serve as a basis for the reduction of rates. Surplus revenues shall be computed as of June 30 of each year. The City may devote surplus revenues earned in any year to the purchase or retirement of system indebtedness before maturity, if, and to the extent that such use thereof is consistent with all other requirements of this section.

(c) Maintain and operate its system in accordance with reasonable standards of safety, reliability, and efficiency.

(d) Keep the general books of accounts, of its electric system according to the system of accounts prescribed for public utilities and licensees by the Federal Power Commission, and shall allow the duly authorized agents of the Government to have free access at all reasonable times to all books and records relating to electric system operations.

(e) Furnish promptly to the Government such operating and financial statements relating to electric system operations as may reasonably be requested by the Government. In the event of failure to furnish promptly such operating and financial statements, the Administrator, following written notification to the City of the Administrator's intention so to do, may with his own staff perform all work necessary to collect such data as is reasonably desired.

11. *Cancellation by the Administrator.*—In the event that the City does not comply with the provisions and requirements of Sections 7 to 10, inclusive, of this contract, or any of such provisions and requirements, the Administrator may, at his option, cancel this contract, after such reasonable notice (but not to exceed eighteen months) as may be required for the City to obtain substitute power supplies.

Nothing contained in this contract shall be construed as in any manner to abridge, limit, or deprive the Government of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have.

12. *Assignment of contract.*—This contract shall inure to the benefit of, and shall be binding upon the respective successors and assigns of the parties hereto: *Provided, however,* That neither the contract nor any interest therein shall be transferred or assigned by the City without the written consent of the Administrator.

13. *Waiver of default.*—Any waiver at any time by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

14. *Interest of Member of Congress.*—No Member of, or Delegate to Congress, or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

IN WITNESS WHEREOF the parties hereto have executed this agreement in triplicate, the said City by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Department of the Interior,
 By PAUL J. RAVEN,
Bonneville Power Administrator.
 THE CITY OF FOREST GROVE, OREGON,
 By L. B. DRAKE, *Mayor.*

Attest:

ARTHUR J. YOEMANS, *Recorder.*

EXHIBIT A

UNITED STATES OF AMERICA DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

OPTIONAL WHOLESALE POWER RATE SCHEDULE F-1

(Prime power)

Availability.—This schedule covers prime power, delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power shall be sold under this schedule at the following rate:

Demand Charge: 75 cents net per month per kilowatt of billing demand.

Energy Charge: 2.5 mills net per kilowatt-hour delivered.

Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—Except in the case of customers entitled to the five mill developmental rate referred to above, the total net minimum monthly charge for service under this schedule shall be 75 cents per month per kilowatt of contract demand, but not less than 75 percent of the highest demand charge billed during the preceding eleven months. The Administrator may also require a minimum guaranteed load factor except in the case of public bodies and cooperatives taking all their requirements under this rate schedule.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that in the case of public bodies and cooperatives taking all their power requirements under this rate schedule the billing demand shall be the actual demand.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of .85, or more, the actual demand for the month shall be de-

fined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than .85, then the actual demand shall be determined by taking .85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below .80.

Billing.—Bills shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR—BONNEVILLE
ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located

on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges, against the purchaser, for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past due bills are paid. Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages, if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any pre-determined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without

permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may in any way affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the

ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended:

Administrator: The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At Site: At the Bonneville Project Power House or points adjacent thereto,

Bonneville Project: The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and Cooperatives: Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump Energy: Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy: Electric energy measured in kilowatt-hours.

Government: The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt: The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour: The amount of energy generated or delivered in one hour when delivery is at a constant rate of one kilowatt.

Power: The rate of transferring or transforming energy measures in kilowatts.

Power factor: The ratio of kilowatts to kilovolt-amperes.

Prime Power: The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 cubic feet per second.

Public Bodies: States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,

Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

EXHIBIT C

RESALE RATE SCHEDULES

RESIDENTIAL RATE—SCHEDULE 1

Availability.—Applicable to domestic use of all residential customers, including meters with individual rated capacity of 7½ H. P. or less. Service under the Residential Rate shall apply only to electric service in a single private dwelling and its appurtenances, or for general farm service, including water heating, and not for resale to others. Private dwellings in which space is occasionally used for the conduct of business by a person residing therein will be served under the Residential Rate. Where a portion of a dwelling is used regularly for the conduct of business, the electricity consumed in that portion so used will be separately metered and billed under the Commercial Lighting and Power Rate.

If separate circuits are not provided by the customer, the entire premises shall be classified as nonresidential and billed accordingly. The Residential Rate shall not apply to service to institutions such as clubs, fraternities, orphanages, or homes; recognized rooming or boarding houses; the space in an apartment or other residential building primarily devoted to use as an office or studio for professional or other gainful purposes.

Rates.—

- First 50 kilowatt-hours used per month, at 3 cents per kilowatt-hour.
- Next 50 kilowatt-hours used per month, at 2 cents per kilowatt-hour.
- Next 200 kilowatt-hours used per month, at 1 cent per kilowatt-hour.
- Next 900 kilowatt-hours used per month, at $\frac{1}{2}$ cent per kilowatt-hour.
- Over 1,200 kilowatt-hours used per month, at $\frac{3}{4}$ cent per kilowatt-hour.

Minimum monthly bill.—75 cents net per month for each meter.

Payment.—The above rates are net, the gross rates being 5 percent higher. In the event that the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

Delivery point.—The above rates are based upon the supply of service through a single delivery and metering point, and at a single voltage. Separate supply for the same customer at other points of consumption, or at a different voltage, shall be separately metered and billed.

Rules and regulations.—Service under this classification is subject to the Rules and Regulations of the City.

COMMERCIAL LIGHTING AND POWER RATE—SCHEDULE 2

Availability.—Applicable to all commercial and nonresidential light, heat, and power customers. Energy supplied under this schedule shall not be submetered for resale or resold to others.

Rates.—

Energy Charge:

- First 150 kilowatt-hours used per month, at 3 cents per kilowatt-hour.
- Next 350 kilowatt-hours used per month, at 2 cents per kilowatt-hour.
- Next 1,000 kilowatt-hours used per month, at 1 cent per kilowatt-hour.
- Next 13,500 kilowatt-hours used per month, at 0.8 cent per kilowatt-hour.
- Next 25,000 kilowatt-hours used per month, at 0.6 cent per kilowatt-hour.
- Next 60,000 kilowatt-hours used per month, at 0.4 cent per kilowatt-hour.
- Excess above 100,000 kilowatt-hours used per month, at 0.3 cent per kilowatt-hour.

Demand Charge:

- First 10 kilowatts of demand per month, no demand charge.
- Excess above 10 kilowatts of demand per month, at 95 cents per kilowatt.

The energy charge for use in excess of 360 times the demand shall be subject to a reduction of 0.5 mills per kilowatt-hour from the otherwise applicable rate.

Determination of demand.—Demand measurement shall be made by suitable instruments at the point of delivery. Demand for any month shall be defined as the average kilowatt delivery during the 30-minute period in which the consumption of energy is the greatest during the month for which determination is made.

Adjustment of demand charges for power factor.—Demand charges shall be adjusted for customers with 50 kilowatts or more of measured demand to correct for weighted average power factors lower than 85 percent, and may be so adjusted for other customers if and when the City deems necessary. Such adjustments will be made by taking .85 of the demand determined as stated above, and dividing this amount by the weighted monthly average power factor.

Minimum charges.—For customers with 10 kilowatts or less of measured demand the net monthly minimum bill shall be \$1.00 for each meter.

For users whose measured demand in any of the past eleven months exceeds 10 kilowatts the minimum charges shall be as follows:

The minimum monthly bill during the service period shall be 60 percent of 95 cents times the highest demand during the preceding eleven calendar months.

For seasonal customers taking service for less than one full year, the minimum annual charge, including demand and energy, shall be \$6.84 (60 percent of 95 cents times 12) per kilowatt of the highest measured demand occurring during any month of each year of service. The estimated minimum annual charge will be collected in equal installments during the first four consecutive months of

service, and will be adjusted at the end of the service period, at which time customer shall pay the excess, if any, of the minimum charge over the total amount previously billed to and paid by customer. Seasonal customers shall pay in addition the actual cost of connections and disconnections in excess of one of each per year.

Payment.—The above rates are net, the gross rates being 5 percent higher on the first \$25 and 1 percent on the remainder of the bill. In the event the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

Delivery point.—The above rates are based upon the supply of service through a single delivery and metering point, and at a single voltage and phase. Separate supply for the same customer at other points of consumption, or at a different voltage, or phase, shall be separately metered and billed.

Contract requirement.—Customers whose measured demand in any month exceeds 10 kilowatts may be required to execute a contract for a minimum term of one year.

Rules and regulations.—Service under this classification is subject to the Rules and Regulations of the City.

COMMERCIAL WATER-HEATING RATE—SCHEDULE 3

Availability.—Applicable to commercial and nonresidential customers for energy used for water-heating purposes and measured through a separate meter.

Rate.—All energy, 0.8 cent per kilowatt-hour.

Minimum monthly bill.—\$1.00 net per month for each meter.

Payment.—The above rates are net, the gross rates being 5 percent higher. In the event that the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

Delivery point.—The above rates are based upon the supply of service through a single delivery and metering point, and at a single voltage. Separate supply for the same customer at other points of consumption, or at a different voltage, shall be separately metered and billed.

Rules and regulations.—Service under this classification is subject to the Rules and Regulations of the City.

STREET-LIGHTING RATE—SCHEDULE 4

Availability.—Applicable to service for street-lighting systems, including street lighting, signal systems, and roadway and park lighting for a term of not less than one year.

Character of service.—Alternating-current service, either series or multiple system, or in combination, at option of the City.

Rate.—The rates for this service consist of two parts, as follows:

I. Energy Charge:

First 150 kilowatt-hours used per month, at 3 cents per kilowatt-hour.

Next 350 kilowatt-hours used per month, at 2 cents per kilowatt-hour.

Excess above 500 kilowatt-hours used per month, at 1 cent per kilowatt-hour.

II. Investment Charge: The annual investment charge (for the cost of operation, maintenance, and fixed charges on the City's special investment for street-lighting service) shall be 9 percent of such special investment, determined as set forth below. This charge will be recomputed on January 1 of each year and one-twelfth of the total annual charge so computed will be billed customer monthly.

Method of determining distributor's investment.—The investment in property and equipment used as a basis for the investment charge contained in this schedule shall consist of the cost of property and equipment used solely for street-lighting purposes, such as lamps, fixtures, brackets, mast arms, conductors, poles, posts, standards, control equipment, switches, transformers, etc.

Lamp renewals.—Distributor shall keep a record of the number and type of lamp replacements and customer shall be billed monthly for the replacements during the month at actual cost to the City, including appropriate overheads.

Relocation of lamps.—The City shall, at the request of customer, relocate or change existing equipment. Customer shall reimburse the City for such changes at actual cost, including appropriate overheads.

Metering.—All energy consumed under this schedule shall be metered excepting installations where, in the opinion of the City, metering would be impracticable.

When the consumption is metered, the meters shall be installed in or connected to the lighting circuit and the billing shall include the energy delivered to and consumed in all circuits and equipment used exclusively for street-lighting purposes. If more than one meter is used, the readings shall be consolidated for billing purposes.

When the energy is not metered, and also when a meter reading is found to be in error, the consumption for billing purposes shall be computed from the rated capacity of the lamps plus 5 percent for losses, multiplied by the number of hours of use.

Payment.—The rates included herein are net, the gross rates being five percent (5%) higher on the first \$25 and one percent (1%) on the remainder of the bill. In the event the current monthly bill is not paid within fifteen days from date of bill, the gross rates shall apply.

EXHIBIT D

MEMORANDUM

Pursuant to Section 10 (b) (4) of the contract of November 7, 1939, between the United States of America, Department of the Interior, Bonneville Administrator, and the City of Forest Grove, Oregon, it is understood and agreed that the maximum amount of the payments to the General Fund of the City, referred to in said section, shall be determined in the following manner:

A. *Return on investment.*—The City may pay into its General Fund each month, from electric revenues available therefor under this contract, a return of one-half of one percent on the investment of the General Fund in the electric system.

Inasmuch as no outstanding bonds are allocated to the electric system for the purposes of this section, the investment of the General Fund in the electric system as of the date of execution of the contract shall be the depreciated present value of the system. For the purposes of this provision the depreciated present value of said system shall be deemed to be \$125,000, but that amount shall be subject to adjustment upon completion of an appraisal and inventory of the system and agreement upon a corrected figure.

The investment of the General Fund in the electric system shall be increased only by and to the extent that money is transferred to the electric fund (other than for services rendered) from other funds of the City, or debts hereafter incurred by or for the account of the electric system are retired out of the proceeds of funds of the City other than the electric fund.

The amount the City may transfer to its General Fund each month as return on investment shall be computed on the basis of the investment as of the last day of the month next preceding.

B. *Payments in lieu of taxes.*—The City may pay into its General Fund from electric revenues available therefor an amount in lieu of taxes, to be determined as follows:

(1) The prevailing municipal property tax rate shall be applied to the equalized value of the property used in electric operations within the municipal limits.

(2) The tax equivalent paid to the City's General Funds under (1) above shall be increased by application of the county- and state-tax rates to the equalized value of the electric system, unless the county and/or state governments levy property taxes upon the electric system, in which case the City shall not take the county- and state-tax equivalents for such taxes as are assessed.

(3) In determining the amount to which the City is entitled in lieu of taxes under (1) and (2) above, the tax rate shall be applied to the present value of the system plus net additions, less the depreciation reserve equalized according to the same ratio applied to taxable property in the county.

* * * * *

The Administrator agrees to the continuation of the special contract with Pacific University for athletic field lighting at 3 cents per kilowatt-hour.

MEMORANDUM AGREEMENT

IT IS AGREED as of the 6th day of November 1939, between the PORTLAND GENERAL ELECTRIC COMPANY (hereinafter called "the Company") and the UNITED STATES OF AMERICA (hereinafter called "the Government"), represented by the Department of the Interior, Bonneville Power Administrator (hereinafter called "the Administrator"), as follows:

WHEREAS the City of Forest Grove, Oregon (hereinafter called "the City"), has requested the Administrator to supply the entire wholesale power requirements of the City, which are at the present time approximately 750 kilowatts; and

WHEREAS the Company owns transmission facilities extending to a point in the vicinity of the City and capable of carrying, for a temporary period, the power needed by the City, and negotiations are being conducted contemplating that the transmission lines of the Administrator will at an early date be connected with those of the Company at the Government's St. Johns and Salem substations; and

WHEREAS, until such time as the Administrator has completed the construction of a transmission line to the vicinity of the City, the Government desires to transfer its power over the existing lines of the Company in order to supply the City's requirements;

IT IS THEREFORE MUTUALLY AGREED between the parties hereto that—

1. The Company will proceed immediately with the construction and installation of the facilities necessary in order to connect the Company's existing transmission lines with those of the City at a satisfactory point, and to provide for delivery of 750 kilowatts of power to the City at 2,400 volts. The Company will also install the meters necessary for measuring the power delivered to the City. All such construction and installations shall be performed according to a plan approved by the Administrator, specifying the materials, equipment, and work necessary to be installed and performed and the cost thereof to the Company. An itemized statement of said materials, equipment, and work, together with a description of other equipment and materials to be purchased by the Government, and the price thereof, is attached as Exhibit A. On or before February 15, 1940, the Government will pay the Company the price of such materials, equipment, and services, and thereafter they shall be the sole property of the Government and may be removed by the Government upon the expiration of this agreement.

2. Meters recording power supplied to the City shall be read each month by agents of the Administrator and the Company. The City will be billed directly by the Administrator for power supplied to the City, and payment for such power will be made directly to the Administrator in accordance with the power contract to be executed between the Government and the City. The Company will be reimbursed by the Administrator for power supplied to the City hereunder by the delivery by the Government to the Company at the St. Johns substation of two kilowatt-hours of dump energy for each kilowatt-hour of energy delivered by the Company to the City. In calculating the amount of energy delivered by the Company to the City hereunder each month, the amount as registered by the meters on the low side of the transformers at the Forest Grove substation shall be divided by the factor of .97 as an adjustment for losses between the point of delivery and point of metering. For the purpose of simplifying the adjustment of accounts between the Government and the Company, the amount of energy to be delivered by the Government to the Company under this agreement each month will be deducted from the total amount of dump energy sold to the Company by the Government during that month under the Power Contract between the Company and the Government to be dated December 1, 1939.

The Administrator will proceed with the work now in progress with a view to providing terminals at St. Johns for connection with the Company's system by December 1, 1939, or as soon thereafter as reasonable diligence permits, in order that the compensatory energy provided for herein may be delivered to the Company.

3. No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom.

4. This agreement shall terminate upon one year's notice in writing by either party, or as soon as the Government has completed permanent arrangements for supplying power to the City, whichever date is the earlier.

IN WITNESS WHEREOF, the parties have executed this agreement in triplicate, the Company by the signatures and attest of its duly authorized officers, as of the day and year first above written.

PORTLAND GENERAL ELECTRIC COMPANY,
By FRANKLIN T. GRIFFITH, *President*.
UNITED STATES OF AMERICA,
Represented by the Department of the Interior.
By PAUL J. RAVEB,
Bonneville Power Administrator.

Attest:

CLARENCE O. PHILLIPS, *Asst. Secretary.*

EXHIBIT A

Original substation construction

Item	Quantity
Single-phase transformer, OISC., 200 kva, 12,000-2400/2509 volts, G. E. Co. type H, Form KD, serial #3197635-----	1
Land (Parcel)-----	1
Fence, consisting of 83 lineal feet of eight-foot cyclone fence, including gate-----	1
Transformer foundation, concrete slab 5'0" x 12'0" x 0'8"-----	1
45'0" W. C. poles, stepped and guyed-----	2
Timber crossarms, 16'0" long-----	10
Air-break disconnecting switch, triple pole, gang operated, 300 amps. 22,000 volts, Pacific Elec. Mfg. Co. type 1422-----	1
Fused cutouts, single pole, 25 kv. fitted with 50 amp. fuses, S. C. type D-----	3
Fused cut-outs, single pole, 7.5 kv., 150 amps. G. E. Co. Cat. #260277-----	3
Spare Fuse cabinet-----	1
Wiring, primary and secondary (Lot)-----	1
Cross arms-----	3
Miscellaneous wiring (Lot)-----	1
Single-phase transformer, OISC, 200 kva., 12,000-2400/2509 volts, G. E. Co. type H Form KD, serial #4331946-----	1
Installation cost of 200 kva. transf-----	1
Miscellaneous material (Lot)-----	1

New construction

Item	Quantity
Single-phase transformer, OISC., 200 kva., 24,000-2509/4350 Y volts, G. E. Co. Type H, Form VD, serial #5169759-----	1
Air-break disconnecting switch, triple pole, gang operated, Pacific Elec. Mfg. Co. type #1422-----	1
Single-phase feeder voltage regulator for outdoor service 48 kva., 200 amps., 2400/4160 Y, Allis Chalmers type DFR serials #2A 4912-1 and -2-----	2
Potential transformers, outdoor type, 200 volt amperes, 2,300 volts, ratio 20: 1, G. E. Co. type JE-36, Cat. #70 x 162-----	2
Regulator by pass switches with auxiliary blade, 7.5 kv., 400 amperes, Kearney Cat. #7716-1-----	2
Special-service restorer with oil, 200 amperes, 2400/4160 Y volts, triple pole, single throw, Pacific Elec. Mfg. Co. type AP-1-3-T-----	1
Current transformers, outdoor type, 200 amperes, 5,000 volts, ratio 40:1, G. E. Co. type WF-6, Cat. #41 x 192-----	2
Miscellaneous Materials (Lot)-----	1
Cartage (Lot)-----	1
Labor (Lot)-----	1
Freight (Lot)-----	1

Total substation cost, \$9,500.00.

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR, BONNEVILLE POWER ADMINISTRATOR, AND THE CITY OF McMINNVILLE, OREG.

THIS AGREEMENT, executed on January 13, 1940, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Power Administrator, hereinafter called "the Administrator," and the CITY OF McMINNVILLE, a municipal corporation of the State of Oregon, hereinafter called "the City";

WITNESSETH:

WHEREAS the City owns and operates an electric power system, serving customers in the city and vicinity, which system includes a hydroelectric plant with a rated capacity of 200 kilowatts, and a diesel plant with a rated capacity of 2,710 kilowatts, making a total rated generating capacity of 2,910 kilowatts, and an electric transmission and distribution system; and

WHEREAS the City intends to operate an efficient and economical system for the distribution of power to its ultimate consumers and desires to purchase its power requirements from the Administrator, and the Administrator expects to be able to supply such requirements; and

WHEREAS all acts, things, and conditions necessary under law and the City's charter to make this agreement the valid and binding obligation of the parties have been duly done, performed and complied with (except as stated in Section 17 hereof);

NOW, THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for twenty years from the date of its execution.

2. *Coordination.*—After interconnection both parties agreed to coordinate the operation of their respective generating stations and transmission lines in the manner best calculated to obtain the economic benefits of such interconnection without disadvantage to either party.

3. *Date of initial delivery.*—All obligations of the parties hereto with respect to the delivery of power, and payment therefor, shall begin on the date (hereinafter called the "date of initial delivery") upon which the Administrator shall be prepared to deliver power to the City, which date shall be not later than October 1, 1940.

4. *Sale of power.*—The Administrator shall sell power to the City and the City shall purchase such power from the Administrator as hereinafter provided.

The Administrator shall furnish, and the City shall purchase from the Administrator, all of the power requirements of the City with the following exceptions:

(a) The City may utilize any generating facilities now owned by the City;

(b) In the event of delay or failure on the part of the Administrator to increase the contract demand after reasonable notice, or to meet the City's requirements for increased power supplies, the City shall have the right to make such arrangements as may be necessary to meet its requirements.

Beginning on the date of initial delivery and throughout the term of this contract, the Administrator shall make available to the City 1,000 kilowatts of prime power, which shall be the Contract Demand. Such Contract Demand may be increased or decreased whenever the parties hereto mutually so agree in writing.

The City shall pay for prime power at the rate specified in Bonneville Wholesale Power Rate Schedule C-2 and in accordance with the schedule of General Terms and Conditions applicable thereto, which schedules are attached hereto as Exhibits A and B, respectively, and hereby made a part of this contract.

On or before June first of each year the City shall furnish the Administrator a forecast of its monthly maximum and average loads for the twelve-month period beginning on the following October first, and a schedule of requested increases, if any, in the Contract Demand for this period. On or before August first of each year the Administrator shall notify the City whether or not, or to what extent, he is prepared to meet the requested increases in the Contract Demand.

It is agreed by the City that the sum of the billing demand for prime power and the dependable rating of the City's generating facilities, less the dependable rating of the City's largest generating unit, shall at all times during each billing period be in excess of the City's maximum 30-minute system load. The billing demand for prime power shall be increased to the extent that

any deficiency exists, calculated as set forth above, indicating that the City has relied on the availability of Bonneville dump or excess power at the time of the City's maximum 30-minute system load.

5. *Sale of excess energy.*—Whenever either party, in its judgment, has un-used excess energy available for supply to the other, such energy will, upon request therefor, be sold and delivered in accordance with the following terms:

(a) Excess hydro energy shall be sold at the rate set forth in and in accordance with the terms of Bonneville Wholesale Energy Rate Schedule H-1, which schedule is attached hereto as Exhibit C and hereby made a part of this contract.

(b) Surplus fuel-generated energy shall be subject to monthly settlements on the basis of recovery of incremental production expenses, to be determined each month by a committee composed of one member appointed by the Administrator, one member appointed by the City, and, if necessary, one member, selected by both parties, who shall have no direct interest.

Neither party shall be entitled to any credit for excess energy supplied to the other party hereunder unless such energy was supplied pursuant to prior agreement between the dispatchers in responsible charge of each system and logged and recorded as such by the proper operators for both parties.

6. *Emergency and break-down relief.*—In the event of a break-down or emergency on the system of either party, the other party shall make available for relief all necessary power to the maximum capability of its facilities, of which each party shall be the sole judge. The supplying party shall be entitled to payment for such power on the same basis set forth in Section 5 hereof with respect to sale of excess power.

7. *Point of delivery and service specifications.*—The Administrator shall construct a transmission line to a mutually suitable point in or adjacent to the City, and a substation at such point for delivery of power hereunder to the City. The City shall extend and connect its primary circuits to the Government's terminals in a manner acceptable to the Administrator. All power shall be delivered to the City in the form of three-phase alternating current at approximately 60 cycles per second and 2,400 volts.

8. *Metering.*—Power supplied to or by the City shall be metered at the point of delivery. The metering equipment shall be installed by the Government and shall be of a type which will measure the total energy delivered and also measure, separately, the total energy delivered at such times as the total demand exceeds the contract demand (or billing demand) for prime power, and in addition thereto shall register the duration of time that the total demand exceeds the contract demand (or billing demand).

The amount of power or energy of each class supplied hereunder shall be computed at the end of each monthly billing period, from the above measured quantities in the following manner:

(a) The amount of prime power supplied to the City shall be the amount of the established contract demand (or billing demand), subject to the provisions of Section 4 hereof.

(b) The amount of fuel generated energy delivered by each party shall be recorded when supplied and billed separately in accordance with the provisions of Section 5 hereof.

(c) After making proper adjustments for fuel generated energy, all energy metered in amounts above the contract demand (or billing demand) shall be billed and paid for as provided in Section 5 hereof.

Prior to the date of initial delivery of power hereunder a metering and dispatching plan shall be worked out and approved by both parties.

9. *Equitable adjustment of rate.*—After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rates specified in Bonneville Wholesale Power Rate Schedule C-2 and Bonneville Wholesale Energy Rate Schedule H-1, and at five-year intervals thereafter the Administrator shall reexamine the rates then in effect under said Schedules. The Administrator may make an equitable adjustment in such rates, but prior to such adjustment, the Administrator shall hold a hearing at which the City shall have an opportunity to be heard. The City shall be given fifteen days' written notice of the time and place of such hearing. In the event the Administrator determines that such rates or either of them shall be increased, he shall furnish the City with a copy of such increased rate or rates at least two weeks prior to the submission of the same for approval by the Federal Power Commission.

If such increased rate or rates is approved by said Commission and adopted by the Administrator, such changed rate or rates shall thereafter be binding

upon the parties hereto, and thereafter the City shall pay the Government for power supplied hereunder at such changed rate or rates.

In the event that any such equitable adjustment of rate or rates results in an overall rate to the City for power supplied hereunder which is higher than the overall rate in effect at the time such adjustment is made, then the City may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such adjusted rate or rates, such notice specifying the date upon which the cancellation shall become effective: provided, however, that the effective date of such cancellation shall not be sooner than six months nor later than two years after the date such notice is received by the Administrator; provided, further, that in determining whether the overall rate to the City has been increased for the purposes of this section, the new rates shall be applied to the power taken by the City during the year immediately preceding the date of adjustment, and if the cost of such power to the City would have been greater than the cost under the rates which were in effect during that year, the overall rate to the City shall be deemed to have been increased.

10. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator, within sixty days after receipt from the City of a written request therefor, shall submit to the City a contract for the sale of power under such schedule containing such lower rate, to be substituted for this contract. The term of such substituted contract shall be the same as the unexpired term of this contract. The City's Contract Demand under such substituted contract shall not be less than the City's Contract Demand under this contract immediately prior to such substitution unless the Administrator, in his discretion, determines that such Contract Demand may be reduced without prejudice to the Government.

11. *Resale rates.*—On or prior to the date of initial delivery of power hereunder, the City and the Administrator will agree upon and the City will place in effect resale rate schedules setting forth the rates which the City will charge consumers.

Section 256 of the City Charter, insofar as it relates to the fixing and review of the electric rates of the City, is hereby made a part of this contract. Said Section reads as follows:

"Annual estimate and report.—The Commission shall annually before the first day of January make a written estimate of the probable expense of maintaining and conducting the water plant and the electric light system during the next ensuing year including the cost of any contemplated alterations, improvements, additions or extensions, together with the probable amount necessary for the redemption of any unpaid warrants, together with the interest thereon, as well as the amount required for the payment of interest and maturing principal on any outstanding water and light bonds of the City of McMinnville; and shall thereupon ascertain and prescribe, as nearly as can be conveniently done, a water rate and electric current rate for such ensuing year, which will create a fund at least sufficient to meet all of said requirements, and in addition thereto the Commission may include a further amount sufficient to create such fund as in the judgment of the Commission may be desirable in the event of any contemplated additions, improvements, or extensions to such plants."

If in the exercise of its power and authority to fix and review electric rates the City increases or alters said resale schedules in a manner inconsistent with or in violation of the general policies and practices set forth, in Exhibit D hereof, or in a manner which substantially changes the rate structure relationship as between residential, commercial, and industrial customers, or in the event the City fails to carry out the policy of the Bonneville Act that power shall be sold to the ultimate consumers at the lowest possible cost consistent with sound economy, then the Administrator shall have the right to cancel this contract, after such reasonable notice as may be required for the City to obtain substitute power supplies.

The City shall keep on file in the office of the Administrator a schedule of its rates and charges to the public for electric energy, and such alterations and changes therein as may hereafter be put into effect.

12. *Principles of operation.*—The City approves the statement of general policies and practices set forth in Exhibit D hereto, which statement is hereby made a part of this contract. The City agrees, in the operation of its electric plant, to abide by and follow said general principles and practices.

13. *Cancellation by the administrator.*—In the event that the City does not comply with the provisions and requirements of Sections 11 and 12 of this contract, or any of such provisions and requirements, the Administrator may, at his option, cancel this contract, after such reasonable notice as may be required for the City to obtain substitute power supplies.

Nothing contained in this contract shall be construed as, in any manner, to abridge, limit, or deprive either party hereto of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have.

14. *Assignment of contract.*—This contract shall inure to the benefit of, and shall be binding upon the respective successors and assigns of the parties hereto; provided, however, that neither the contract nor any interest therein shall be transferred or assigned by the City without the written consent of the Administrator.

15. *Waiver of default.*—Any waiver at any time by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

16. *Interest of Member of Congress.*—No Member of, or Delegate to Congress, or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

17. *Approval of contract.*—This contract is executed by the duly authorized officers of the City, subject to approval by a vote of the people of the City pursuant to the requirement of the City charter, and the obligations of the Administrator and the Government hereunder shall not become effective until proof of such approval, satisfactory to the Administrator, shall have been supplied.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in quadruplicate, the said City by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA
Represented by the Department of the Interior.

By PAUL J. RAVER,

Bonneville Power Administrator.

THE CITY OF McMinnville, OREGON

By R. H. WINDISHAB, *Mayor.*

Attest:
[SEAL]

MINA REDMOND, *Clerk.*

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

TRANSMISSION SYSTEM PRIME POWER

WHOLESALE POWER RATE SCHEDULE C-2

Availability.—This schedule covers Prime Power delivered from the Bonneville transmission system at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private persons or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be three-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power sold under this schedule shall be at the rate of seventeen and one-half dollars (\$17.50) net per year per kilowatt of billing demand. Provided that public bodies or cooperatives to whom this schedule is available,

purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years, commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—The net minimum monthly charge for service under this schedule shall be one-twelfth ($\frac{1}{12}$ th) of seventeen and one-half dollars (\$17.50) per kilowatt of contract demand, except in the case of customers entitled to the five-mill developmental rate referred to above.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraphs, whichever is higher; provided, however, that the billing demand for any month shall not be less than the highest actual demand which occurred during the immediately preceding eleven months.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of .85 or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than .85, then the actual demand shall be determined by taking .85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below .80.

Billing.—Bills shall be rendered monthly on the basis of one-twelfth ($\frac{1}{12}$ th) of the annual rate.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels Wholesale Power Rate Schedules C-1 and D-1 confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations

designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2% slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2% slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's facilities at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges, against the purchaser, for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past-due bills are paid.

Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages, if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of

electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended:

Administrator.—The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At site.—At the Bonneville Project Power House, or points adjacent thereto.

Bonneville project.—The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and cooperatives.—Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump energy.—Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy.—Electric energy, measured in kilowatt-hours.

Government.—The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt.—The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour.—The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power.—The rate of transferring or transforming energy measured in kilowatts.

Power factor.—The ratio of kilowatts to kilovolt-amperes.

Prime power.—The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 c. f. s.

Public bodies.—States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

EXHIBIT C

UNITED STATES OF AMERICA

DEPARTMENT OF INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

DUMP ENERGY—WHOLESALE ENERGY RATE SCHEDULE H-1

Availability.—This schedule covers Dump Energy delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that energy sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public; provided further, that energy will be available under this schedule only in cases where the Administrator determines that the purchaser maintains available generating facilities or has firm standby contracts or other sources of energy satisfactory to the Administrator ample to supply its requirements when dump energy is not available.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Delivery of Dump Energy is not assured. The Administrator shall be the sole judge of whether and when Dump Energy will be delivered, and, if delivered, the amount thereof.

In the event that the Dump Energy to be delivered is insufficient to supply the requirements of all purchasers thereof, the Administrator shall, in his sole discretion, designate the purchasers to whom such Dump Energy shall be delivered and the amount thereof to be delivered to each such purchaser.

Rate.—Energy shall be sold under this schedule at two and one-half (2.5) mills net per kilowatt-hour delivered.

Minimum charge.—If it is necessary for the Government to install extra equipment or extra capacity for the purpose of delivering dump energy, the contract for the sale thereof shall provide a minimum charge sufficient, in the judgment of the Administrator, to protect the Government from loss due to the installation of such extra equipment or extra capacity.

Energy delivered.—Whenever energy is delivered to the purchaser at a weighted monthly average power factor of .85, or more, billing shall be based upon the number of kilowatt-hours registered by the metering equipment. Whenever the monthly weighted average power factor is less than .85, then the energy shall be determined by taking .85 of the kilowatt-hours delivered and dividing this amount by the monthly weighted average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below .80.

Billing.—Bills for energy shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and

the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order the Federal Power Commission, effective September 18, 1939.

EXHIBIT D

STATEMENT OF GENERAL POLICIES AND PRACTICES IN OPERATING PUBLICLY OWNED ELECTRIC SYSTEMS

1. Publicly owned electric systems should be operated primarily for the benefit of the users of electricity.

2. Publicly owned electric systems should be maintained and operated in accordance with reasonable standards of safety, reliability, quality, and efficiency. Costs should be kept at the lowest levels consistent with good service, proper maintenance, and fair treatment of employees. Employees of public plants should be hired on a merit basis only.

3. Rates should be established and the plant designed and operated in such a manner as will enable electric consumers to obtain a good quality of service and to make abundant and beneficial use of electricity. To this end electric rates should be nondiscriminatory, should not defray more than the reasonable costs of efficient electric service only, and should be designed with a view to obtaining the advantages of mass production and consumption.

4. Such electric rates shall be fixed on a basis insuring a financially sound and self-supporting system. This requires that rates produce revenues sufficient at least for the payment of:

(a) Reasonable and necessary current maintenance and operating expenses, including salaries, wages, cost of power at wholesale, materials, supplies, insurance, and other lawful charges.

(b) Interest on and matured principal of indebtedness, preferably serial maturities, incurred for the electric plant, as well as payments required to be made into any special bond funds.

(c) Necessary renewals and replacements of plant, including the establishment of reasonable funds for such purposes and for contingencies.

(d) Depreciation of the property to the extent not adequately provided for by amortization of debt and by renewals and replacements.

5. The municipality, in its governmental capacity, shall be treated as a customer. It shall be billed for electric service rendered at rates consistent with the rates charged other consumers, giving due consideration to all special circumstances surrounding uses of electricity for municipal purposes, and shall pay such bills. Conversely, necessary service or materials received by the electric system from other governmental departments, such as part-time work of other employees of the city, rent of space in the city hall, etc., shall be billed to the electric system and paid by it.

6. If permitted by law, payments may be made to general municipal funds in lieu of taxes. Such tax equivalents shall not exceed the taxes which would be payable as general property taxes by other property or business of a similar character. If the state or any governmental subdivision actually levies a tax on the electric system, then the City shall not make any payment into its general fund in lieu of such taxes actually levied. In determining the amount to which the City is entitled in lieu of taxes, the tax rate shall be applied to the present value of the electric system plus net additions, less the depreciation reserve, equalized according to the same ratio applied to taxable property in the county.

7. Taxpayers' investments in the electric system, made through use of general governmental funds of the City, may be treated in the same manner as funds borrowed by the electric system from outside sources, and receive a return not less than the approximate interest rate on long-term revenue bonds issued by this or similar systems and not more than the going rate of interest on secure investments in the community. Where such investments are returnable to general governmental funds the amortization period should be consistent with the similar periods for other indebtedness.

8. For the purposes of this contract the following practices are recognized: From electric revenues available therefor under this contract, the City may pay into its water or general fund each month, or apply to interest and prin-

cipal payments becoming due on bonds outstanding against the City's water system, an amount equal to not more than one-half of 1% on the investment of the City in the electric system.

Inasmuch as no outstanding bonds are allocated to the electric system, for the purposes of this section the investment of the City in the electric system as of December 31, 1938, shall be the depreciated value of the system as of that time, which shall be deemed to be \$420,000.00.

The amount the City may transfer to its water or general fund each month as return on investment shall be computed on the basis of the amount of investment as of the last day of the month next proceeding.

It is recognized that no funds should be transferred from the electric system to the water or general fund of the City pursuant to paragraphs 6, 7, and 8 of this statement unless and until the expenses and charges described in paragraphs 4 and 5 hereof have been paid.

9. All surplus revenues remaining after meeting the requirements of paragraphs 4 to 8, inclusive, shall be applied to reduction of rates. Surplus revenues earned in any year may be devoted to the purchase or retirement of system indebtedness before maturity, or for construction of new plant, to the extent that such use thereof is consistent with the above principles and practices.

10. In order to accomplish the above purposes the publicly owned electric system shall be administered as a separate department and a separate fund shall be established for revenues from electric operations. Funds or accounts shall not be mingled with those of any other departments of government.

11. Records maintained shall be adequate to reveal fully the results of operations and the financial condition of the electric system. The accounting records shall be in accordance with some standard classification generally used by public systems. A periodic audit of the accounts shall be made by independent auditors.

PUBLIC UTILITY DISTRICTS

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE DEPARTMENT OF THE INTERIOR, BONNEVILLE POWER ADMINISTRATOR, AND PUBLIC UTILITY DISTRICT No. 1 OF KLICKITAT COUNTY

THIS AGREEMENT, executed on December 5th, 1939, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Power Administrator, hereinafter called "the Administrator," and PUBLIC UTILITY DISTRICT No. 1 of KLICKITAT COUNTY, hereinafter called "the Purchaser," a public-utility district organized and existing under and by virtue of the laws of the State of Washington.

WITNESSETH:

WHEREAS the Purchaser intends to acquire by purchase or construction an electric distribution system serving customers in Klickitat County, Washington; and

WHEREAS the Purchaser intends to operate an efficient and economical system for the distribution of power to its ultimate consumers on a nonprofit basis, and desires to purchase power from the Administrator, and the Administrator expects to be able to supply such requirements; and

WHEREAS all acts, things, and conditions necessary under law to make this agreement the valid and binding obligation of the parties hereto have been duly done, performed, and complied with:

Now, THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for five years from the date of its execution, or until superseded by a more comprehensive contract covering the power requirements of the Purchaser.

2. *Sale of power.*—The Administrator shall furnish, and the Purchaser shall purchase, all of the power requirements of the Purchaser, as hereinafter provided.

All obligations of the parties hereto with respect to the delivery of power at a particular point of delivery, and payment therefor, shall begin on the date (hereinafter called "the date of initial delivery") upon which the Administrator shall be prepared to deliver power to the Purchaser and the Purchaser shall be prepared to take power at such point of delivery. The date of initial delivery for the Glenwood point of delivery shall not be later than four months after notification by the Purchaser, substantiated by satisfactory evidence, that it will purchase not less than 100 kilowatts at such point of delivery.

Beginning on the date of initial delivery for the respective delivery points, and during the remainder of the term of this contract, the Administrator shall make available to the Purchaser the following amounts of power, which shall be the Contract Demands: 100 kilowatts at Glenwood until the date of initial delivery at Gilmer; thereafter 350 kilowatts at Gilmer, and 1,150 kilowatts at Klickitat. Such Contract Demands may be increased or decreased whenever the parties hereto mutually so agree in writing.

3. *Points of delivery and service specifications.*—All power hereunder shall be delivered in the form of three-phase, alternating current at a frequency of approximately 60 cycles per second and at such primary voltages as the Purchaser may select, provided, however, that such voltages do not require more than one transformation from the Government's transmission system at the specified points of delivery.

The Government shall deliver and meter power to the Purchaser at the low-tension side of the Government's transformers at Klickitat, at Gilmer, and at Glenwood, and at such other points as the parties hereto may mutually agree upon in writing.

In the event the Government elects to effect delivery at Glenwood by constructing a transmission line from Gilmer to Glenwood, the Purchaser shall pay the Government \$50 per mile per year, payable monthly; provided, within a reasonable time but in no event later than 2 years after completion of this line, the Purchaser shall purchase said line from the Government at a price equal to the actual, direct costs to the Government incurred by virtue of such work, plus overheads of twelve and one-half (12½) per centum of such actual, direct costs.

4. *Rate to Purchaser.*—Bonneville Wholesale Power Rate Schedule F-1 (Optional Prime Power), together with the General Terms and Conditions applicable to such Schedule, all as confirmed by order of the Federal Power Commission, effective September 18, 1939, are hereby made a part of this contract. Copies of said Schedule F-1 and said General Terms and Conditions are attached hereto and marked Exhibits A and B, respectively. The Purchaser shall pay the Administrator for Optional Prime Power at the rate specified in Exhibit A of this contract.

5. *Equitable adjustment of rate.*—After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rate specified in Bonneville Wholesale Power Rate Schedule F-1, and at five-year intervals thereafter the Administrator shall reexamine the rate in effect under Bonneville Wholesale Power Rate Schedule F-1. The Administrator may make an equitable adjustment in such rate, but prior to such adjustment, the Administrator shall hold a hearing at which the Purchaser shall have an opportunity to be heard. The Purchaser shall be given fifteen days' written notice of the time and place of such hearing. In the event the Administrator determines that such rate shall be increased, he shall furnish the Purchaser with a copy of such increased rate at least two weeks prior to the submission of the same for approval by the Federal Power Commission.

If such increased rate is approved by said Commission, and adopted by the Administrator, such changed rate shall thereafter be binding upon the parties hereto, and thereafter the Purchaser shall pay the Government for Prime Power at such changed rate.

In the event that such rate is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the Purchaser may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate, and such notice shall specify the date upon which the cancellation shall become effective; provided, however, that the effective date of such cancellation shall be not sooner than six months nor later than two years after the date such notice is received by the Administrator.

6. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator, within sixty days after receipt from the Purchaser of a written request therefor, shall submit to the Purchaser a contract for the sale of power under such schedule containing such lower rate, to be substituted for this contract. The term of such substituted contract shall be the same as the unexpired term of this contract. The Purchaser's respective Contract Demands and minimum charges under such substituted contract shall not be less than the Purchaser's respec-

tive Contract Demands and minimum charges under this contract immediately prior to such substitution, unless the Administrator, in his discretion, determines that the respective Contract Demands and minimum charges, or any of them, may be reduced without prejudice to the Government.

7. *Resale rates.*—The Purchaser shall so manage and operate its electric system, and handle the revenues derived therefrom, as to resell power purchased from the Administrator at rates which reflect the low cost of Bonneville Power, and at the same time are consistent with sound and economical operation.

It is understood that the Administrator is preparing a schedule of Bonneville standard resale rates (hereinafter called "Resale Schedules") for inclusion in all power contracts with purchasers of the same class as the Purchaser, which Resale Schedules will be adequate to enable the Purchaser to defray payments for interest, principal, and otherwise, in accordance with the terms of any bonds to be issued by it for the acquisition of electrical properties, to maintain reasonable reserve funds and generally to operate and maintain upon a financially sound basis any electrical properties to be acquired by the Purchaser. If the Purchaser shall determine that such resale schedules, together with the surcharges provided for therein, are suitable for the Purchaser's electric system, the Purchaser shall adopt such resale schedules and the same shall become a part of this contract; provided, however, that the Purchaser shall not be obligated to place such resale schedules in actual effect prior to the date of initial delivery hereunder.

The Purchaser shall thereafter charge consumers the rates set forth in such resale schedules, with such surcharges as are provided thereby and placed in effect by the Purchaser. Additional resale schedules for special classes of consumers, or special uses of electricity, may be added from time to time upon mutual agreement of the parties.

If at any time during the term of this contract it should appear that the rates set forth in the said resale schedules, together with such surcharge as may be provided for therein, do not produce revenues sufficient to operate and maintain the Purchaser's electric system on a self-supporting and financially sound basis, then the Purchaser and the Administrator shall agree upon, and the Purchaser shall put into effect, such changes in resale rates as will provide the increased revenues necessary to place the system upon such a self-supporting and financially sound basis. To the extent that the Purchaser has surplus revenues (as defined in Section 9 hereof) available therefor, the Purchaser shall reduce its rates to consumers; provided, however, that unless the written consent of the Administrator is first obtained, such reduction shall be uniform as between the several resale schedules for different classes of consumers, and no substantial alteration shall be made in the rate structure of any resale schedule. The Purchaser shall keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy, and such alterations and changes therein as may be put into effect pursuant to the terms of this contract.

The Purchaser shall sell electric energy to the ultimate consumer without discrimination between consumers of the same class, and shall not give or make as between consumers of the same class any discriminatory rate, rebate or other special concession.

If, upon consideration of the resale schedules adopted by the Administrator, the Purchaser does not consider it feasible to adopt such schedules and make the same a part of this contract, then in that event this contract shall terminate upon the expiration of sixty days after such schedules were submitted to the Purchaser, and shall be of no further force and effect.

8. *Electric energy or service furnished other public body.*—The Purchaser shall be reimbursed for all electric energy and service furnished to any other public body, at the resale rates as set forth in the attached resale schedules, with such modifications and additions as may from time to time be agreed upon by the parties hereto.

9. *Principles of operation.*—The Purchaser shall—

(a) Maintain and operate its electric system on a nonprofit, self-supporting, and financially sound basis, and dispose of its gross revenues from electric operations in the following manner:

(1) Revenues shall first be used for the payment of all current operating expenses, including salaries, wages, cost of materials, and supplies, power at wholesale, and insurance.

(2) From remaining revenues, the Purchaser shall next currently provide for the payment of interest due on all system indebtedness, and for debt amortization charges and/or sinking fund payments thereon.

(3) Thereafter revenues shall be used to make reasonable provision (including reserves) for replacements of plant, new construction, contingencies, and cash working capital.

(4) All remaining revenues shall be considered surplus revenues and shall serve as a basis for the reduction of rates. Surplus revenues shall be computed as of June 30 of each year. The Purchaser may devote surplus revenues earned in any year to the purchase or retirement of system indebtedness before maturity, if, and to the extent, that such use thereof is consistent with all the requirements of this section.

(b) Maintain and operate its system in accordance with reasonable standards of safety, reliability, and efficiency.

(c) Keep the general books of accounts, of its electric system, according to the rules prescribed by the Division of Municipal Corporations of the State Auditor's Office of the State of Washington, or in the event the laws of the State of Washington should fail to provide an agency for prescribing such rules, according to the system of accounts prescribed for public utilities and licensees by the Federal Power Commission, and shall allow the duly authorized agents of the Government to have free access at all reasonable times to all books and records relating to electric-system operations.

(d) Cause its books of accounts to be audited annually by the State Auditor's Office of the State of Washington, or if such an audit shall not be made within twelve months after the close of any fiscal year, by independent Certified Public Accountants, if requested by the Administrator.

(e) Furnish promptly to the Government such operating and financial statements relating to electric-system operations as may be reasonably requested by the Government. In the event of failure to furnish promptly such operating and financial statements the Administrator, following written notification to the Purchaser of the Administrator's intention so to do, may with his own staff perform all work necessary to collect such data as is reasonably desired.

10. *Cancellation by the Administrator.*—In the event that the Purchaser does not comply with the provisions and requirements of Sections 7 to 9, inclusive, of this contract, or any of such provisions and requirements, the Administrator may, at his option, cancel this contract, after such reasonable notice (but not to exceed eighteen months) as may be required for the Purchaser to obtain substitute power supplies.

Nothing contained in this contract shall be so construed as, in any manner, to abridge, limit, or deprive either party of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have.

11. *Assignment of contract.*—This contract shall inure to the benefit of, and shall be binding upon the respective successors and assigns of the parties hereto; provided, however, that neither the contract nor any interest therein shall be transferred or assigned by the Purchaser without the written consent of the Administrator.

12. *Waiver of default.*—Any waiver at any time by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

13. *Interest of Member of Congress.*—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate, the said Purchaser by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
 Represented by the Department of the Interior,
 By PAUL J. RAVEN, Bonneville Power Administrator.
 PUBLIC UTILITY DISTRICT No. 1 of KLIKIKITAT COUNTY,
 By M. A. COLLINS.

Attest:
 [SEAL]

MARTIN LUMIJARVI.

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

OPTIONAL WHOLESALE POWER RATE SCHEDULE F-1

(Prime Power)

Availability.—This schedule covers prime power, delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power shall be sold under this schedule at the following rate:

Demand Charge: 75 cents net per month per kilowatt of billing demand.

Energy Charge: 2.5 mills net per kilowatt-hour delivered.

Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—Except in the case of customers entitled to the five-mill developmental rate referred to above, the total net minimum monthly charge for service under this schedule shall be 75 cents per month per kilowatt of contract demand, but not less than 75 percent of the highest demand charge billed during the preceding eleven months. The Administrator may also require a minimum guaranteed load factor except in the case of public bodies and cooperatives taking all their requirements under this rate schedule.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that in the case of public bodies and cooperatives taking all their power requirements under this rate schedule the billing demand shall be the actual demand.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of .85, or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than .85, then the actual demand shall be determined by taking .85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below .80.

Billing.—Bills shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and

the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power-factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage,

or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges, against the purchaser, for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days advance notice in writing, discontinue service until all past-due bills are paid. Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages, if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own

expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancelation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings,

unless it clearly appears from the context that a different meaning was intended:

Administrator.—The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At site.—At the Bonneville Project Power House, or points adjacent thereto.

Bonneville Project.—The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and cooperatives.—Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump energy.—Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy.—Electric energy, measured in kilowatt-hours.

Government.—The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt.—The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour.—The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power.—The rate of transferring or transforming energy measured in kilowatts.

Power factor.—The ratio of kilowatts to kilovolt-amperes.

Prime power.—The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 cubic feet second.

Public bodies.—States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,

Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

CONTRACT BETWEEN THE UNITED STATES OF AMERICA REPRESENTED BY THE DEPARTMENT OF THE INTERIOR BONNEVILLE ADMINISTRATOR AND PUBLIC UTILITY DISTRICT No. 2 OF PACIFIC COUNTY

THIS AGREEMENT, executed on October 5, 1939, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Administrator, hereinafter called "the Administrator," and PUBLIC UTILITY DISTRICT No. 2 OF PACIFIC COUNTY, hereinafter called "the Purchaser," a public utility district organized and existing under and by virtue of the laws of the State of Washington.

WITNESSETH:

WHEREAS the Willapa Electric Company, hereinafter called "the Willapa Company," is the owner of an electric transmission system, extending from a point in the vicinity of Raymond, Washington, to a point in the vicinity of Cosmopolis, Washington, which transmission system includes transmission and transformation facilities and other equipment appurtenant thereto; and

WHEREAS the Willapa Company is also the owner of an electric generation and distribution system in Pacific County, Washington; and

WHEREAS the Government has executed a contract with the Willapa Company, dated March 8, 1939, for the purchase of the Willapa Company's said electric transmission system, and the Purchaser has executed a contract with the Willapa Company, dated January 31, 1939, for the acquisition of the Company's said electric generation and distribution system pursuant to proceedings in eminent domain now pending before the Superior Court of the State of Washington for Pacific County in that certain cause entitled "Public Utility District No. 2 of Pacific County, Petitioner, vs. Willapa Electric Company, et al., Defendants," being cause number 8913 in the records and files of said court.

WHEREAS the purchase contract between the Government and the Willapa Company provides that the acquisition of the Willapa Company's said electric transmission system by the Government is contingent upon the sale of the Willapa Company's said electric generation and distribution system to the Purchaser; and

WHEREAS the West Coast Power Company, hereinafter called "the West Coast Company," is the owner of an electric transmission system extending from a point in the vicinity of Westport, Oregon, to points in the vicinity of Ilwaco and Raymond, Washington, which transmission system includes transmission and transformation facilities and other equipment appurtenant thereto; and

WHEREAS the West Coast Company is also the owner of electric generating and distributing facilities in Pacific County, Washington; and

WHEREAS, the Purchaser has entered into a contract dated January 31, 1939, with the West Coast Company for the purchase of the West Coast Company's generating and distributing facilities located in Pacific County, Washington, and the Government intends to execute a contract with the West Coast Company for the purchase of the West Coast Company's electric transmission system in said County; and

WHEREAS the Purchaser intends to operate an efficient and economical system for the distribution of power to its ultimate consumers on a strictly non-profit basis, and desires to purchase power from the Administrator, and the Administrator expects to be able to supply Bonneville power on or about July 1, 1940; and

WHEREAS in the event the Purchaser acquires said generation and distribution system from the Willapa Company prior to the date on which Bonneville power is available, it will be necessary for the Purchaser to have the use of the Raymond-Cosmopolis electric transmission system in order to obtain a temporary supply of power to meet its requirements, and in the event the Purchaser acquires said generation and distribution system from the West Coast Company prior to the date on which Bonneville power is available, it will be necessary for the purchaser to have the use of the transmission system which the Government plans to acquire from the West Coast Company in order to obtain a temporary supply of power to meet its requirements; and

WHEREAS by a resolution passed by the Purchaser's Commission on September 13, 1939, the president and secretary of the Purchaser are authorized to execute this contract on behalf of the Purchaser;

Now, THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for twenty years from the date of its execution; provided, however, that in the event both of the said contracts for the acquisition of distributing facilities by the Purchaser expire or terminate without transfer of the properties covered thereby, this power contract shall terminate and thereafter shall be of no further force and effect.

2. *Sale of power.*—The Administrator shall sell power to the Purchaser, and the Purchaser shall purchase such power from the Administrator, as hereinafter provided.

The Administrator shall furnish and the Purchaser shall purchase all of the power requirements of the Purchaser, with the following exceptions:

(a) The Purchaser may utilize any generating facilities acquired from the Willapa Company and the West Coast Company without limit;

(b) The Purchaser may utilize any power generated by industries located in the territory served by its distributing facilities;

(c) Until the Administrator can deliver power to the Purchaser's system, or in the event of delay or failure on the part of the Administrator to increase the contract demand after reasonable notice, or to meet the Purchaser's requirements for increased power supplies, the Purchaser shall have the right to make such temporary arrangements as may be necessary to meet its requirements. In the event of any interruption of service to the Purchaser, the Purchaser shall have the right to use the Government's transmission lines to meet its requirements, to the extent that the Administrator finds such lines available therefor and subject to the Administrator's supervision.

Nothing contained in subparagraphs (a), (b), or (c), of this section, however, shall be construed as permitting the Purchaser to reduce its contract demand hereunder, or as relieving the Purchaser of its obligation for payment of the minimum bills on said contract demand hereunder in accordance with the applicable provisions of Exhibits A and B hereto.

All obligations of the parties hereto with respect to the delivery of such power, and payment therefor, shall begin on the date (hereinafter called the "date of

initial delivery") upon which the Administrator shall be prepared to deliver Bonneville power to the Purchaser. Said date of initial delivery shall not be later than one year after the date on which either of the distribution systems described above are actually acquired by the Purchaser.

Beginning on the date of initial delivery, and during the remainder of the term of this contract, the Administrator shall make available to the Purchaser 1,500 kilowatts of power, which shall be the contract demand. Provided, however, that in the event the Purchaser does not acquire the distribution system of the West Coast Company until after the date of initial delivery hereunder, the contract demand from the date of initial delivery to the date on which the West Coast properties are acquired shall be 820 kilowatts. Such contract demand may be increased or decreased whenever the parties hereto mutually so agree in writing.

Such power shall be delivered in the form of three-phase, alternating current at approximately 60 cycles per second, and shall be delivered at such primary voltages as the Purchaser may select which require not more than one voltage transformation from the Government's transmission system at the specified points of delivery.

3. *Points of delivery.*—The Government shall deliver and meter power to the Purchaser at its substations located at Raymond, Naselle Junction, and Ilwaco; at such taps which now exist on its 33,000-volt transmission line; and at such other points as the parties may mutually agree upon in writing. It is contemplated that the existing substation to be acquired by the Government at Raymond may hereafter be discontinued by the Government and new facilities installed in the vicinity of Raymond. Until such time as the existing Raymond substation is discontinued, however, the Purchaser shall be entitled to receive delivery of power at that substation at approximately 2,300 volts, and also at approximately 6,900, 11,000, or 13,200 volts, whichever of the latter three voltages is selected by the Purchaser. The Administrator having found it to be advantageous to the Government to furnish power at such temporary substation at more than one voltage, the charge to the Purchaser for the total amount of power furnished at such substation shall be the same as if all such power were furnished at one voltage and at a single point of delivery.

4. *Purchaser's use of transmission facilities.*—During the period between the date of the acquisition by the Government of the electric transmission systems, hereinbefore mentioned, and the date of initial delivery, the Purchaser may utilize such systems for the transmission and transformation of power to the extent of the rated capacity of the lines and transformers in order to maintain a temporary supply of power.

During such period, the Purchaser shall be responsible for the usual and ordinary maintenance and operation of said transmission and transformation facilities, and shall operate them in a manner satisfactory to the Administrator. The Purchaser shall be liable for any damage to the systems caused by the Purchaser's use thereof or operations, and shall save the Government harmless from all liability, suits, or claims by third parties arising from damage or injury caused or allegedly caused by the Purchaser's negligence in using, operating, maintaining, or failing to maintain the said systems.

Subject to the specifications of the Administrator and agreement upon a reasonable rental, the Purchaser shall have the right of attachment to the Government's transmission line poles in order to support its distributing lines.

5. *Rate to purchaser.*—Bonneville Wholesale Power Rate Schedule F-1 (optional Prime Power), together with the General Terms and Conditions applicable to such Schedule, all as confirmed by order of the Federal Power Commission, dated September 18, 1939, are hereby made a part of this contract. Copies of said Schedule F-1 and said General Terms and Conditions, are attached hereto and marked Exhibits A and B, respectively. The Purchaser shall pay the Administrator for Optional Prime Power at the rate specified in Exhibit A of this contract.

6. *Equitable adjustment of rate.*—After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rate specified in Bonneville Wholesale Power Rate Schedule F-1, and at five-year intervals thereafter the Administrator shall reexamine the rate in effect under Bonneville Wholesale Power Rate Schedule F-1. The Administrator may make an order affecting an equitable adjustment in such rate, but prior to such order, the Administrator shall hold a hearing at which the Purchaser shall have an opportunity to be heard. The Purchaser shall be given fifteen days' written notice of the time and place of such hearing. Within five days after the Administrator has made

an order changing such rate, he shall furnish the Purchaser with a copy of such order, and the Purchaser may make such showing with respect thereto before the Federal Power Commission, or any other governmental official, department, or agency having the power to confirm and approve such rate, as the rules and regulations of such Commission, official, department, or agency may permit.

If the Administrator determines that such rate should be changed, and makes an order accordingly, such changed rate shall, upon confirmation and approval by the Federal Power Commission, or any other governmental official, department, or agency having the power to confirm and approve such rate, be binding upon the parties hereto, and thereafter the Purchaser shall pay the Government for Optional Prime Power at such changed rate.

In the event that such rate is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the Purchaser may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate.

Such notice shall specify the date upon which the cancellation shall become effective; provided, however, that the effective date of cancellation shall be not sooner than six months nor later than two years after the date such notice is received by the Administrator.

7. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator, within sixty days after receipt from the Purchaser of a written request therefor, shall submit to the Purchaser a contract, for the sale of power under such schedule containing such lower rate, to be substituted for this contract. The term of such substituted contract shall be the same as the unexpired term of this contract. The Purchaser's contract demand and minimum charge under such substituted contract shall not be less than the Purchaser's contract demand and minimum charge under this contract immediately prior to such substitution, unless the Administrator, in his discretion, determines that such contract demand and minimum charge, or either of them, may be reduced without prejudice to the Government.

8. *Resale rates.*—The Purchaser shall so manage and operate its electric system, and handle the revenues derived therefrom, as to resell power purchased from the Administrator at rates which reflect the low cost of Bonneville Power, and at the same time are consistent with sound and economical operation.

It is understood that the Administrator is preparing a schedule of Bonneville standard resale rates (hereinafter called "Resale Schedules") for inclusion in all power contracts with purchasers of the same class as the Purchaser, which Resale Schedules will be adequate to enable the Purchaser to defray payments for interest, principal, and otherwise, in accordance with the terms of any bonds to be issued by it for the acquisition of electrical properties, to maintain reasonable reserve funds and generally to operate and maintain upon a financially sound basis any electrical properties to be acquired by the Purchaser. If the Purchaser shall determine that such resale schedules, together with the surcharges provided for therein, are suitable for the Purchaser's electric system, the Purchaser shall adopt such resale schedules and the same shall become a part of this contract; provided, however, that the Purchaser shall not be obligated to place such resale schedules in actual effect prior to the date of initial delivery hereunder.

The Purchaser shall thereafter charge consumers the rates set forth in such resale schedules, with such surcharges as are provided thereby and placed in effect by the Purchaser. Additional resale schedules for special classes of consumers, or special uses of electricity may be added from time to time upon mutual agreement of the parties.

If at any time during the term of this contract it should appear that the rates set forth in the said resale schedules, together with such surcharge as may be provided for therein, do not produce revenues sufficient to operate and maintain the Purchaser's electric system on a self-supporting and financially sound basis, then the Purchaser and the Administrator shall agree upon, and the Purchaser shall put into effect, such changes in resale rates as will provide the increased revenues necessary to place the system upon such a self-supporting and financially sound basis. To the extent that the Purchaser has surplus revenues (as defined in Section 10 hereof) available therefor, the Purchaser shall reduce its rates to consumers; provided, however, that unless the written consent of the Administrator is first obtained, such reduction shall be uniform as between the several resale schedules for different classes of consumers, and

no substantial alteration shall be made in the rate structure of any resale schedule. The Purchaser shall keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy, and such alterations and changes therein as may be put into effect pursuant to the terms of this contract.

The Purchaser shall sell electric energy to the ultimate consumer without discrimination between consumers of the same class, and shall not give or make as between consumers of the same class any discriminatory rate, rebate, or other special concession.

If, upon consideration of the resale schedules adopted by the Administrator, the Purchaser does not consider it feasible to adopt such schedules and make the same a part of this contract, then in that event this contract shall terminate upon the expiration of sixty days after such schedules were submitted to the Purchaser, and shall be of no further force and effect.

9. *Disposition of revenues.*—The Purchaser shall maintain and operate its electric system on a self-supporting and otherwise financially sound basis, and it shall dispose of its gross revenues in the following manner:

(a) Revenues shall first be used for the payment of all current maintenance and operating expenses, including salaries, wages, cost of power at wholesale, materials, supplies and insurance; for the payment of taxes, if any; for the payments required to be made by the Purchaser into any applicable special bond fund or funds, and for the payment of the interest on and the matured principal of the Purchaser's indebtedness. The order in which the payments are enumerated in this paragraph (a) shall not be construed as affecting in any manner the right of the Purchaser to issue bonds providing for the making of such payments in any other order.

(b) Thereafter, revenues shall be used currently for the establishment and maintenance of a renewal and replacement fund, to provide reasonable working capital and, if the Purchaser so desires, for construction or acquisition of additional electric facilities.

(c) All remaining revenues shall be considered surplus revenues and shall be used by the Purchaser to purchase or retire the Purchaser's bonds or other indebtedness, or shall be used as a basis for the reduction or elimination of surcharges to consumers, and thereafter for the reduction of rates.

10. *Accounting methods.*—The Purchaser shall keep proper books of account in accordance with rules prescribed by the Division of Municipal Corporations of the State Auditor's Office of the State of Washington, or in the event the laws of the State of Washington should fail to provide an agency for prescribing such rules, in accordance with the Uniform System of Accounts prescribed by the Federal Power Commission. Purchaser shall cause its books of account to be audited annually by the State Auditor's Office of the State of Washington, or, if such an audit shall not be made within twelve months after the close of any fiscal year, by independent Certified Public Accountants, if requested by the Administrator.

The duly authorized agents of the Government shall have free access, at all reasonable times, to all of the Purchaser's books and records. Such agents will render such advisory and other service in the establishment and maintenance of the accounting system of the Purchaser as the Administrator may designate.

Within sixty days following the close of any fiscal year, the Purchaser shall furnish the Administrator a copy of the balance sheet and profit and loss statement of the District's electric system, showing, in reasonable detail, the financial condition of such electric system as of the close of such fiscal year, the income and expenses thereof for such year, and the amounts paid into any bond or other fund during such year, and the amount remaining in such fund, or funds, at the close of such year. At the same time, the Purchaser shall furnish to the Administrator an annual report of the operation of its electric system.

The Purchaser shall also furnish such monthly reports on its operations and special reports which the Administrator may require in order to maintain statistics covering all agencies distributing Bonneville power.

11. *Electric energy or service furnished public body.*—The Purchaser shall be reimbursed by any municipality, or other public body, at the rates specified in the applicable resale schedules for any and all electric energy and service furnished to such municipality, or other public body, by the Purchaser.

12. *Contract not transferable.*—Neither this contract nor any interest therein shall be transferred or assigned by the Purchaser without the written consent of the Administrator.

13. *Waiver of default.*—No waiver by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall at any time be considered a waiver with respect to any subsequent default or matter.

14. *Remedies under contract not exclusive.*—Nothing contained in this contract shall be construed in any manner to abridge, limit, or deprive either party hereto of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof, which it would otherwise have.

15. *Interest of Member of Congress.*—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom.

16. *Change of form of administration.*—Any act herein designated to be performed by the Administrator may be performed by any governmental official, department, or agency succeeding to the powers of the Administrator.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate, the said Purchaser by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Department of the Interior,
 By PAUL J. RAVEN, *Bonneville Administrator.*
 PUBLIC UTILITY DISTRICT No. 2 of PACIFIC COUNTY,
 By R. W. SCHULTZ, *President.*

Attest:

[SEAL] M. M. MOORE, *Secretary.*
 JOHN M. DUBLA, *Commissioner.*

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

OPTIONAL WHOLESOME POWER RATE SCHEDULE F-1

(Prime Power)

Availability.—This schedule covers prime power, delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power shall be sold under this schedule at the following rate:

Demand charge: 75 cents net per month per kilowatt of billing demand.

Energy charge: 2.5 mills net per kilowatt-hour delivered.

Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—Except in the case of customers entitled to the five-mill developmental rate referred to above, the total net minimum monthly charge for service under this schedule shall be 75 cents per month per kilowatt of contract demand, but not less than 75 percent of the highest demand charge billed during the preceding eleven months. The Administrator may also require a minimum

guaranteed load factor except in the case of public bodies and cooperatives taking all their requirements under this rate schedule.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that in the case of public bodies and cooperatives taking all their power requirements under this rate schedule the billing demand shall be the actual demand.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and

such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges, against the purchaser, for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past-due bills are paid. Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract de-

mand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages, if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall at all times take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the re-

spective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended:

Administrator: The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At Site: At the Bonneville Project Power House, or points adjacent thereto.

Bonneville Project: The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and Cooperatives: Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump Energy: Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy: Electric energy, measured in kilowatt-hours.

Government: The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt: The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour: The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power: The rate of transferring or transforming energy measured in kilowatts.

Power factor: The ratio of kilowatts to kilovolt-amperes.

Prime Power: The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 cubic feet per second.

Public Bodies: States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE DEPARTMENT OF THE INTERIOR, BONNEVILLE ADMINISTRATOR, AND PUBLIC UTILITY DISTRICT NO. 1 OF SKAMANIA COUNTY

THIS AGREEMENT, executed on August 2, 1939, between THE UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Administrator, hereinafter called "the Administrator" (acting pursuant to the provisions of the Bonneville Act of August 20, 1937, Title 16, U. S. C., Sec. 832, et seq.), and PUBLIC UTILITY DISTRICT No. 1 of SKAMANIA COUNTY, hereinafter called "the Purchaser," a public utility district organized and existing under and by virtue of the laws of the State of Washington.

WITNESSETH:

WHEREAS the West Coast Power Company, hereinafter called "the Company," is the owner of an electric-distribution system in Skamania County, Washington, and an electric-transmission line crossing the Columbia River at the Bridge of the Gods; and

WHEREAS the Purchaser has executed a contract with the Company for the acquisition of said distribution system and transmission line, which contract provides for the transfer of said properties on or before August 15, 1939; and

WHEREAS the Government is constructing a substation in Skamania County, Washington, on the north bank of the Columbia River in the vicinity of the Bonneville Project Power Plant, hereinafter called "the north bank substation," and it is expected that such substation will be completed on or about July 1, 1940; and

WHEREAS the Purchaser desires to purchase power from the Government beginning on or about August 15, 1939, but, until such time as the north bank substation is completed, the Government can deliver such power only on the south side of the Columbia River; and

WHEREAS, by resolution passed by the Purchaser's Commission on August 2, 1939, the president and secretary of the Purchaser are authorized to execute this contract on behalf of the Purchaser;

NOW, THEREFORE, the parties hereto (subject to all the provisions of the said Bonneville Act as amended or supplemented) mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for twenty years from the date of its execution; provided, however, that in the event the Purchaser does not acquire from the Company the distribution system and transmission line hereinbefore mentioned before July 1, 1940, this contract shall terminate and, from and after such date, shall be of no further force or effect.

2. *Sale of power.*—The Government shall sell "At Site" Prime Power to the Purchaser, and the Purchaser shall purchase such power from the Government, as hereinafter provided.

All obligations of the parties hereto with respect to the delivery of such power and payment therefor shall begin on the date (hereinafter called the "date of initial delivery") upon which the Company's distribution system and transmission line, hereinbefore mentioned, are transferred to the Purchaser.

The Purchaser's actual demand shall in no case exceed 200 kilowatts unless the written consent of the Administrator is first obtained. The Purchaser's contract demand hereunder for such power shall be the Purchaser's highest actual demand during the period between the date of initial delivery and the end of the next succeeding calendar month.

Such contract demand may be increased or decreased whenever the parties hereto mutually so agree in writing.

3. *Point of delivery.*—During the period between the date of initial delivery and the completion of the Government's north bank substation, the Government shall make power available to the Purchaser at a point to be designated by the Administrator, adjacent to the point at which power is now being delivered by the Government to the City of Cascade Locks, Oregon, from the Bonneville-Cascade Locks transmission line at the westerly limits of the City of Cascade Locks, Oregon. The Purchaser shall construct the necessary connection between the transmission line to be acquired by the Purchaser and the point of delivery designated by the Administrator. During such period all power shall be delivered at 6,900 volts, and shall be three-phase and 60 cycles.

Subsequent to the completion of the Government's north-bank substation, all power made available hereunder shall be delivered to the Purchaser at a point to be designated by the Administrator at such substation. All power delivered

to the Purchaser at the north-bank substation shall be delivered at 13,800 volts, and shall be three-phase, and 60 cycles.

4. *Rate to purchaser.*—Bonneville Wholesale Power Rate Schedule A-1 ("At Site" Prime Power), together with the General Terms and Conditions and the Definitions applicable to such schedule, all as confirmed by order of the Federal Power Commission, dated June 8, 1938, are hereby made a part of this contract. Copies of said Schedule A-1, said General Terms and Conditions, and said Definitions are attached hereto and marked Exhibits A, B, and C, respectively.

The Purchaser shall pay the Government a monthly service charge of one-twelfth of \$1.25 per kilowatt of billing demand for each month during which power is delivered by the Government to the Purchaser at 6,900 volts over the Bonneville-Cascade Locks transmission line.

The Purchaser shall pay the Government for "At Site" Prime Power at the rate specified in Exhibit A of this contract.

After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rate specified in Bonneville Wholesale Power Rate Schedule A-1, and at five-year intervals thereafter the Administrator shall reexamine the rate in effect under Bonneville Wholesale Power Rate Schedule A-1. Prior to the making of any order changing such rate the Administrator shall hold a hearing at which the Purchaser shall have an opportunity to be heard. The Purchaser shall be given fifteen days' written notice of the time and place of such hearing. Within five days after the Administrator has made an order changing such rate he shall furnish the Purchaser with a copy of such order, and the Purchaser may make such showing with respect thereto before the Federal Power Commission, or any other governmental official, department, or agency having the power to confirm and approve such rate, as the rules and regulations of such Commission, official, department, or agency may permit.

If the Administrator determines that such rate should be changed, and makes an order accordingly, such changed rate shall, upon confirmation and approval by the Federal Power Commission, or any other governmental official, department, or agency, having the power to confirm and approve such rate, be binding upon the parties hereto, and thereafter the Purchaser shall pay the Government for "At Site" Prime Power at such changed rate.

In the event that such rate is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the Purchaser may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate, such cancellation to be effective two years from the date such notice is received by the Administrator.

5. *Substitution of other rate schedule.*—Within ninety days after the Government makes available a schedule containing a lower rate for the same class and quality of service covered by this contract than is then applicable under this contract, the Purchaser may request the Administrator, in writing, to substitute for this contract a contract for the sale of power under such lower rate; provided, however, that the Purchaser's contract demand and minimum charge under such substituted contract shall not be less than the Purchaser's contract demand and minimum charge under this contract immediately prior to such substitution, and that the term of such substituted contract shall not extend beyond the term of this contract. In the event that the Administrator does not execute such a contract within six months from the date of the receipt by him of such written request, the Purchaser may, at its option, cancel this contract upon written notice to the Administrator given within thirty days of the expiration of such six months' period, such cancellation to be effective two years from the date that such notice of cancellation is received by the Administrator. Nothing herein contained shall be so construed as to render the Government liable for breach of contract in the event that the Administrator does not execute such substituted contract.

6. *Resale rates.*—The Purchaser shall so manage and operate its electric system, and handle the revenues derived therefrom, as to resell power purchased from the Government at rates which reflect the low cost of Bonneville power, and at the same time are consistent with sound and economical operation.

Prior to the adoption by the Administrator of the Bonneville standard resale rate schedules (hereinafter called "resale schedules"), which the Administrator is preparing for inclusion in all power contracts with customers of the same class as the Purchaser, the Purchaser shall charge consumers rates not in excess of the rates which were charged by the Company immediately prior to the transfer of the Company's electric distribution system, hereinbefore mentioned.

Upon adoption by the Administrator of standard resale schedules, the Purchaser agrees to charge consumers the rates set forth in such resale schedules, and not to depart therefrom except upon mutual agreement of the parties hereto. Additional resale schedules for special classes of consumers, or special uses of electricity, may be added from time to time upon mutual agreement of the parties.

If at any time during the term of this contract it should appear that the rates set forth in the said resale schedules, together with such surcharge as may be provided for therein, do not produce revenues sufficient to operate and maintain the Purchaser's electric system on a self-supporting and financially sound basis, then the Purchaser and the Government shall agree upon, and the Purchaser shall put into effect such changes in resale rates as will provide the increased revenues necessary to place the system upon such a self-supporting and financially sound basis.

The Purchaser shall sell electric energy to the ultimate consumer without discrimination between consumers of the same class, and shall not give or make as between consumers of the same class any discriminatory rate, rebate, or other special concession.

The Purchaser shall keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy, and such alterations and changes therein as may be put into effect by the Purchaser.

7. *Disposition of revenues.*—The Purchaser shall maintain and operate its electric system on a self-supporting and otherwise financially sound basis, and it shall dispose of its gross revenues in the following manner:

(a) Revenues shall first be used for the payment of all current maintenance and operating expenses, including salaries, wages, cost of power at wholesale, materials, supplies, and insurance.

(b) From remaining revenues the Purchaser shall next currently provide for the payments required to be made by it into any special bond fund or funds, and for the payment of the interest on and the matured principal of the Purchaser's indebtedness.

(c) Thereafter, revenues shall be used currently for the establishment and maintenance of a renewal and replacement fund, to provide reasonable working capital and for new construction.

(d) All remaining revenues shall be considered surplus revenues and shall be used by the Purchaser to purchase or retire the Purchaser's bonds or other indebtedness, or shall be used as a basis for the reduction or elimination of surcharges to consumers, and thereafter for the reduction of rates.

8. *Accounting methods.*—The Purchaser shall keep proper books of account in accordance with rules prescribed by the Division of Municipal Corporations of the State Auditor's Office of the State of Washington, or in the event the laws of the State of Washington should fail to provide an agency for prescribing such rules, in accordance with the Uniform System of Accounts prescribed by the Federal Power Commission. Purchaser shall cause its books of account to be audited annually by the State Auditor's Office of the State of Washington, or, if such an audit shall not be made within twelve months after the close of any fiscal year, by independent Certified Public Accountants.

The duly authorized agents of the Government shall have free access, at all reasonable times, to all of the Purchaser's books and records. Such agents will render such advisory and other service in the establishment and maintenance of the accounting system of the Purchaser as the Administrator may designate.

Within sixty days following the close of any fiscal year the Purchaser shall furnish the Administrator a copy of the balance sheet and profit-and-loss statement of the District's electric system, showing, in reasonable detail, the financial condition of such electric system as of the close of such fiscal year, the income and expenses thereof for such year, and the amounts paid into any bond or other fund during such year, and the amount remaining in such fund, or funds, at the close of such year. At the same time the Purchaser shall furnish to the Administrator an annual report of the electric operation of its system.

In the event that the Purchaser does not comply with the provisions and requirements of Sections 6-8, inclusive, of this contract, or any of such provisions and requirements, the Administrator may, at his option, cancel this contract.

9. *Electric energy or service furnished public body.*—The Purchaser shall be reimbursed by any municipality, or other public body, at the rates specified in

the applicable resale schedules for any and all electric energy and service furnished to such municipality, or other public body, by the Purchaser.

10. *Contract not transferable.*—Neither this contract nor any interest therein shall be transferred or assigned by the Purchaser without the written consent of the Administrator.

11. *Waiver of default.*—No waiver by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall at any time be considered a waiver with respect to any subsequent default or matter.

12. *Remedies under contract not exclusive.*—Nothing contained in this contract shall be construed in any manner to abridge, limit, or deprive either party hereto of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof, which it would otherwise have.

13. *Interest of Member of Congress.*—No Member of, or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom.

14. *Change of form of administration.*—Any act herein designated to be performed by the Administrator may be performed by any governmental official, department, or agency succeeding to the powers of the Administrator.

15. *Contract contingent upon appropriations.*—This contract is subject to appropriations being made by Congress from year to year sufficient to provide for the operation and maintenance of the Bonneville Project Power Plant and the Bonneville transmission system. No liability shall accrue against the Government, its officers, agents, or employees by reason of sufficient moneys not being so appropriated.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate, the said Purchaser by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,

Represented by the Department of the Interior.

By F. A. BANKS, *Acting Bonneville Administrator.*

PUBLIC UTILITY DISTRICT No. 1 OF SKAMANIA COUNTY,

By HARRY J. CARD, *President.*

Attest:

J. CHAUNCEY PRICE, *Secretary.*

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE A-1

("At Site" Prime Power)

Availability.—This rate schedule covers Prime Power delivered at the bus bars of the Bonneville Project Power Plant, or at such point or points adjacent thereto, as may be designated by the Administrator.

Power under this rate schedule shall be available to private purchasers for their own use, but not for resale; and to public bodies, cooperatives, and privately owned electric utilities at 13,800 volts (nominal) for distribution within fifteen miles of the Bonneville Project Power Plant.

Rate.—Fourteen and One-Half Dollars (\$14.50) net per year, per kilowatt of contract demand or maximum billing demand, whichever is higher.

Determination of demand.—The demand shall be determined by suitable indicating and recording instruments installed at such locations as may be designated by the Administrator. The demand for any month shall be defined as the highest integrated load during any thirty-minute (30-minute) period occurring in the calendar month for which the determination is made.

Maximum billing demand.—Purchaser shall maintain as nearly 100 percent (100%) power factor as practicable. Whenever the purchaser's power factor at the time of maximum monthly demand is less than eighty-five percent (85%), the demand for billing purposes shall be determined by taking eighty-five percent (85%) of the kilovolt-amperes indicated at the time of the maximum monthly demand. In no case shall the billing demand for any month be less than the contract demand, nor less than the highest billing demand that has occurred during the preceding eleven months.

Contract demand.—Each contract under this schedule shall specify the amount of capacity in kilowatts to be made available to the purchaser each year of the contract term. This capacity in kilowatts shall be termed the contract demand. The purchaser may not exceed the contract demand by more than 10 percent, without the written consent of the Administrator.

Minimum charge.—The minimum charge for service under this schedule shall be the contract demand at \$14.50 net per kilowatt per year.

Point of delivery.—The purchaser shall accept delivery of power at approximately 13,800 volts at the transmission-line side of the circuit breakers connecting the purchaser's cables to the generator bus at the Bonneville Project Power Plant, or at such substation adjacent thereto, located on either the north bank or the south bank of the Columbia River, as may be designated by the Administrator.

The purchaser shall accept delivery as provided above; and shall install, at his own expense, such necessary switches, cables, transmission lines, lightning arresters, and other equipment, as may be designated by the Administrator. If, however, facilities are provided by the Administrator for the delivery of power at a point removed from those specified above, the purchaser shall pay the capital or annual cost of such facilities.

Character of service.—Delivery of power hereunder shall be at approximately 13,800 volts, three phase, and sixty cycles.

Payments.—Bills shall be rendered monthly, on the basis of one-twelfth of the annual rate, and shall be due and payable at the office of the Administrator within fifteen days from the date of the bill.

The above rate is net. If payment is not received on or before the close of business on the date due, a penalty of two percent (2%) of the bill rendered will be added for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Administrator may, at any time thereafter, and after giving the purchaser ten days advance notice in writing, discontinue service.

Contract and term.—Service under this schedule shall, in each case, be covered by a contract entered into with each purchaser by the Administrator.

Contracts shall be for a period of not less than five years, nor more than twenty years in the aggregate, including renewals or extensions provided for therein, from date of making.

Adjustment of rates.—Contracts shall contain such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years. Such adjustments of rates shall be subject to the approval of the Federal Power Commission.

Rules and regulations.—Purchase of power under the rate schedule shall be subject to the rules and regulations prescribed by the Administrator contained in the General Terms and Conditions, which by reference are made a part of the schedule and to all the provisions of the Bonneville Act.

J. D. Ross,
Administrator, The Bonneville Project.

Confirmed and Approved by the Federal Power Commission June 8, 1938.

LEON M. FUQUAY, Secretary.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—THE BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

SCHEDULES OF RATES AND CHARGES

GENERAL TERMS AND CONDITIONS

Purchase of power under all rate schedules and contracts shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power from the Bonneville Project Power Plant shall be available only to those purchasers, the waste products from whose plants or operations shall not be harmful to, or destructive of, the fish or other aquatic life of the Columbia River; nor otherwise pollute the stream; nor detract from the scenic beauties of the Columbia River Gorge.

Measurement of demand, energy, and power factor.—Demand and energy measurements shall be made by suitable instruments at the point, or points, of delivery; or may, at the option of the Administrator, be made at some other point, or points, where housing facilities are available or may be made available, or operation simplified: *Provided, however,* that in the event the metering is effected at some other location than at the point of delivery, suitable correction shall be made by the Administrator, of the amounts determined at such location, so that the adjusted amounts will, so far as possible, reflect the exact quantities delivered at the actual point, or points, of delivery.

The Administrator shall, without charge to the purchaser, install and maintain the necessary meters for measuring the maximum demand, and the amount of energy furnished to purchaser: *Provided, however,* that should these meters fail, or be found inaccurate, the maximum demand, and the amount of energy delivered, will be estimated by the Administrator from the best information available. The Administrator may also measure power factor. The purchaser shall permit the use of his housing and other facilities for Administrator's metering equipment.

Whenever a purchaser contracts for Secondary power in addition to Prime power, computation of his billing demands under the two classes of service shall be made as follows: When the sum of the purchaser's billing demands exceeds the sum of his contract demands, the excess of his billing demands above his contract demands shall be billed as Prime power or Secondary power, in the ratio that each contract demand bears to the sum of the contract demands: *Provided, however,* that the amount billed as Prime power shall, in no case, be less than the highest billing demand established for Prime power during the preceding eleven months; nor, in the case of curtailed Secondary power deliveries, shall the amount billed as Prime power be less than the difference between the total of the Prime and Secondary demands, and the curtailed Secondary power demand as prorated to the purchaser by the Administrator.

At site power.—The aggregate contract demands for "At Site" power, prime and secondary, shall not exceed 20% of the installed generating capacity of the plant.

Meter tests.—The Administrator shall, not less frequently than once a year, make periodical tests and inspections of metering equipment installed by him, in order to maintain a high standard of accuracy. At the request of purchaser, the Administrator may make additional tests or inspection of such equipment in the presence of representatives of purchaser. If such additional tests show that the metering equipment does not register or indicate within 2 percent of the correct reading, the metering equipment shall be corrected, and an adjustment will be made in purchaser's bill over a period of not more than 30 days prior to date of such test unless the period of faulty registration can be definitely established. Such tests shall be made without charge to the purchaser.

Inspections.—The Administrator shall have the right, but shall not be obligated, to inspect purchaser's installation at any time, and reserves the right to reject any wiring or equipment not in accordance with the Administrator's reasonable standards; but such inspection, or failure to inspect, or to reject, shall not render the Administrator, his agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in the installation of any

electrical equipment, or from violation of the contract of which these terms and conditions are a part.

Purchaser's responsibility for property installed by the Administrator.—All meters, services, and other equipment furnished by the Administrator shall be and remain the property of the United States, and the right to remove, replace, or repair all such equipment is expressly reserved. The purchaser shall exercise proper care to protect the property of the United States on purchaser's premises, and in the event of loss or damage to property of the United States, arising from neglect of purchaser, the cost of necessary repairs or replacement shall be paid by purchaser.

Right of access.—Administrator's identified employees shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator.

Additional loads.—No change shall be made in purchaser's installation that may cause his demand to exceed his contract demand by 10 percent except after notice to and written permission from the Administrator. Additions to, or material changes in the characteristics of load, made without permission from the Administrator, shall render purchaser liable for any damage caused by the additional or changed installation, and to cancellation of the contract.

Purchaser's lines and equipment.—All lines and substations from point of delivery (as defined in the contract of which these terms and conditions are a part), and all electrical equipment, except the metering equipment installed by the Administrator, located on purchaser's side of such point of delivery, shall be furnished, installed, and maintained by purchaser.

Purchaser's lines and equipment—Standards.—All lines and equipment of purchaser must conform to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code, and to such State and local regulations as may apply.

Billing.—Bills will be rendered monthly and shall be due and payable at the office of the Administrator within fifteen days from the date of the bill. Failure to receive bill shall not release purchaser from payment obligation. If payment is not made on or before the close of business on the date due, a penalty of two percent (2%) of the bill rendered will be added for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Administrator may, at any time thereafter, and after giving the purchaser ten days' advance notice in writing, discontinue service.

Should the final date for payment of the bill fall on a Sunday or holiday, the business day next following the final date will be held as a day of grace for delivery of payment. Remittances received by mail after expiration of the time limit for payment will be accepted by Administrator as made in time if the incoming envelope bears United States Post Office date stamp of the final date for payment or any date prior thereto.

Discontinuance of supply under this section shall not relieve the purchaser of his liability for the agreed minimum monthly payment during the time the supply of energy is so discontinued.

Interruption of service.—Administrator will furnish energy as agreed upon continuously so far as reasonable diligence will permit; but neither the United States, the Administrator, nor his duly authorized employees shall be liable for damages when, for any reason, suspensions of the operation of the generation and transmission system serving purchaser, or any part thereof, shall interfere with the delivery of electric energy to purchaser; nor shall such an interruption constitute a breach of contract on the part of the Administrator. Administrator will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service; and, in event of curtailment of power, shall give preference to purchasers of Prime power for resale.

Voltage fluctuations caused by purchaser.—Electric service must not be used in such a manner as to cause unusual fluctuations or disturbances to the system of the Bonneville Project. Administrator may require purchaser at his own expense to install suitable apparatus to reasonably limit such fluctuation.

Balancing of loads.—Purchaser shall at all times take and use energy in such manner that the load will be balanced between phases as nearly as practicable to within 10 percent. In the event of unbalanced polyphase loads, Administrator reserves the right to require purchaser at his own expense to make the necessary changes to correct this condition, or to compute the kilowatt demand on the assumption that the load on each phase is equal to the greatest load on any phase.

Notice of trouble.—Purchaser shall notify the Administrator immediately should the service be unsatisfactory for any reason; or should there be any defects, trouble, or accidents affecting the supply of electricity. Such notices, if verbal, should be confirmed in writing.

Single point delivery.—Unless otherwise specifically provided in the contract, if service is rendered from more than one substation, or through more than one transformation at the same substation, Administrator will bill purchaser for power at each substation or additional transformation separately.

Contracts.—(1) Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate cancelling of such contract of sale in the event of violation of such provision.

(2) Contracts shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided by the rate schedule under which service is rendered, but not exceeding in the aggregate twenty years from the dates of the making of such contracts.

(3) Contracts shall contain such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years. Such adjustments of rates shall be subject to the approval of the Federal Power Commission.

(4) Contracts with purchasers engaged in selling electric energy to the general public shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of public bodies or cooperatives, and that such cancellation may be with respect to all or any part of the electric energy so purchased under the contract.

(5) Contracts with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including, among other things, stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility.

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville project and sold to purchasers shall become effective only after confirmation and approval of the Federal Power Commission. Subject to confirmation and approval of the Federal Power Commission, such rate schedules may be modified from time to time by the Administrator.

EXHIBIT C

DEFINITIONS

The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings:

Administrator.—Means the Bonneville Project Administrator.

"At site."—Refers to the Bonneville Project Power House or points adjacent thereto.

Billing demand.—Purchaser's maximum or contract demand used for computing power bill.

Bonneville Project.—Means dams, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington; and such other facilities as may be constructed, leased, or acquired in accordance with the Bonneville Act.

Contract demand.—The kilowatts of demand specified in the purchaser's contract for power, to establish the amount of power that will be sold the customer under the particular agreement.

Cooperative and cooperatives.—Any form of nonprofit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dollars per year per kilowatt.—The amount of money charged annually for each kilowatt of contract demand or maximum billing demand.

Electric energy.—(See Energy.)

Energy.—Electric energy, measured in kilowatt-hours.

Kilowatt.—The rate of power generation or delivery equal to approximately 1,341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour.—The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Load.—Power requirements of a purchaser, or purchasers, supplied by the Bonneville Project.

Point of delivery.—Unless otherwise specifically defined in the power schedules or contracts with the purchaser, means at the point of connection of the purchaser's lines with the switch on the feeder through which the purchaser receives power delivery.

Power.—When used in text refers to either kilowatts of demand, or kilowatt-hours of energy, or both; when reference is made to definite amounts of energy, or to a rate of power generation or power delivery, it is expressed in kilowatt-hours, or kilowatts, as required.

Power factor.—Defined as the ratio of the kilowatts to the kilovolt-amperes supplied to a system determined at the time of the purchaser's maximum monthly demand.

Prime power.—Prime Power, as referred to herein, is defined as the kilowatt output capacity that is estimated to be available at the Bonneville Project Power Plant (based on stream-flow records 1879 to 1934) 99.5 percent of the time; viz, whenever the flow in the Columbia River at the Bonneville Project Power Plant site is less than 800,000 c. f. s. and greater than 35,000 c. f. s. (the minimum unregulated flow of record).

Private purchasers.—Persons, firms, or corporations, other than privately owned utilities, public bodies, or cooperatives, requiring power for use in their own plants and operations.

Public body or public bodies.—Means States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

Secondary power.—All power that can be produced at the Bonneville Project Power Plant in excess of that defined as Prime. Secondary power is not continuously available. When it is produced, but in less than the aggregate contract demands, the Administrator may curtail deliveries to purchasers.

Year.—Twelve consecutive calendar months.

AMENDATORY AGREEMENT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE DEPARTMENT OF THE INTERIOR, BONNEVILLE ADMINISTRATOR, AND PUBLIC UTILITY DISTRICT NO. 1 OF SKAMANIA COUNTY

THIS AGREEMENT, executed on August 19, 1939, between THE UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Administrator, hereinafter called "the Administrator" (acting pursuant to the provisions of the Bonneville Act of August 20, 1937, Title 16 U. S. C., Sec. 832, et seq.), and PUBLIC UTILITY DISTRICT NO. 1 OF SKAMANIA COUNTY, hereinafter called "the Purchaser," a public-utility district organized and existing under and by virtue of the laws of the State of Washington,

WITNESSETH:

WHEREAS on August 2, 1939, the parties hereto executed a contract for the sale of power by the Government to the Purchaser; and

WHEREAS the parties hereto desire to amend said contract by amending Section 5 thereof;

Now, THEREFORE, the parties hereto mutually agree that said contract of August 2, 1939, be and the same is hereby amended by amending Section 5 of said contract which is entitled "Substitution of Other Rate Schedule," to read as follows:

"5. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator within sixty days after receipt from the Purchaser of a written request therefor shall submit to the Purchaser a contract, for the sale of power under such schedule containing such lower rate, to be substituted for this contract; provided, however, that the term of such substituted contract shall not extend beyond the term of this contract, and the Purchaser's contract demand and minimum charge under such substituted contract shall not be less than the Purchaser's contract

demand and minimum charge under this contract immediately prior to such substitution, unless the Administrator, in his discretion, determines that such contract demand and minimum charge, or either of them, may be reduced."

IN WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate, the said Purchaser by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Department of the Interior.
 By F. A. BANKS,
Acting Bonneville Administrator.
 PUBLIC UTILITY DISTRICT No. 1 of SKAMANIA COUNTY.,
 By HARRY J. CARD,
President.

[SEAL]

Attest:

J. CHAUNCEY PRICE, *Secretary.*

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE
 DEPARTMENT OF THE INTERIOR, BONNEVILLE ADMINISTRATOR, AND PUBLIC UTILITY
 DISTRICT No. 1 OF WAHAKIACUM COUNTY

THIS AGREEMENT, executed on November 10, 1939, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department of the Interior, Bonneville Administrator, hereinafter called "the Administrator," and PUBLIC UTILITY DISTRICT No. 1 OF WAHAKIACUM COUNTY, hereinafter called "the Purchaser," a public-utility district organized and existing under and by virtue of the laws of the State of Washington,

WITNESSETH:

WHEREAS the West Coast Power Company, hereinafter called "the West Coast Company," is the owner of an electric transmission system extending from a point in the vicinity of Westport, Oregon, to points in the vicinity of Ilwaco and Raymond, Washington, which transmission system includes transmission and transformation facilities and other equipment appurtenant thereto; and

WHEREAS the West Coast Company is also the owner of electric generating and distributing facilities in Wahkiakum County, Washington; and

WHEREAS the Purchaser has entered into a contract dated January 31, 1939, with the West Coast Company for the purchase of the West Coast Company's generating and distributing facilities located in Wahkiakum County, Washington, and the Government intends to execute a contract with the West Coast Company for the purchase of the West Coast Company's electric transmission system in said County; and

WHEREAS, all acts, things and conditions necessary under law to make this arrangement valid and binding obligation of the parties hereto have been duly done, performed and complied with:

WHEREAS in the event the Purchaser acquires said generation and distribution system from the West Coast Company prior to the date on which Bonneville power is available, it will be necessary for the Purchaser to have the use of the said electric transmission system in order to obtain a temporary supply of power to meet its requirements; and

WHEREAS by a resolution passed by the Purchaser's Commission on November 16, 1939, the president and secretary of the Purchaser are authorized to execute this contract on behalf of the Purchaser;

Now, THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall continue in effect for twenty years from the date of its execution, provided, however, that in the event the Purchaser has not acquired an electric distribution system for purchase of power hereunder within two years from the date of execution hereof, this contract shall thereupon terminate.

2. *Sale of power.*—The Administrator shall sell power to the Purchaser, and the Purchaser shall purchase such power from the Administrator, as hereinafter provided.

The Administrator shall furnish and the Purchaser shall purchase all of the power requirements of the Purchaser, with the following exceptions:

(a) The Purchaser may utilize any generating facilities acquired from the West Coast Company without limit;

(b) The Purchaser may utilize any power generated by industries located in the territory served by its distributing facilities:

(c) Until the Administrator can deliver power to the Purchaser's system, or in the event of delay or failure on the part of the Administrator to increase the contract demand after reasonable notice, or to meet the Purchaser's requirements for increased power supplies, the Purchaser shall have the right to make such temporary arrangements as may be necessary to meet its requirements. In the event of any interruption of service to the Purchaser, the Purchaser shall have the right to use the Government's transmission lines to meet its requirements, to the extent that the Administrator finds such lines available therefor and subject to the Administrator's supervision.

Nothing contained in subparagraphs (a), (b), or (c), of this section, however, shall be construed as permitting the Purchaser to reduce its contract demand hereunder, or as relieving the Purchaser of its obligation for payment of the minimum bills on said contract demand hereunder in accordance with the applicable provisions of Exhibits A and B hereto.

All obligations of the parties hereto with respect to the delivery of such power, and payment therefor, shall begin on the date (hereinafter called the "date of initial delivery") upon which the Administrator shall be prepared to deliver Bonneville power to the Purchaser. Said date of initial delivery shall not be later than one year after the date on which either of the distribution systems described above are actually acquired by the Purchaser.

Beginning on the date of initial delivery, and during the remainder of the term of this contract, the Administrator shall make available to the Purchaser 400 kilowatts of power, which shall be the contract demand. Such contract demand may be increased or decreased whenever the parties hereto mutually so agree in writing.

Such power shall be delivered in the form of three-phase, alternating current at approximately 60 cycles per second, and shall be delivered at the primary voltages which now prevail on the distributing system to be acquired by the Purchaser, unless otherwise agreed by the parties hereto.

3. *Points of delivery.*—The Government shall deliver and meter power to the Purchaser at its substations located at Cathlamet and Svenson; at such taps which now exist on its 33,000-volt transmission line; and at such other points as the parties may mutually agree upon in writing.

4. *Purchaser's use of transmission facilities.*—During the period between the date of the acquisition by the Government of the electric transmission system, hereinbefore mentioned, and the date of initial delivery, the Purchaser may utilize such system for the transmission and transformation of power to the extent of the rated capacity of the lines and transformers in order to maintain a temporary supply of power.

During such period, the Purchaser shall be responsible for the usual and ordinary maintenance and operation of said transmission and transformation facilities and shall operate them in a manner satisfactory to the Administrator; provided, however, that neither party hereto is obligated to repair or replace any portion of the submarine cable crossing the Columbia River. The Purchaser shall be liable for any damage to the system caused by the Purchaser's use thereof or operations, and shall save the Government harmless from all liability, suits, or claims by third parties arising from damage or injury caused or allegedly caused by the Purchaser's negligence in using, operating, maintaining, or failing to maintain the said systems.

In the event the submarine cable crossing the Columbia River fails, or the Administrator determines that it is no longer suitable for use by the Government, the Purchaser shall have the option to purchase for the sum of \$4,500.00 the eleven-kilovolt pole line from the Cathlamet Substation to the Columbia River and the eleven-kilovolt pole line crossing Puget Island, which pole lines are part of the electric transmission system the Government proposes to acquire. Said option may be exercised at any time within sixty days following the failure of such cable or receipt of notice from the Administrator that such cable is no longer suitable for use by the Government.

Subject to the specifications of the Administrator and agreement upon a reasonable rental, the Purchaser shall have the right of attachment to the Government's transmission-line poles in order to support its distributing lines.

5. *Rate to purchaser.*—Bonneville Wholesale Power Rate Schedule F-1 (Optional Prime Power), together with the General Terms and Conditions applicable to such Schedule, all as confirmed by order of the Federal Power Commission, dated September 18, 1939, are hereby made a part of this contract. Copies of said Schedule F-1 and said General Terms and Conditions, are attached hereto and marked Exhibits A and B, respectively. The Purchaser shall pay the Administrator for Optional Prime Power at the rate specified in Exhibit A of this contract.

6. *Equitable adjustment of rate.*—After January 1, 1944, and not later than February 15, 1944, the Administrator shall reexamine the rate specified in Bonneville Wholesale Power Rate Schedule F-1, and at five-year intervals thereafter the Administrator shall reexamine the rate in effect under Bonneville Wholesale Power Rate Schedule F-1. The Administrator may make an order effecting an equitable adjustment in such rate, but prior to such order the Administrator shall hold a hearing at which the Purchaser shall have an opportunity to be heard. The Purchaser shall be given fifteen days' written notice of the time and place of such hearing. Within five days after the Administrator has made an order changing such rate, he shall furnish the Purchaser with a copy of such order, and the Purchaser may make such showing with respect thereto before the Federal Power Commission, or any other governmental official, department, or agency having the power to confirm and approve such rate, as the rules and regulations of such Commission, official, department, or agency may permit.

If the Administrator determines that such rate should be changed, and makes an order accordingly, such changed rate shall, upon confirmation and approval by the Federal Power Commission or any other governmental official, department, or agency having the power to confirm and approve such rate, be binding upon the parties hereto, and thereafter the Purchaser shall pay the Government for Optional Prime Power at such changed rate.

In the event that such rate is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the Purchaser may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate.

Such notice shall specify the date upon which the cancellation shall become effective; provided, however, that the effective date of cancellation shall be not sooner than six months nor later than two years after the date such notice is received by the Administrator.

7. *Substitution of other rate schedule.*—If the Administrator makes power available for resale under a schedule containing a lower rate for the class and quality of service covered by this contract, the Administrator, within sixty days after receipt from the Purchaser of a written request therefor, shall submit to the Purchaser a contract, for the sale of power under such schedule containing such lower rate, to be substituted for this contract. The term of such substituted contract shall be the same as the unexpired term of this contract. The Purchaser's contract demand and minimum charge under such substituted contract shall not be less than the Purchaser's contract demand and minimum charge under this contract immediately prior to such substitution, unless the Administrator, in his discretion, determines that such contract demand and minimum charge, or either of them, may be reduced without prejudice to the Government.

8. *Resale rates.*—The Purchaser shall so manage and operate its electric system, and handle the revenues derived therefrom, as to resell power purchased from the Administrator at rates which reflect the low cost of Bonneville Power, and at the same time are consistent with sound and economical operation.

It is understood that the Administrator is preparing a schedule of Bonneville standard resale rates (hereinafter called "Resale Schedules") for inclusion in all power contracts with purchasers of the same class as the Purchaser, which Resale Schedules will be adequate to enable the Purchaser to defray payments for interest, principal, and otherwise, in accordance with the terms of any bonds to be issued by it for the acquisition of electrical properties, to maintain reasonable reserve funds and generally to operate and maintain upon a financially sound basis any electrical properties to be acquired by the Purchaser. If the Purchaser shall determine that such resale schedules, together with the surcharges provided for therein, are suitable for the Purchaser's electric system, the Purchaser shall adopt such resale schedules and the same shall become a part of this contract; provided, however, that the Purchaser shall not be obligated to place such resale schedules in actual effect prior to the date of initial delivery hereunder.

The Purchaser shall thereafter charge consumers the rates set forth in such resale schedules, with such surcharges as are provided thereby and placed in effect by the Purchaser. Additional resale schedules for special classes of consumers, or special uses of electricity, may be added from time to time upon mutual agreement of the parties.

If at any time during the term of this contract it should appear that the rates set forth in the said resale schedules, together with such surcharge as

may be provided for therein, do not produce revenues sufficient to operate and maintain the Purchaser's electric system on a self-supporting and financially sound basis, then the Purchaser and the Administrator shall agree upon, and the Purchaser shall put into effect, such changes in resale rates as will provide the increased revenues necessary to place the system upon such a self-supporting and financially sound basis. To the extent that the Purchaser has surplus revenues (as defined in Section 9 hereof) available therefor, the Purchaser shall reduce its rates to consumers; provided, however, that unless the written consent of the Administrator is first obtained, such reduction shall be uniform as between the several resale schedules for different classes of consumers, and no substantial alteration shall be made in the rate structure of any resale schedule. The Purchaser shall keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy, and such alterations and changes therein as may be put into effect pursuant to the terms of this contract.

The Purchaser shall sell electric energy to the ultimate consumer without discrimination between consumers of the same class, and shall not give or make as between consumers of the same class any discriminatory rate, rebate, or other special concession.

If, upon consideration of the resale schedules adopted by the Administrator, the Purchaser does not consider it feasible to adopt such schedules and make the same a part of this contract, then in that event this contract shall terminate upon the expiration of sixty days after such schedules were submitted to the Purchaser, and shall be of no further force and effect.

9. *Disposition of revenues.*—The Purchaser shall maintain and operate its electric system on a self-supporting and otherwise financially sound basis, and it shall dispose of its gross revenues in the following manner.

(a) Revenues shall first be used for the payment of all current maintenance and operating expenses, including salaries, wages, cost of power at wholesale, materials, supplies, and insurance; for the payment of taxes, if any; for the payments required to be made by the Purchaser into any applicable special bond fund or funds, and for the payment of the interest on and the matured principal of the Purchaser's indebtedness. The order in which the payments are enumerated in this paragraph (a) shall not be construed as affecting in any manner the right of the Purchaser to issue bonds providing for the making of such payments in any other order.

(b) Thereafter, revenues shall be used currently for the establishment and maintenance of a renewal and replacement fund, to provide reasonable working capital and, if the Purchaser so desires, for construction or acquisition of additional electric facilities.

(c) All remaining revenues shall be considered surplus revenues and shall be used by the Purchaser to purchase or retire the Purchaser's bonds or other indebtedness, or shall be used as a basis for the reduction or elimination of surcharges to consumers, and thereafter for the reduction of rates.

10. *Accounting methods.*—The Purchaser shall keep proper books of account in accordance with rules prescribed by the Division of Municipal Corporations of the State Auditor's Office of the State of Washington, or in the event the laws of the State of Washington should fail to provide an agency for prescribing such rules, in accordance with the Uniform System of Accounts prescribed by the Federal Power Commission. Purchaser shall cause its books of account to be audited annually by the State Auditor's Office of the State of Washington, or, if such an audit shall not be made within twelve months after the close of any fiscal year, by independent Certified Public Accountants, if requested by the Administrator.

The duly authorized agents of the Government shall have free access, at all reasonable times, to all of the Purchaser's books and records. Such agents will render such advisory and other service in the establishment and maintenance of the accounting system of the Purchaser as the Administrator may designate.

Within sixty days following the close of any fiscal year, the Purchaser shall furnish the Administrator a copy of the balance sheet and profit-and-loss statement of the District's electric system, showing, in reasonable detail, the financial condition of such electric system as of the close of such fiscal year, the income and expenses thereof for such year, and the amounts paid into any bond or other fund during such year, and the amount remaining in such fund, or funds, at the close of such year. At the same time, the Purchaser shall furnish to the Administrator an annual report of the operation of its electric system.

The Purchaser shall also furnish such monthly reports on its operations and special reports which the Administrator may require in order to maintain statistics covering all agencies distributing Bonneville power.

11. *Electric energy or service furnished public body.*—The Purchaser shall be reimbursed by any municipality, or other public body, at the rates specified in the applicable resale schedules for any and all electric energy and service furnished to such municipality, or other public body, by the Purchaser.

12. *Contract not transferable.*—Neither this contract nor any interest therein shall be transferred or assigned by the Purchaser without the written consent of the Administrator.

13. *Waiver of default.*—No waiver by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall at any time be considered a waiver with respect to any subsequent default or matter.

14. *Remedies under contract not exclusive.*—Nothing contained in this contract shall be construed in any manner to abridge, limit, or deprive either party hereto of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof, which it would otherwise have.

15. *Interest of Member of Congress.*—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom.

16. *Change of form of administration.*—Any act herein designated to be performed by the Administrator may be performed by any governmental official, department, or agency succeeding to the powers of the Administrator.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate, the said Purchaser by the signatures and attest of its duly authorized officers, the day and year first above written.

UNITED STATES OF AMERICA,

Represented by the Department of the Interior,

By PAUL J. RAYER, *Bonneville Administrator.*

PUBLIC UTILITY DISTRICT No. 1 OF WAHKIAKUM COUNTY,

[SEAL] By GUS J. JASPERS, *President.*

Attest:

J. I. MAKI, *Secretary.*

C. R. WORRELL, *Commissioner.*

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

OPTIONAL WHOLESALE POWER RATE SCHEDULE F-1

(Prime Power)

Availability.—This schedule covers prime power, delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power shall be sold under this schedule at the following rate:

Demand charge: 75 cents net per month per kilowatt of billing demand.

Energy charge: 2.5 mills net per kilowatt-hour delivered.

Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Admin-

istrator, will be permitted a developmental period of two years, commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—Except in the case of customers entitled to the five mill developmental rate referred to above, the total net minimum monthly charge for service under this schedule shall be 75 cents per month per kilowatt of contract demand, but not less than 75 percent of the highest demand charge billed during the preceding eleven months. The Administrator may also require a minimum guaranteed load factor except in the case of public bodies and cooperatives taking all their requirements under this rate schedule.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that in the case of public bodies and cooperatives taking all their power requirements under this rate schedule the billing demand shall be the actual demand.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR—BONNEVILLE
ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by

the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code, and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges against the purchaser for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added and the Administrator may, at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past-due bills are paid. Remittances received by mail after the due date will be accepted by the Gov-

ernment, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages, if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in the characteristics of, the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of

electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things, stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contracts shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended:

Administrator.—The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At site.—At the Bonneville Project Power House, or points adjacent thereto.

Bonneville project.—The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and cooperatives.—Any form of nonprofit-making organization or organizations of citizens applying, or which may be created to supply members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump energy.—Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy.—Electric energy, measured in kilowatt-hours.

Government.—The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt.—The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour.—The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power.—The rate of transferring or transforming energy measured in kilowatts.

Power factor.—The ratio of kilowatts to kilovolt-amperes.

Prime power.—The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 c. f. s.

Public bodies.—States, public-power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

PRIVATE AGENCIES

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE BONNEVILLE POWER ADMINISTRATOR, AND ALUMINUM COMPANY OF AMERICA

THIS AGREEMENT, made this 20th day of December 1939 between THE UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Bonneville Power Administrator, hereinafter called "the Administrator," and ALUMINUM COMPANY OF AMERICA, a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, hereinafter called "the Purchaser."

WITNESSETH:

WHEREAS the first and second generating units, with a rated capacity of 43,200 kilowatts each, have been installed in the Bonneville Project and are now in operation; and it is planned to install and place in operation the third and fourth generating units, with a rated capacity of 54,000 kilowatts each, by approximately March 1, 1941, and the fifth and sixth units, of 54,000 kilowatts rated capacity each, by approximately July 1, 1942; and

WHEREAS Purchaser proposes to construct a works at a site located in Clark County, State of Washington, on the north bank of the Columbia River 0.9 to 1¼ miles west of the Columbia River crossing of the Government's Vancouver-Eugene transmission line, for the reduction of aluminum and for auxiliary and other manufacturing operations, and has requested the Government to supply the power requirements therefor; and

WHEREAS the Administrator has determined that a sufficient quantity of power will be available at the Bonneville Project for the performance of this contract without prejudice to any preferential rights and priorities accorded to public bodies and cooperatives by the Bonneville Act;

NOW, THEREFORE, in consideration of the premises and of the mutual agreements hereinafter set forth, the parties hereto, subject to all of the provisions of the Bonneville Act of August 20, 1937, mutually agree as follows:

1. *Term of contract.*—This contract shall commence on the date first above-mentioned, and shall continue in effect for twenty years from said date.

2. *Construction of works.*—The Purchaser agrees, promptly upon the execution hereof, to begin construction of a works for the reduction of aluminum and for auxiliary operations at the above-mentioned site. The Purchaser agrees to schedule its construction so that sufficient of said works shall be completed not later than January 1, 1941, as will use 32,500 kilowatts of electricity. Should the Purchaser fail so to begin or continue such construction, the Administrator shall have the right, but not before January 1, 1941, to cancel this contract upon thirty days' notice in writing to the Purchaser, except that the contract shall not be cancelled if and while such construction is prevented, delayed, or impeded by reason of injunction, strike, riot, invasion, fire, accident, acts of God, or the public enemy, or other cause beyond the Purchaser's control. In the event of delay in construction due to any causes specified above, the Purchaser agrees to resume construction and continue the same to completion of said portion of its works as soon as reasonably possible, and upon failure so to do, the Administrator shall have the right of cancellation as hereinabove provided.

3. *Sale of power.*—All power which the Government agrees to sell and deliver hereunder shall be prime power and it shall be delivered, except as otherwise provided for herein, at all times when the flow in the Columbia River at the Bonneville project power plant site is less than 800,000 c. f. s.

Beginning on the date of initial delivery, as hereinafter defined, the Government will sell and deliver to the Purchaser 27,000 kilowatts of power until the

end of the first full calendar month thereafter. During such period the Contract Demand shall be 27,000 kilowatts. During each succeeding full calendar month the Contract Demand shall be increased and the Government shall increase the power made available hereunder cumulatively by 500 kilowatts until the Contract Demand shall reach 32,500 kilowatts. Thereafter, the Government shall make available hereunder and the Contract Demand shall be 32,500 kilowatts for the remainder of the contract term.

The Purchaser shall pay the Administrator for such power at the rate specified in Bonneville Wholesale Power Rate Schedule C-2, attached hereto as Exhibit A and made a part hereof, and subject to the provisions thereof. All power delivered hereunder in excess of the Contract Demand shall be billed and paid for as provided in said Exhibit A.

The purchase and sale of power hereunder shall be subject to and in accordance with the provisions of Exhibit A and, except as modified or supplemented herein, the provisions of the General Terms and Conditions attached hereto as Exhibit B and made a part hereof.

The "date of initial delivery" is herein defined as the date of completion of such portion of the Purchaser's works as will use 32,500 kilowatts of electricity, but not later than January 1, 1941, unless the construction of the Purchaser's works shall have been prevented, delayed, or impeded for any cause set out in Section 2 hereof, in which case the date of initial delivery shall be postponed by the period of any delay so caused, but not beyond January 1, 1942, in any event. The Purchaser shall give the Administrator not less than thirty days' advance notice in writing of the anticipated date of completion of such portion of said works as will use 32,500 kilowatts of electricity.

4. *Point of delivery and service specifications.*—The electric power supplied hereunder shall be in the form of three-phase, alternating current at a frequency of approximately 60 cycles per second, and at approximately 13,800 volts. The point of delivery of such power shall be a substation to be provided by the Government at a point adjacent to the Purchaser's works mutually agreeable to the parties. Maintenance by the Government at the point of delivery of the voltage, frequency, and capacity contracted for shall constitute delivery of electric power for the purposes of this contract.

5. *Electrical disturbances.*—Each party shall use due diligence in designing, constructing, and operating its facilities to minimize voltage fluctuations and other electrical disturbances which may be objectionable to the other party.

6. *Metering.*—The Administrator shall, at his expense, install equipment which in his judgment will be necessary to determine the amount of power supplied hereunder. The Purchaser may, at its expense, install metering equipment so that the power supplied hereunder may be measured and computed as of the point of delivery, as a check upon the accuracy of the Government's meters. The record of power used by the Purchaser as recorded by the Government's meters shall be used for billing purposes, unless said meters shall have been shown to be inaccurate, in which case proper adjustment of billing shall be made. The Administrator and the Purchaser shall each be responsible for the accuracy and maintenance of its own metering equipment, and shall make such periodic tests as may be necessary to maintain the same at the highest practical commercial standard of accuracy. The meters of both parties shall be read simultaneously at mutually agreeable times, and the readings taken by each shall be furnished the other. Should any discrepancy occur, either party may request the other to test its metering equipment, and such tests shall be made in the presence of a representative of the other party.

7. *Billing.*—The Administrator will, on or before the tenth day of each calendar month, bill the Purchaser for power delivered during the preceding calendar month, and within fifteen days thereafter the Purchaser will pay the Administrator, in lawful money of the United States, the amount so due the Administrator. Upon failure of the Purchaser to pay for power as herein contracted for within sixty days after due date, the Administrator shall have the right, upon ten days' advance notice, to discontinue the supply of power and refuse to resume delivery so long as any part of the amount due remains unpaid. Discontinuance of supply under this paragraph shall not relieve the Purchaser of its liability for the agreed charges during the time the supply of power is so discontinued. To any amount thus remaining unpaid on the first day of the calendar month following the due date, there shall be added a penalty of two percent, and an additional one percent shall be added on the first day of each succeeding month until the amount is paid in full.

In the event of any disagreement as to the amount payable for power delivered during any calendar month, if the Purchaser has paid or tendered such part

of the amount billed as is not in controversy, the Purchaser shall not be deemed to have failed to pay for such part of said amount as may be in controversy unless and until ten days after the amount due shall have been agreed upon by the parties, or, if the parties are unable to agree, until ten days after the amount due shall have been determined by the final disposition of the controversy by appropriate court or courts.

All payments shall be made to the Administrator at his offices at Portland, Oregon, or at such other place as the Administrator may from time to time designate by notice to the Purchaser.

8. *Interruption of service for causes beyond control of the parties.*—If the operation of the Government's generating or transmission system or the operation of the Purchaser's works is suspended, interrupted, or interfered with for any cause reasonably beyond its control, including, but not by way of limitation, the failure or breakdown of generating or transmitting facilities or equipment, floods, fires, strikes, or acts of God or the public enemy, the Administrator need not deliver power hereunder, and the Purchaser need not accept or pay for such power, for such period of time and to the extent that such suspension, interruption or interference makes it reasonably impracticable to deliver or use such power, and monthly bills for any period including any such suspension, interruption or interference shall be prorated. Each party shall promptly notify the other of any such suspension, interruption, or interference.

If, prior to the date of installation of Bonneville generating units three and four, any interruption of service should be of such duration as to cause the freezing of the molten material in the Purchaser's electrolytic cells, there shall be for each such interruption a reduction in the otherwise applicable bill to the Purchaser in the amount of seven days' service at the then current rate of use.

After the date of installation of Bonneville generating units three and four, in the event delivery of power hereunder by the Government is generally interfered with for any of the above causes or by reason of the flow in the Columbia River at the Bonneville project power plant site exceeding 800,000 c. f. s., the Administrator may reduce delivery hereunder, but in no greater proportion than the delivery of power at that time is reduced under all other then existing industrial contracts for prime power deliverable from the Bonneville project plant site. Prime power as referred to for purposes of this section shall be limited to not more than that amount of power which can be generated in and delivered from the Bonneville project when the stream flow in the Columbia River at the Bonneville project power plant site is 800,000 c. f. s.; but this limitation shall not apply at any time after the Administrator has made arrangements with other power systems or Federal projects providing emergency or break-down relief, or after the completion and operation of any other project on the Columbia River improves the availability of prime power on the Government's system, all provided the availability of power to the Purchaser is thereby improved.

9. *Temporary curtailment of contract demand.*—If, subsequent to the date of initial delivery, conditions in the Purchaser's business are depressed so that the Purchaser, in its judgment, cannot use all the power contracted for, the Purchaser shall have the right, upon giving the Administrator six months' written notice, temporarily to curtail the contract demand as the Purchaser may specify in said notice, but such curtailment or curtailments shall not exceed in the aggregate 162,500 kilowatt-years. The Purchaser may request the Administrator to resume the delivery of the power so discontinued upon six months' written notice, and the Administrator shall thereupon resume such delivery, but the Administrator shall not be obligated to resume the delivery of said power until one year after the discontinuance of the delivery thereof; provided that the notice to resume delivery shall not, without the consent of the Administrator, be given at such time as to obligate the Administrator to start to resume delivery in the months of November, December, or January. During the period in which delivery is curtailed under this section, the Purchaser shall be relieved of the payment for half the power, the delivery of which is interrupted pursuant to such curtailment.

10. *Equitable adjustment of rates.*—Five years after the date hereof, and at the end of each succeeding five-year period, the Administrator may (and if the rate then in effect exceeds the rate in effect under this contract at the time of execution thereof, the Administrator, upon request of the Purchaser, shall) reexamine the rates provided by this contract and make such equitable adjustment thereof, if any, as shall be necessary to conform to changes in the Government's cost of generating and delivering power from the Bonneville project,

as compared with the cost at the date hereof or the date of the last preceding adjustment of rates, as the case may be. It is understood that for purposes of rate adjustments hereunder, but only for purposes of this contract, the interest rate of the Government shall be assumed to be constant at 3½ percent. It is further understood that unless the average level of wholesale prices in the nation for the six months preceding the end of any five-year period has increased or decreased more than twenty-five percent as compared with the average level of such prices for the month in which this contract is executed, or, if an adjustment has been made, then as compared with the average level for the six months preceding the time as of which the last preceding adjustment was made, no such adjustment will be made. The extent of changes in the average level of wholesale prices shall be determined according to the all commodity wholesale price index of the United States Bureau of Labor Statistics, or other standard authority if the said Bureau should cease reporting such statistics.

In the event that the Administrator decides to reexamine the rate hereunder, as above provided (or in the event that the Purchaser requests such reexamination as above provided), the Administrator shall hold a hearing at which the Purchaser shall have an opportunity to be heard. The Purchaser shall be given thirty days' written notice of the time and place of such hearing. If, after such hearing, the Administrator determines as aforesaid that such rate should be changed, he shall notify the Purchaser of such decision and the amount of such proposed change, and the Administrator shall not submit such changed rate for the approval of the Federal Power Commission until two weeks subsequent to the date on which said notice was given to the Purchaser. In the event such change in rate, determined as provided in this section, is confirmed and approved by the Federal Power Commission, such rate shall be effective as of the beginning of the then current five-year period and thereafter, subject to the provisions of this contract.

In the event that the rate hereunder is so increased that it exceeds the rate in effect under this contract at the time of execution thereof, the Purchaser may, at its option, cancel this contract upon written notice to the Administrator, given within ninety days after the confirmation and approval of such increased rate.

If, at the end of any five-year period after the date hereof, the rate then in effect exceeds a rate previously in effect at any time under this contract and the average level of wholesale prices in the nation for the six months prior to the end of the said five-year period is not more than 115 percent of the average level of wholesale prices for the six months prior to the beginning of a previous five-year period (except the first five-year period) during which a lower rate has been in effect, or in the case of the first five-year period, is not more than 115 percent of the average level of wholesale prices for the month in which this contract is executed, the rate applicable hereunder shall, unless a lower rate shall be determined and approved in accordance with the provisions of this section, be the lowest rate in effect during any such previous five-year period.

Notwithstanding any other provision hereof, if, at any time, the Administrator shall sell any power of a similar or better quality to any person or corporation engaged in any business of a nature similar to or competitive with that of the Purchaser at rate or rates less than those provided for herein, then in such case the rate or rates to be applied hereunder shall be reduced to the lesser rate or rates and continue so long as such lesser rate or rates are operative.

If the provisions of the first paragraph under "Billing Demand" in Rate Schedule C-2 (being Exhibit A hereof), hereafter referred to as the "ratchet clause," should at any time be revised in a manner more favorable to customers and the schedule made available to electro-metallurgical and electro-chemical industrial customers, or if the Administrator hereafter adopts a new rate schedule for prime power replacing or offered in lieu of the aforesaid Schedule C-2 available to electro-metallurgical and electro-chemical industrial customers and containing a ratchet clause more favorable to customers than the said clause in Schedule C-2, such revised or new rate schedule shall at the request of the Purchaser be made available to it so long as such schedule is available to or in effect for such industrial customers.

11. *Use of power.*—The Purchaser agrees that it will use all of the power purchased hereunder in its own operations for the reduction of aluminum and for auxiliary and other manufacturing operations.

12. *Resale of power.*—The Purchaser shall not resell any power purchased hereunder to any private utility or agency engaged in the sale of electric energy

to the general public. In the event of the sale by the Purchaser of any such power to any such private utility or agency, this contract shall be immediately cancelled.

13. *Assignment.*—The provisions of this agreement shall bind and inure to the benefit of the Purchaser and its subsidiaries, and their successors and assigns, and the Administrator, his successors, and assigns.

14. *Waiver of default.*—No waiver by either party hereto of its rights with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall at any time be considered a waiver with respect to any subsequent default or matter.

15. *Remedies under contract.*—Nothing contained in this contract shall be construed in any manner to abridge, limit, or deprive either party hereto of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof, which it would otherwise have.

Inasmuch as damages would be an inadequate remedy under this contract, each of the parties hereto shall be entitled to the remedy of specific performance of the provisions hereof.

16. *Liability for injuries or claims.*—Each party shall maintain and repair the facilities owned by it, and shall indemnify and save the other party harmless from all liability to, or claims and demands of, other persons arising out of or in any manner connected with the construction, maintenance, repair, or operation of such facilities.

17. *Interest of Member of Congress.*—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom.

18. *Notices.*—Any notice or demand required under this contract shall be deemed properly given if mailed, postage prepaid, to the Administrator, Bonneville Administration, Portland, Oregon, on behalf of the Administrator, or to the Aluminum Company of America, Pittsburgh, Pennsylvania, on behalf of the Purchaser. The designation of the person to be so notified, or the address of such person, may be changed at any time, and from time to time, by either party by similar notice.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in quintuplicate, the Purchaser by the signatures and attest of its duly authorized officers, as of the day and year first above written.

UNITED STATES OF AMERICA,
By PAUL J. RÄVER,
Bonneville Power Administrator.
ALUMINUM COMPANY OF AMERICA,
By I. W. WILSON, *Vice President.*

Attest:

D. L. MARLETT, *Technical Assistant.*
J. R. D. HUSTON, *Assistant Secretary.*

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE C-2

(Transmission System Prime Power)

Availability.—This schedule covers Prime Power delivered from the Bonneville transmission system at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private persons or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be three-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power sold under this schedule shall be at the rate of seventeen and one-half dollars (\$17.50) net per year per kilowatt of billing demand. Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—The net minimum monthly charge for service under this schedule shall be one-twelfth (1/12) of seventeen and one-half dollars (\$17.50) per kilowatt of contract demand, except in the case of customers entitled to the five-mill developmental rate referred to above.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that the billing demand for any month shall not be less than the highest actual demand which occurred during the immediately preceding eleven months.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of .85 or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than 0.85, then the actual demand shall be determined by taking 0.85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below .80.

Billing.—Bills shall be rendered monthly on the basis of one-twelfth (1/12) of the annual rate.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels Wholesale Power Rate Schedules C-1 and D-1 confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA DEPARTMENT OF THE INTERIOR—BONNEVILLE
ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations

designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser, the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2 percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator), located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month, the Administrator shall make an appropriate adjustment of the charges against the purchaser for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date, a penalty of two percent (2%) of the bill rendered will be added,

and the Administrator may, at any time thereafter and after giving ten days' advance notice in writing, discontinue service until all past due bills are paid. Remittances received by mail after the due date will be accepted by the Government without penalty, provided payment was mailed on or before the due date, as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator, any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees shall be liable for damages if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted or curtailed to less than his contract demand shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in the purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in, the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall at all times take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator

shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancelation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it clearly appears from the context that a different meaning was intended:

Administrator.—The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At site.—At the Bonneville Project Power House or points adjacent thereto.

Bonneville Project.—The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and cooperatives.—Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump energy.—Energy which from time to time may be generated by the Project from water which otherwise would be wasted and which is not needed to supply actual demands under contracts for Prime Power.

Energy.—Electric energy, measured in kilowatt-hours.

Government.—The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt.—The rate of power generation, or delivery, equal to approximately 1.341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour.—The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power.—The rate of transferring or transforming energy measured in kilowatts.

Power factor.—The ratio of kilowatts to kilovolt-amperes.

Prime power.—The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 c. f. s.

Public Bodies.—States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

(Contract No. Ibp-138)

CONTRACT FOR TEMPORARY POWER SERVICE BETWEEN UNITED STATES OF AMERICA—
THE BONNEVILLE PROJECT, J. D. ROSS, ADMINISTRATOR, AND NORTHWESTERN
ELECTRIC COMPANY, DATED DECEMBER 21, 1938

CONTRACT FOR TEMPORARY POWER SERVICE

THIS CONTRACT, dated December 21, 1938, but effective retroactively from November 1, 1938, made and entered into, pursuant to the act of Congress approved August 20, 1937 (50 Stat. 731), commonly known and referred to as the Bonneville Act, by and between the UNITED STATES OF AMERICA, hereinafter referred to as the United States, represented by the Department of the Interior, Bonneville Project, by J. D. Ross, the administrator appointed under the provisions of said Act, hereinafter referred to as the Administrator, and NORTHWESTERN ELECTRIC COMPANY, a corporation organized under the laws of the State of Washington, hereinafter referred to as Northwestern Company.

WITNESSETH: WHEREAS Northwestern Company is a public utility engaged in the generation, purchase, transmission, and distribution of electric power and energy for sale to the general public in the city of Portland and elsewhere in the State of Oregon, and in the cities of Vancouver and Camas and other cities and towns and large areas of rural territory in Clark, Cowlitz, and Skamania counties, in the State of Washington; and

WHEREAS Northwestern Company, in the conduct of its said business, owns and operates an electric transmission line extending westerly from its Condit hydroelectric plant on the White Salmon River, along the northerly bank of the Columbia River into the substation of Northwestern Company at Camas, Washington, and other transmission lines forming an electric transmission ring or loop connecting said Camas substation with the load centers of Northwestern Company's system in the Portland and Vancouver districts, all of which transmission lines are constructed for operation and are operated at a potential of 66,000 volts; and by means of said transmission lines and their interconnections Northwestern Company regularly transmits electric power and energy into the Camas-Vancouver-Portland area from said Condit plant and from other sources of electric energy available to Northwestern Company's system, the amount and the direction of the flow of such power and energy varying with load and other conditions from time to time at various points on its interconnected system; and

WHEREAS the United States now has available, to be disposed of by the Administrator pursuant to the provisions of said Bonneville Act, the potential output of the generating units heretofore installed at the Bonneville project in excess of the amount of power and energy that may be required for operating the navigation facilities of said project and in excess of the amounts already sold and disposed of under existing contracts, without prejudice to any preferential rights of public bodies or cooperatives to purchase electric energy generated at the Bonneville project, under the terms of the Bonneville Act; and the Administrator, acting for and in behalf of the United States, desires to sell and dispose of temporary power service from said project and to obtain revenue therefrom for the United States, pending the completion of the transmission lines to be constructed by the Administrator for the purpose of marketing such output under contracts hereafter to be negotiated pursuant to said Act; and

WHEREAS the parties hereto have heretofore established a satisfactory temporary electrical connection between the switching structure at the powerhouse at said Bonneville project and said 66,000-volt transmission system of Northwestern Company at a point on said system at or near North Bonneville, Washington, and by means of said connection the United States has been delivering and Northwestern Company has been taking Electric power and energy from said Bonneville project into said 66,000-volt transmission system of Northwestern Company, pursuant to the terms of a certain contract for sale of temporary power service entered into between the parties under date of July 26, 1938, and expiring by its terms at midnight on October 31, 1938; and since midnight of October 31, 1938, the United States has continued to furnish and Northwestern Company has continued to take such electric service for the temporary and experimental purposes specified in said contract of July 26, 1938, subject to the approval by the Federal Power Commission of a schedule of rates and provisions applicable to such service after October 31, 1938; and the Federal Power Commission by order entered December 20, 1938, has approved such rate schedule, to be effective retroactively as of November 1, 1938, and to continue thereafter until the date of completion of the Bonneville-Vancouver transmission facilities under construction by the United States under the direction of the Administrator, but in no event to a date later than December 31, 1939, such schedule being designated "The Bonneville Project—Wholesale Power Rate Schedule E-1—Transmission System—Temporary Prime and Secondary Power."

Now, THEREFORE, the United States, acting by and through the Administrator as aforesaid, and Northwestern Company, do hereby mutually undertake and agree as follows:

1. Effective as of 12:01 a. m. on November 1, 1938, and continuing thereafter until this contract shall be terminated as hereinafter provided, and upon and subject to all the terms and conditions herein set forth, the United States will be prepared to and will deliver as required by Northwestern Company, at the point on such temporary connection where the latter leaves the northerly boundary of the property of the United States on the north bank of the Columbia River at or near North Bonneville, electric power and energy of the kind commonly known as three phase, 60-cycle, alternating current, and at a potential of approximately 66,000 volts, at any rate of supply Northwestern Company may from time to time elect to take and the United States may have available for delivery hereunder, including a free allowance of 11.9 percent of Northwestern Company's registered demand to compensate for estimated transformer losses beyond the metering point hereunder and for transmission losses involved in getting such temporary power service into the interconnected transmission system of Northwestern Company and its substation at Camas, Washington; and Northwestern Company agrees to take and pay for power service hereunder during said period upon and subject to all the terms, provisions, and conditions hereof. Northwestern Company's contract demand at all times during the term of this contract shall be deemed and taken to be 2,500 kilowatts of continuous demand, but the consent of the Administrator is hereby given to Northwestern Company's exceeding said contract demand in such blocks of 500 kilowatts or multiples thereof as Northwestern Company shall request the Administrator to deliver, and as the Administrator shall have available and be willing to deliver upon such request. For billing purposes under said Schedule E-1, one-half of Northwestern Company's entire billing demand as of any billing calendar day hereunder shall be considered and taken to be "prime power" and the other one-half shall be considered and taken to be "secondary power."

2. If and when Northwestern Company shall desire to take power and energy hereunder at any time at a rate of supply in excess of 2,500 kilowatts, plus such allowance of registered demand for transformation and transmission losses, it shall have the right and option to receive and take such additional power and energy, but only in such blocks of 500 kilowatts or multiples thereof plus such allowance of registered demand for transformation and line losses, as it may request the Administrator from time to time to deliver and as the Administrator may then have available and be willing to deliver hereunder. Such additional blocks of power and energy shall be delivered only during such periods as may be specified by Northwestern Company, either at the time of making the request for any such additional block or blocks or thereafter, by notice from the load dispatcher on Northwestern Company's System to the operator in charge of delivering power and energy from the Bonneville project hereunder.

3. Attached hereto are copies of said "Wholesale Power Rate Schedule E-1" of The Bonneville Project and of the said order of the Federal Power Commission confirming and approving said schedule; and it is mutually agreed that service shall be furnished, taken, and paid for hereunder subject to and in accordance with the terms and provisions of said Wholesale Power Rate Schedule E-1, and the "General Terms and Conditions" referred to in such schedule, except as such "General Terms and Conditions" may be modified by the terms of said schedule.

4. Northwestern Company's registered demand hereunder shall be determined by suitable indicating and recording instruments installed and maintained by the United States at the Bonneville power plant, and all demand measurements shall be made at the bus bars at said plant at generating voltage (approximately 13,800 volts). The registered demand for any calendar day shall be determined by integrating the readings of the watt meters installed at said plant during the 30 consecutive minute periods of such day during which the highest integrated load shall have been taken by Northwestern Company; but all such registered demands so determined shall be adjusted for billing purposes by deducting therefrom said allowance of 11.9 percent thereof for transformation and transmission losses; provided, however, that the parties mutually recognize that the conditions governing the operation of said Bonneville power plant in parallel with the interconnected system of Northwestern Company are such as to make unlikely, if not impossible, the uniform continuous delivery to Northwestern Company of the exact amount of its currently desired power demand, namely, its said contract demand of 2,500 kilowatts, plus such additional demand in blocks of 500 kilowatts or multiples thereof as Northwestern Company may have requested the United States to deliver hereunder as hereinbefore provided, and that fluctuations in deliveries above or below such desired power demand are likely to occur in daily operation from hour to hour beyond the control of either party; and in view of the foregoing, the parties expressly agree that any such excesses or deficiencies of delivery of the desired power demand, inherent in the normal operation of the Bonneville power plant in parallel with Northwestern Company's interconnected system, shall be adjusted from hour to hour during each day for the purpose of averaging such deliveries consistently with such desired power demand, and that abnormal demands caused by accident to, failure of, or abnormal conditions on the facilities and the system of the United States or of Northwestern Company shall be disregarded for billing purposes, and that Northwestern Company shall not be chargeable or required to pay for any power or energy that may be delivered to it at any time, through accident, inadvertence, or uncontrollable conditions of operation, in excess of Northwestern Company's desired power demand at such time as above defined, or for the power and energy delivered to Northwestern Company to compensate for transformer and transmission losses as aforesaid.

5. The metering apparatus to be installed by the United States for the purposes hereof shall be freely accessible to Northwestern Company for the purpose of reading and/or having tests made of the accuracy and condition of said apparatus. When either party shall desire to make tests or investigations of the accuracy of any such metering apparatus, or to cause any of such apparatus to be disconnected, recalibrated, or changed in any way, such party shall give to the other five days' notice in writing before making such tests, investigations, or change, stating the time at which it intends to perform the work specified in such notice, in order that the other party may have representatives present at the time of such test, investigations, or change, if it shall so elect; but such notice shall not be required in cases of emergency requiring the immediate disconnection of such apparatus. If upon any such test or investigation such metering apparatus shall be found not to be registering accurately, such apparatus shall immediately be corrected so as to register thereafter as accurately as possible under existing conditions of operation; and proper allowance or adjustment shall at once be made in favor of the party theretofore adversely affected by such inaccurate metering apparatus, upon all bills rendered or to be rendered in respect of the power or energy furnished and taken hereunder during the thirty days preceding such test, or during the period since the latest previous test of such apparatus, if made within a shorter period than thirty days.

6. Each of the parties hereto will operate, keep, and maintain in good and safe order and condition, at its own expense, all of the property and equipment employed by it in supplying or receiving the temporary power service provided

for herein. Each of the parties hereto assumes all risk and will be solely responsible for any injury, loss, or damage to its own property or equipment resulting from or growing out of the delivering or taking of such service hereunder, irrespective of the cause of such injury or damage; and as between the parties hereto, the party charged hereunder with the maintenance of any property or equipment, in connection with which any injury or damage to the person or property of a third party or parties shall occur, shall be solely responsible for such injury or damage. Each of the parties hereto will assume and pay any and all cost, expense, or claim incurred or to be incurred in respect of its own employees pursuant to the provisions of any law relating to employees' indemnification, protection, or welfare promotion by their employer. Neither party assumes any duty or responsibility concerning the inspection of any of the property or equipment owned or operated by the other.

7. The United States will endeavor at all times to maintain continuous and satisfactory service to Northwestern Company hereunder, so far as reasonable diligence will permit, but neither the United States nor the Administrator shall be chargeable in damages for any interruption or failure of service hereunder, nor shall any such interruption or failure of service be deemed to constitute a breach of this agreement or entitle Northwestern Company to cancel or terminate this agreement on account thereof, but Northwestern Company shall be allowed a proportionate credit upon the monthly bill otherwise payable hereunder on account of any such interruption or failure of service occurring during the month for which such bill shall have been rendered. The United States, whenever practicable, will give reasonable notice to Northwestern Company of any predetermined interruption of service hereunder, and will endeavor to arrange any such predetermined interruptions in such manner as to cause the least possible inconvenience to Northwestern Company or to the operation of or service from its interconnected system.

8. The parties hereto, by their respective representatives and employees, will at all times fully cooperate to the end that such temporary service may be satisfactorily taken and utilized by Northwestern Company hereunder, and without interference with the continued satisfactory operation of the power producing and delivering facilities of the United States at said Bonneville project. It is mutually recognized, however, that the furnishing and taking of such temporary power service hereunder, under the conditions of operation prevailing on Northwestern Company's said interconnected system, are experimental from the standpoints of both parties, and that it may be found impracticable on actual test to continue such temporary service hereunder without causing undue interference with the operation of Northwestern Company's said interconnected system, or with the operation of the electric equipment of the United States; and it is mutually agreed that if such contingency shall occur, either party on giving written notice to that effect to the other may discontinue the furnishing or taking of service hereunder until such interference is eliminated, or may terminate this contract for such cause by immediate written notice to the other. In the latter event, both parties shall be relieved of all further obligation with respect to any service otherwise to be furnished hereunder after the delivery of such notice.

9. Northwestern Company shall keep on file in the office of the Administrator a schedule of all Northwestern Company's rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by it.

10. Any waiver at any time by either party hereto of its rights with respect to the other party, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

11. All materials and equipment heretofore installed by the United States on Northwestern Company's former 11,000-volt line, extending between the Bonneville powerhouse and the northerly boundary of the property of the United States on the north bank of the Columbia River, shall be and at all times remain the property of the United States, and Northwestern Company shall have no claim or interest therein prior to or after the termination of this agreement; but all poles, materials, or equipment belonging to Northwestern Company and now in use on said portion of said former 11,000-volt line, which may have been utilized by the United States in the prior reconstruction of said line for 66,000-volt operation, shall be and remain the property of Northwestern Company, and Northwestern Company shall be permitted to remove the same upon the termination of this contract or the dismantling of such temporary connection.

12. This contract shall be subject to termination by either party at any time by giving the other two weeks' written notice of election to terminate, and upon the giving of such notice the contract shall terminate as of the date specified in the notice, except with respect to obligations accruing hereunder prior to such date of termination; but this contract shall terminate in any event on the date of the completion of the Bonneville-Vancouver transmission facilities now under construction by the Administrator, or on December 31, 1939, whichever is the earlier date.

13. No Member of or Delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise herefrom, but this restriction shall not be construed to extend to this contract if made with a corporation or company for its general benefit.

IN WITNESS WHEREOF the parties hereto have executed this contract in triplicate, Northwestern Company by the signatures of its vice president and its secretary thereunto duly authorized, as of the day and year first above written.

UNITED STATES OF AMERICA,
Represented by Department of the Interior, Bonneville Project,
 By CHAS. E. CAREY, *Actg. Administrator.*
 _____, *Legal Division.*

NORTHWESTERN ELECTRIC COMPANY,
 By JOHN A. LAING, *Vice President,*
 By C. W. PLATT, *Secretary.*

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—THE BONNEVILLE PROJECT

J. D. ROSS, ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE E-1

(Transmission System, Temporary Prime and Secondary Power)

Availability.—This rate schedule covers the sale of Prime and Secondary Power to public bodies, cooperatives, and privately owned electric utilities for resale.

For the limited period covered by contracts made under this schedule, the above-named agencies shall provide adequate facilities for the transmission of power to the purchaser's distribution system from such point at or adjacent to the Bonneville Project Power Plant as may be designated by the Administrator.

Due to the experimental nature of the service, this schedule shall be effective, between the dates of November 1, 1938, and the date of completion of the Bonneville-Vancouver Transmission facilities, but in no event later than December 31, 1939.

Rate.—

1. *Prime Power*, 1/365th of \$17.50, per day, per kilowatt of billing demand.
2. *Secondary Power*, 1/365th of \$11.50, per day, per kilowatt of billing demand.

Determination of demand.—The demand shall be determined by suitable indicating and recording instruments installed at such locations as may be designated by the Administrator. The demand for any calendar day shall be defined as the highest integrated load during any thirty-minute (30-minute) period occurring during the twenty-four hours from midnight to midnight; provided, that all demands so determined shall be adjusted by deduction of a free allowance, expressed as a percentage of the registered demand and specified in the contract, to compensate the purchaser for the transformation and transmission losses from the point of metering to the specified theoretical point of delivery; provided, further, that provision shall be made in the contract for special treatment of unusual or abnormal demands, in excess of the contract demand, which may be occasioned by the operation of the Bonneville Project Power System in parallel with the purchaser's system; or by accident to, failure of, or abnormal conditions on, the facilities of either party. For billing purposes, one-half of the purchaser's demand, as of any calendar day, excluding such free allowance

for losses, shall be considered as "prime power," and the other one-half shall be considered as "secondary power."

Maximum billing demand.—The billing demand for each day shall be the contract demand or the registered demand, whichever is higher, both being subject and adjustment for transformation and transmission losses as above noted; provided, that when the adjusted registered demand exceeds the adjusted contract demand, it shall be considered to do so, in the determination of billing demand, in blocks of 500 kilowatts or multiples thereof, such blocks being in turn subject to the above specified adjustment for losses.

Contract demand.—Each contract under this schedule shall specify the amount of capacity in kilowatts to be made available to the purchaser during the term of such contract. This capacity in kilowatts shall be termed the contract demand. For billing purposes, one-half of such contract demand, excluding such free allowance as shall be specified in the contract for transformation and transmission losses from the point of metering to the theoretical point of delivery, shall be considered and taken to be "prime power," and the other one-half shall be considered and taken to be "secondary power." The purchaser may not exceed the contract demand by more than ten percent (10%) without the written consent of the Administrator.

Minimum charge.—The minimum charge for service under this schedule shall be the Prime Power portion of the contract demand, as adjusted for losses, at 1/365th of \$17.50 net per kilowatt per day, plus the Secondary Power portion of the contract demand, as adjusted for losses, at 1/365th of \$11.50 net per kilowatt per day.

Point of delivery.—For billing purposes the point of delivery shall be considered as such point on the transmission system of the purchaser as is designated by the Administrator and specified in the contract. An allowance will be made in the contract for transmission losses from the point of metering to such point of delivery.

Service shall be measured at the Bonneville Project Power Plant bus bars, at generating voltage (approximately 13,800 volts).

Character of service.—Power delivered hereunder shall be three phase and six cycles, at a voltage which shall be specified in the contract.

Payments.—Bills shall be rendered monthly, the amount of each monthly bill being the sum of the amounts of the daily bills incurred during the current month, as derived by applying the above rates to the daily billing demand; such monthly bills shall be due and payable at the office of the Administrator within fifteen (15) days from the date thereof.

The above rate is net. If payment is not received on or before the close of business on the date due, a penalty of two percent (2%) of the bill rendered will be added, for failure to pay within the fifteen days. Should bills not be paid within the fifteen days, the Administrator may, at any time thereafter, and after giving the purchaser ten (10) days' advance notice in writing, discontinue service under this rate schedule.

Contract and term.—Service under this schedule shall, in each case, be covered by a contract entered into with each purchaser by the Administrator.

Due to the temporary and experimental nature of the service rendered hereunder, such contracts shall be for terms specified in each contract by the Administrator, but in no case shall such term or extensions thereof exceed the expiration date of this schedule. All such contracts shall be subject to termination, by either party at any time, by two-weeks' notice in writing given to the other party of intention to terminate at the time specified in such notice.

Rules and regulations.—Purchase of power under this schedule shall be subject to all the provisions of the Bonneville Act; and to the rules and regulations prescribed by the Administrator in the General Terms and Conditions which, by reference, are made a part of this schedule, except as such General Terms and Conditions may be modified by the terms of this schedule.

J. D. Ross,
Administrator, The Bonneville Project.

POWER CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY
THE DEPARTMENT OF THE INTERIOR, BONNEVILLE POWER ADMINISTRATOR, AND
PORTLAND GENERAL ELECTRIC COMPANY

THIS AGREEMENT, executed on December 1, 1930, between THE UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Department

of the Interior, Bonneville Power Administrator, hereinafter called "the Administrator," and PORTLAND GENERAL ELECTRIC COMPANY, hereinafter called "the Purchaser," a corporation organized and existing under the laws of the State of Oregon.

WITNESSETH:

WHEREAS the first and second generating units, with a nominal capacity of 43,200 kilowatts each, have been installed by the Bonneville Project and are now in operation; and it is planned to install and place in operation the third and fourth generating units with a nominal capacity of 54,000 kilowatts each by approximately March 1, 1941, and the fifth and sixth units of 54,000 kilowatts each by approximately July 1, 1942; and

WHEREAS the Administrator is constructing electric transmission lines from the Bonneville Project Power Plant to Portland, Oregon, and to Salem, Oregon; and

WHEREAS the Purchaser is a privately owned public utility, engaged in the business of selling electric energy to the general public, and owns and operates hydroelectric and fuel-electric generating equipment with a rated capacity of 183,000 kilowatts, and a transmitting and distributing system serving cities, towns, and rural areas located in Clackamas, Columbia, Marion, Multnomah, Polk, Washington, and Yamhill Counties, Oregon, and Clark County, Washington; and

WHEREAS the Purchaser desires to purchase power from the Government, and both parties desire to obtain the maximum advantages of interconnection and coordination, to promote economical operation, increase reliability of service, reduce the amount of reserve capacity required, and prevent the waste of water power; and

WHEREAS it has been determined by the Administrator that the Government can supply the Purchaser with power, as hereinafter provided, without prejudice to any preferential rights and priorities accorded public bodies and cooperatives under the Bonneville Act; and

WHEREAS the Government expects to be prepared to make initial power deliveries to the Purchaser on or about December 1, 1939;

Now, THEREFORE, the parties hereto (subject to all of the provisions of the Bonneville Act of August 2, 1937) mutually covenant and agree as follows:

1. *Term of contract.*—This contract shall take effect upon the execution thereof, and shall continue in effect until December 1, 1940. It is understood and agreed that the Purchaser and the Administrator will continue the studies and investigations now in progress with a view to working out a satisfactory basis for, and entering into a further agreement for, the sale of power to the Purchaser and will negotiate with all possible dispatch for such further agreement. In the event that the parties have not agreed upon and executed such a further agreement prior to August 1, 1940, the Purchaser shall have the option of extending the term of this temporary contract until December 1, 1941, in order to give the Purchaser sufficient opportunity to arrange for another source of supplying its power requirements. Said option shall be exercised by written notice filed by the Purchaser with the Administrator between August 1 and August 15, 1940.

2. *Construction.*—The Government shall construct a substation in the vicinity of Portland, Oregon (hereinafter called the "St. Johns substation"), and a substation in the vicinity of Salem, Oregon (hereinafter called the "Salem substation"), for supplying service at approximately 57,100 volts, and the Government may construct additional substations and provide for other service voltages at its discretion.

The Purchaser shall extend and connect its nominal 57,100-volt transmission system circuits to the terminals provided by the Government at the St. Johns and Salem substations in a manner acceptable to the Administrator.

The Purchaser may extend and connect additional circuits to the Government's substations whenever the parties hereto mutually so agree in writing.

3. *Sale of prime power.*—The Administrator shall sell and deliver to the Purchaser and the Purchaser shall take and pay for 10,000 kilowatts of prime power until June 1, 1940, and beginning June 1, 1940, the Purchaser shall take and pay for an additional 10,000 kilowatts of prime power until October 1, 1940. The Contract Demand, until June 1, 1940, shall be 10,000 kilowatts and thereafter the Contract Demand shall be 20,000 kilowatts. Prior to October 1, 1940, the parties shall agree upon and specify in writing the amount of Contract Demand to be effective under this contract between October 1, 1940, and December

1, 1940, and to the extent that at the instance of the Administrator the Contract Demand is reduced, if any, below 20,000 kilowatts for such period. Purchaser shall be given preference over all other private agencies and persons in the sale of surplus energy under Bonneville Wholesale Rate Schedule H-1. In the event the Purchaser exercises the option provided for in Section 1 hereof to extend the term of this temporary contract until December 1, 1941, the parties shall agree upon and specify in writing, not later than December 1, 1940, the Contract Demand to be effective under this temporary contract during such extended term thereof and to the extent that at the instance of the Administrator the Contract Demand is reduced, if any, below 20,000 kilowatts in the contract as thus extended the Purchaser shall be given preference over all other private agencies and persons in the sale of surplus energy under such Bonneville Wholesale Rate Schedule H-1. The Purchaser shall pay for all prime power delivered hereunder at the rate specified in Bonneville Wholesale Rate Schedule C-2 and in accordance with the schedule of General Terms and Conditions applicable thereto, which schedules are attached hereto as Exhibits A and B, respectively, and hereby made a part of this contract.

The Purchaser shall notify the Administrator, within thirty days after the Salem substation is established as a point of delivery from the Government's system, of the allocation of its contract demand between the St. Johns and Salem substations. This allocation shall then become, starting with the first day of the month following such notification, the Contract Demand for these points of delivery. The total Contract Demand at the Salem substation, however, shall not exceed 7,000 kilowatts.

4. *Sale and interchange of surplus power.*—Whenever either party, in its judgment, has unused surplus power available for supply to the other party, such power may, upon request therefor, be sold and delivered under the provisions of this contract. Delivery of surplus power is not assured, and each party shall be the sole judge of whether and when it has such power available for delivery hereunder.

All surplus hydro power sold by the Administrator to the Purchaser shall be billed as Dump Energy and paid for each month at the rate specified in Bonneville Wholesale Rate Schedule H-1, attached hereto as Exhibit C and hereby made a part of this contract, and in accordance with the provisions of Exhibit B hereof. Surplus hydro power sold by the Purchaser to the Administrator hereunder shall be paid for by the return of an equal amount of surplus hydro power at mutually satisfactory times.

All surplus fuel-generated power sold by either party to the other hereunder shall be paid for at the end of each monthly billing period, at the option of the supplier, either:

(1) At the rate specified in Exhibit C; or

(2) On the basis of recovery of incremental cost, to be determined each month by a committee composed of one member appointed by the Administrator, one member appointed by the Purchaser and, in case of disagreement, one member selected by both parties and having no direct interest.

Neither party shall be entitled to any credit for surplus power supplied hereunder except pursuant to prior agreement between the dispatchers in responsible charge of each system and logged and recorded as such by the proper operators for both parties.

5. *Emergency break-down relief.*—In the event of a break-down or emergency on the system of either party, the other party shall make available for relief all power necessary therefor to the maximum capability of its facilities. The supplying party shall be entitled to payment for such power on the same basis set forth in Section 4 hereof with respect to sale and interchange of surplus power.

6. *Point of delivery and metering.*—All power delivered to or by the Purchaser pursuant to this contract shall be delivered at, and metered as of, the low-tension side of the transformers at the St. Johns and Salem substations of the Government, or at such other point or points as the parties may mutually agree to in writing; provided, that the Administrator shall not at any time be obliged to deliver more than 7,000 kilowatts of power at the Salem substation. Power shall be delivered in the form of three-phase, alternating current at approximately 60 cycles per second and 57,100 volts. Prior to the date of initial delivery, a dispatching plan shall be worked out and approved by both parties. From the date of initial power delivery and until metering equipment is installed at the St. Johns and Salem substations, which will be approximately February 1, 1940, the metering of energy delivered hereunder shall be by means of watt-

hour meters at the Bonneville Project power plant. The metering equipment to be installed at the St. Johns and Salem substations shall measure the total energy delivered and also shall measure, separately, the total energy delivered at such times as the total demand exceeds the Contract Demand and in addition thereto shall register the duration of time that the total demand exceeds the Contract Demand.

The amount of power or energy of each class supplied hereunder shall be computed at the end of each monthly billing period from the above measured quantities in the following manner:

(a) The amount of prime power supplied to the Purchaser shall be the amount of the established Contract Demand as specified in Section 3 hereof.

(b) The amount of fuel-generated energy delivered by each party shall be recorded when supplied and billed separately in accordance with the provisions of Section 4 hereof.

(c) After making proper adjustments for fuel energy, all energy metered in amounts above the Contract Demand shall be billed as Dump Energy and paid for as provided in Section 4 hereof.

7. *Date of initial delivery.*—All obligations of the parties hereto with respect to the delivery of power to the Purchaser and payment therefor shall begin at such time (herein called "the date of initial delivery") as the Administrator shall be prepared to deliver power to the Purchaser at either or both the St. Johns and Salem substations.

8. *Sale of power to competing public body.*—In the event that any public body or cooperative shall hereafter contract with the Government for the purchase of power for distribution in any portion of the area now served by the Purchaser, the Contract Demand hereunder may, at the option of the Purchaser, be reduced by an amount which shall not exceed the amount of power so purchased from the Government by such public body and resold by it to customers formerly served by the Purchaser.

9. *Interruption of service for causes beyond control of the parties.*—If the operation of the Government's generating transmission system or the operation of the Purchaser's system is suspended, interrupted, or interfered with for any cause reasonably beyond its control, including, but not by way of limitation, the failure or break-down of generating or transmitting facilities or equipment, floods, fires, or acts of God, or the public enemy, the Administrator need not deliver power hereunder, and the Purchaser need not accept or pay for such power, for such period of time and to the extent that such suspension, interruption, or interference makes it reasonably impracticable to deliver or use such power, and monthly bills for any period including any such suspension, interruption, or interference shall be prorated. Each party shall promptly notify the other of any such suspension, interruption, or interference.

10. *Contract not transferable.*—Neither this contract nor any interest therein shall be transferred or assigned by the Purchaser without the written consent of the Administrator.

11. *Waiver of default.*—Any waiver at any time by either party hereto of its rights, with respect to any default of the other party hereto, or with respect to any other matter arising in connection with this contract, shall not be considered a waiver with respect to any subsequent default or matter.

12. *Remedies under contract not exclusive.*—Nothing contained in this contract shall be so construed as, in any manner, to abridge, limit, or deprive the Government of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have.

13. *Interest of Member of Congress.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom. Nothing, however, herein contained shall be construed to extend to this contract if made with a corporation for its general benefit.

14. *Change of form of administration.*—Any act herein designated to be performed by the Administrator may be performed by any Governmental officer, department or agency succeeding to the powers of the Administrator.

15. *Preservation of priorities.*—The Administrator may upon thirty days' notice to the Purchaser reduce the Contract Demand down to 10,000 kilowatts if in the judgment of the Administrator and to the extent any part of the power purchased under this contract is needed to satisfy the requirements of public bodies or cooperatives, as defined in the Bonneville Act, to the end that the

preferential rights and priorities accorded public bodies and cooperatives under the Bonneville Act shall at all times be preserved.

In WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate, the Purchaser by the signature of its President and its Secretary, by authority of its Board of Directors, as of the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Department of the Interior,
 By PAUL J. RAVEN,
Bonneville Power Administrator.
 PORTLAND GENERAL ELECTRIC COMPANY,
 By FRANKLIN T. GRIFFITH, *President,*
 CASSIUS R. PECK, *Secretary.*

[CORPORATE SEAL]

EXHIBIT A

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

WHOLESALE POWER RATE SCHEDULE C-2

(Transmission system prime power)

Availability.—This schedule covers Prime Power delivered from the Bonneville transmission system at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that power sold to any private persons or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public.

Character of service.—Power delivered hereunder shall be three-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Rate.—Power sold under this schedule shall be at the rate of seventeen and one-half dollars (\$17.50) net per year per kilowatt of billing demand. Provided that public bodies or cooperatives to whom this schedule is available, purchasing their entire energy requirements from the Bonneville Administrator, will be permitted a developmental period of two years, commencing with the date service is first rendered, during which period monthly bills rendered shall not exceed five (5) mills multiplied by the number of kilowatt-hours delivered for the month.

Minimum charge.—The net minimum monthly charge for service under this schedule shall be one-twelfth (1/12th) of seventeen and one-half dollars (\$17.50) per kilowatt of contract demand, except in the case of customers entitled to the five-mill developmental rate referred to above.

Contract demand.—Each contract for the sale of power under this schedule shall specify the amount of power in kilowatts that the Administrator is obligated to deliver to the purchaser. This amount of power in kilowatts shall be termed the contract demand.

Delivery of power in excess of the contract demand, either with or without the consent of the Administrator, shall not obligate the Administrator to make future deliveries of power in excess of the contract demand.

Billing demand.—The billing demand shall be the contract demand or the actual demand as determined in the following paragraph, whichever is higher; provided, however, that the billing demand for any month shall not be less than the highest actual demand which occurred during the immediately preceding eleven months.

Whenever power is delivered to the purchaser at a weighted monthly average power factor of .85, or more, the actual demand for the month shall be defined as the average kilowatt delivery during the 30-minute interval in which the consumption of energy is the greatest during the month. Whenever such monthly weighted average power factor is less than .85, then the actual demand shall be determined by taking .85 of the average kilowatt delivery for the 30-minute interval in which the consumption of energy is greatest during the month, and dividing this amount by the weighted monthly average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below .80.

Billing.—Bills shall be rendered monthly on the basis of one-twelfth (1/12th) of the annual rate.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels Wholesale Power Rate Schedules C-1 and D-1, confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

EXHIBIT B

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

GENERAL TERMS AND CONDITIONS

Sale of power by the Government under all rate schedules shall be subject to the following general terms and conditions:

Conservation of natural resources.—Power generated at the Bonneville Project Power Plant shall not be available to purchasers whose plants or operations, in the judgment of the Administrator, would detract from the scenic beauties of the Columbia River Gorge, or the waste products from whose plants or operations would harm or destroy the fish or other aquatic life of the Columbia River, or otherwise pollute the water of such river.

Measurement of demand, energy, and power factor.—Demand, energy, and power factor measurements shall be made by suitable instruments at locations designated by the Administrator. In the event that power is metered at some location other than the point of delivery, suitable adjustment shall be made by the Administrator of the amounts of power determined at such location so that the adjusted amounts will, as nearly as possible, equal the actual quantities of power delivered.

The purchaser shall permit the use of its available housing and other facilities for the Government's metering equipment.

The Government shall, without charge to the purchaser, furnish, install, and maintain the necessary meters for measuring the amount of power furnished to the purchaser. Should these meters fail, the amount of power delivered will be estimated by the Administrator from the best information available, and such estimate shall, for billing purposes, have the same force and effect as an exact meter reading.

Meter tests.—The Administrator shall, not less frequently than once each year, make periodical tests and inspection of the metering equipment installed by him. At the request of the purchaser the Administrator shall make additional tests or inspections of such equipment in the presence of representatives of the purchaser. The cost of such additional tests shall be paid by the purchaser if the percentage of error is found to be less than 2 percent slow or fast.

In the event any test or inspection made by the Administrator shows the metering equipment to be inaccurate by more than 2-percent slow or fast, an adjustment, based upon the inaccuracy found, shall be made in the purchaser's bill for service rendered since the beginning of the monthly billing period immediately preceding the monthly billing period during which the test or inspection was completed, or for the actual period of incorrect billing if such period can be definitely established, but in no case for a period exceeding 3 months.

Purchaser's lines and equipment.—All lines, substations, and other electrical facilities (except metering equipment installed by the Administrator, located on the purchaser's side of the delivery point, shall be furnished, installed, and maintained by the purchaser unless otherwise provided by contract.

All lines and equipment must conform to applicable state and local regulations, and to accepted modern practice, as exemplified by the requirements of the National Electrical Safety Code and the National Electric Code.

The Administrator shall have the right, but shall not be obligated, to inspect purchaser's electric installation at any time, and may reject any wiring or equipment that does not conform to the standards hereinbefore specified. But such inspection, or failure to inspect, or to reject, shall not render the Government, its officers, agents, or employees, liable or responsible for any loss, damage, or accident resulting from defects in such electric installation, or for violation of the contract of which these Terms and Conditions are a part.

Purchaser's responsibility for Government's property.—All meters and other facilities furnished by the Administrator shall be and remain the Government's property, and the right to remove, replace, or repair such meters and other facilities is expressly reserved. The purchaser shall exercise due care to protect the Government's property on purchaser's premises. In the event of loss or damage to the Government's property caused by purchaser's negligence, the cost of necessary repairs or replacement shall be paid by purchaser.

The purchaser shall be liable for any damage to the Government's facilities caused by the purchaser's operation.

Right of access.—The Administrator shall have access to purchaser's premises at all reasonable times for the purpose of reading meters, and for testing, repairing, renewing, exchanging, or removing any or all equipment installed by the Administrator and for the purpose of inspecting purchaser's lines and equipment.

Billing.—Bills for power for each month shall be rendered on or before the tenth day of the succeeding month. In the event that the billing is for a fraction of a month the Administrator shall make an appropriate adjustment of the charges, against the purchaser, for such period. All bills shall be payable at the office of the Administrator within fifteen days from the date of the bill; the fifteenth day shall be the due date; provided, however, that if the fifteenth day be a Sunday or a holiday, the following business day shall then become the due date.

Failure to receive a bill shall not release the purchaser from liability for payment. If payment is not made on or before the close of business on the due date a penalty of two percent (2%) of the bill rendered will be added, and the Administrator may at any time thereafter, and after giving ten days' advance notice in writing, discontinue service until all past-due bills are paid. Remittances received by mail after the due date will be accepted by the Government, without penalty, provided payment was mailed on or before the due date as evidenced by the postmark.

Discontinuance of service, as herein provided, shall not relieve the purchaser of its liability for the agreed monthly payment during the period of time service is so discontinued.

Optional rates.—Upon written application to the Administrator any purchaser who has contracted for service under Rate Schedule F-1 shall have the option of being served, under an appropriate new contract for the remainder of the original contract term, under either Rate Schedule C-2 or A-2, whichever is applicable. In case the purchaser exercises this option, the "contract demand" shall remain the same as under the original contract, unless the purchaser and Administrator otherwise agree, and the "actual demands" established under the F-1 rate shall be used in the determination of "billing demands" under the newly elected rate, in the same manner that they would have been used had the purchaser created them under the newly elected rate schedule.

Interruption of service.—The Government will furnish service, as agreed upon, continuously, so far as reasonable diligence will permit; but neither the Government, its officers, agents, or employees, shall be liable for damages if, for any reason, suspension of the operation of the Government's generation and transmission system serving the purchaser, or any part thereof, interferes with the delivery of power to the purchaser, nor shall such an interruption constitute a breach of contract on the part of the Government.

The Government will, whenever possible, give reasonable notice of any predetermined interruption to purchaser's service. The monthly charge of each purchaser whose use of power is interrupted, or curtailed to less than his contract demand, shall be reduced by an appropriate amount.

Additional loads.—No change shall be made in a purchaser's operations that may cause its actual demand materially to exceed its contract demand, without permission of the Administrator. However, unless incorporated in the contract for service, such permission shall not constitute an increase in the contract demand.

Additions to, or material changes in, the characteristics of the load, made without permission of the Administrator, shall render the purchaser liable for any damage caused by such additions or changes, and to cancellation of the contract.

Voltage fluctuations caused by purchaser.—Electric service shall not be used in such a manner as to cause objectionable voltage fluctuations or other electrical disturbances at the Bonneville Project Power Plant or on the Bonneville Transmission System. The Administrator may require the purchaser, at its own expense, to install such suitable apparatus as will reasonably limit fluctuations and disturbances when such fluctuations and disturbances are determined to be objectionable by the Administrator.

Balancing of loads.—Purchasers of three-phase power shall, at all times, take and use power in such manner that the load at the point of delivery will not be unbalanced between phases more than ten percent. In the event any three-phase load is unbalanced more than ten percent, the Administrator reserves the right to require the purchaser, at its own expense, to make the necessary changes to correct such condition; or the Administrator may, in his determination of billing demand, assume that the load on each phase is equal to the greatest load on any phase.

Point of delivery.—Power shall be delivered to each purchaser at a point or points to be designated by the Administrator. If service is rendered to a purchaser from more than one substation, or if power is delivered at more than one voltage at the same substation, the purchaser shall be billed separately for each power delivery, unless otherwise specifically provided in the contract in cases where delivery at more than one point or voltage, or both, is advantageous to the Government.

Notice of trouble.—The purchaser shall notify the Administrator immediately of any defect, trouble, or accident which may, in any way, affect the delivery of power by the Government to such purchaser.

Contracts.—Contracts entered into for the sale of power are subject to all provisions of the Bonneville Act.

Section 5 (a) of said Act provides as follows:

"Subject to the provisions of this Act and to such rate schedules as the Federal Power Commission may approve, as hereinafter provided, the Administrator shall negotiate and enter into contracts for the sale at wholesale of electric energy, either for resale or direct consumption, to public bodies and cooperatives and to private agencies and persons. Contracts for the sale of electric energy to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public, shall contain a provision forbidding such private purchaser to resell any of such electric energy so purchased to any private utility or agency engaged in the sale of electric energy to the general public, and requiring the immediate canceling of such contract of sale in the event of violation of such provision. Contracts entered into under this subsection shall be binding in accordance with the terms thereof and shall be effective for such period or periods, including renewals or extensions, as may be provided therein, not exceeding in the aggregate twenty years from the respective dates of the making of such contracts. Contracts entered into under this subsection shall contain (1) such provisions as the

Administrator and purchaser agree upon for the equitable adjustment of rates at appropriate intervals, not less frequently than once in every five years, and (2) in the case of a contract with any purchaser engaged in the business of selling electric energy to the general public, the contract shall provide that the Administrator may cancel such contract upon five years' notice in writing if in the judgment of the Administrator any part of the electric energy purchased under such contract is likely to be needed to satisfy the requirements of the said public bodies or cooperatives referred to in this Act, and that such cancellation may be with respect to all or any part of the electric energy so purchased under said contract to the end that the preferential rights and priorities accorded public bodies and cooperatives under this Act shall at all times be preserved. Contracts entered into with any utility engaged in the sale of electric energy to the general public shall contain such terms and conditions, including among other things stipulations concerning resale and resale rates by any such utility, as the Administrator may deem necessary, desirable, or appropriate to effectuate the purposes of this Act and to insure that resale by such utility to the ultimate consumer shall be at rates which are reasonable and nondiscriminatory. Such contract shall also require such utility to keep on file in the office of the Administrator a schedule of all its rates and charges to the public for electric energy and such alterations and changes therein as may be put into effect by such utility."

Federal Power Commission.—Schedules of rates and charges for electric energy produced at the Bonneville Project and sold to purchasers shall become effective only after confirmation and approval by the Federal Power Commission. Subject to confirmation and approval by the Federal Power Commission such rate schedules may be modified from time to time by the Administrator.

Definitions.—The terms appearing in the "Schedules of Rates and Charges" and in the "General Terms and Conditions" shall have the following meanings, unless it differently appears from the context that a different meaning was intended:

Administrator: The Bonneville Power Administrator, or such other department, agency, or official authorized by law to perform functions now performed by the Administrator, or any of their authorized agents.

At site: At the Bonneville Project Power House, or points adjacent thereto.

Bonneville Project: The dam, locks, power plant, and appurtenant works at Bonneville, Oregon, and North Bonneville, Washington.

Cooperative and Cooperatives: Any form of non-profit-making organization or organizations of citizens supplying, or which may be created to supply, members with any kind of goods, commodities, or services, as nearly as possible at cost.

Dump Energy: Energy which from time to time may be generated by the Project from water which otherwise would be wasted, and which is not needed to supply actual demands under contracts for Prime Power.

Energy: Electric energy, measured in kilowatt-hours.

Government: The United States of America, represented by the Bonneville Administrator, unless it appears from the context that it was used to designate the United States of America represented by some other official, department, or agency.

Kilowatt: The rate of power generation, or delivery, equal to approximately 1,341 horsepower (44,253 foot-pounds per minute).

Kilowatt-hour: The amount of energy generated or delivered in one hour, when delivery is at a constant rate of one kilowatt.

Power: The rate of transferring or transforming energy measured in kilowatts.

Power factor: The ratio of kilowatts to kilovolt-amperes.

Prime Power: The kilowatt output capacity that is estimated by the Administrator to be available at the Bonneville Project power plant whenever the flow in the Columbia River at the Bonneville Project power plant site is less than 800,000 cubic feet per second.

Public Bodies: States, public power districts, counties, and municipalities, including agencies or subdivisions of any thereof.

FRANK A. BANKS,
Acting Bonneville Administrator.

This schedule cancels the General Terms and Conditions confirmed and approved June 8, 1938.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

EXHIBIT C

UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR—BONNEVILLE ADMINISTRATOR

Portland, Oregon

WHOLESALE ENERGY RATE SCHEDULE H-1

(Dump Energy)

Availability.—This schedule covers Dump Energy delivered at points to be designated by the Administrator, available, either for resale or direct consumption, to public bodies, cooperatives, and private agencies and persons; provided, however, that energy sold to any private person or agency other than a privately owned public utility engaged in selling electric energy to the general public shall not be resold to any private utility engaged in selling electric energy to the general public; provided further, that energy will be available under this schedule only in cases where the Administrator determines that the purchaser maintains available generating facilities or has firm stand-by contracts or other sources of energy satisfactory to the Administrator ample to supply its requirements when dump energy is not available.

Character of service.—Power delivered hereunder shall be 3-phase, standard 60 cycles, or such other type of service as may be available.

Power shall be delivered hereunder at such locations and voltages as the Administrator may deem advisable in view of the prospective loads and other pertinent conditions.

Delivery of Dump Energy is not assured. The Administrator shall be the sole judge of whether and when Dump Energy will be delivered, and, if delivered, the amount thereof.

In the event that the Dump Energy to be delivered is insufficient to supply the requirements of all purchasers thereof, the Administrator shall, in his sole discretion, designate the purchasers to whom such Dump Energy shall be delivered and the amount thereof to be delivered to each such purchaser.

Rate.—Energy shall be sold under this schedule at two and one-half (2.5) mills net per kilowatt-hour delivered.

Minimum charge.—If it is necessary for the Government to install extra equipment or extra capacity for the purpose of delivering dump energy, the contract for the sale thereof shall provide a minimum charge sufficient, in the judgment of the Administrator, to protect the Government from loss due to the installation of such extra equipment or extra capacity.

Energy delivered.—Whenever energy is delivered to the purchaser at a weighted monthly average power factor of 0.85, or more, billing shall be based upon the number of kilowatt-hours registered by the metering equipment. Whenever the monthly weighted average power factor is less than 0.85, then the energy shall be determined by taking 0.85 of the kilowatt-hours delivered and dividing this amount by the monthly weighted average power factor. However, the Administrator shall not be obligated under the terms of this schedule to deliver power to the purchaser at any time at a power factor below 0.80.

Billing.—Bills for energy shall be rendered monthly.

General provisions.—Sales of power under this schedule shall be pursuant to contracts which shall be subject to the provisions of the Bonneville Act and the General Terms and Conditions, as applicable at the time of execution of the contract.

FRANK A. BANKS,
Acting Bonneville Administrator.

Confirmed and approved by order of the Federal Power Commission, effective September 18, 1939.

(Contract No. Ibp-200)

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE BONNEVILLE PROJECT, DEPARTMENT OF THE INTERIOR, J. D. ROSS, ADMINISTRATOR, AND THE WILLAPA ELECTRIC COMPANY

THIS AGREEMENT, executed on March eighth 1939, between the UNITED STATES OF AMERICA, hereinafter called "the Government," represented by the Bonneville Project, Department of the Interior, J. D. Ross, Administrator, and the

WILLAPA ELECTRIC COMPANY, a Washington corporation, hereinafter called "the Company."

WITNESSETH:

WHEREAS the Company, a Washington corporation, duly qualified to do business in the State of Washington, owns and operates an electric generating, transmitting, and distributing system located within Pacific and Grays Harbor Counties, Washington, and hereinafter called "the electric system"; and

WHEREAS the Company and Public Utility District No. 2 of Pacific County, hereinafter called "the District," are about to execute a contract wherein the Company has agreed to sell, and the District has agreed to purchase, all of that portion of the electric system hereinbefore referred to, used in generating and distributing electric energy and hereinafter called "the generating and distributing system"; and

WHEREAS it is the intent of both parties hereto to enter into a contract under which the Company will sell, and the Government will buy, those portions of the electric system used in the transmission of electric energy and hereinafter called "the electric transmission system"; and

WHEREAS the execution of this contract has been duly authorized by the board of directors of the Company;

Now, THEREFORE, the parties hereto mutually covenant and agree as follows:

1. *Property sold.*—Subject to the terms and conditions hereinafter set forth, the Company shall grant, bargain, sell, assign, transfer, convey, and set over to the Government, and the Government shall purchase from the Company, the Company's electric transmission system, consisting of the property and only the property described in Exhibits A, B, and C attached hereto and made a part hereof. Said property consists of the following:

(a) The real property described in said Exhibit A.

(b) The permits, licenses, easements, and rights in land described in said Exhibit B.

(c) The property described in said Exhibit C.

2. *Examination by Government.*—Within ten days after the execution of this contract, the Company shall deliver to the Government abstracts of title continued to the date hereof, covering the titles to the real property described in said Exhibit A. All such abstracts and all continuations thereof shall be prepared and certified to by an abstractor approved by the Government.

Upon the execution of this contract, the Company shall also deliver to the Government all permits, licenses, grants of easements, and other evidence of title and records pertaining thereto which the Company has and which relate to the property described in said Exhibits B and C.

In the event that the sale contemplated by this contract shall not be consummated, the Government will return all of such abstracts, instruments, and records to the Company.

During the interval between the date hereof and the closing date hereinafter set forth, the Company shall advise the Government, its engineers, attorneys, accountants, and agents concerning all matters pertaining to the electric operations of the Company in connection with the electric system, for the purpose of affording such representatives of the Government an opportunity to become familiar with the operation of the electric transmission system. It is understood, however, that the management and operation of said electric transmission system is to remain in the hands of the Company until the closing date.

Within fifteen (15) days after the execution of this agreement, the Company will furnish to the Government, forms, in triplicate, of all proposed deeds, bills of sale, assignments, or other instruments of conveyance by which the Company proposes to sell, convey, transfer, and assign to the Government the property described in said Exhibits A, B, and C.

3. *Operations of electric transmission system.*—Until the closing date hereinafter specified, the Company will operate the electric transmission system as it is now being operated in the ordinary course of business and will keep such electric transmission system in substantially its present condition of repair and running order.

The Company will not, without the consent of the Government, dispose of or encumber, or permit to be encumbered, any of the property described in Exhibits A, B, and C attached hereto, except that any materials and supplies described in said Exhibit C may be used or disposed of in the ordinary course of business.

The Company will not make any expenditure, exclusive of expenditures properly chargeable to operating expenses, in accordance with the uniform system of

accounts prescribed by the State of Washington, and exclusive of expenditures compelled or required by public authority for any single item of construction, which the Company estimates will cost more than Five Hundred Dollars (\$500), for additions, betterments, or replacements of or to the electric transmission system, without the consent of the Government. During the interval between the date hereof and the closing date hereinafter specified, the Company shall not, except in the ordinary course of business, purchase any materials or supplies to be used in connection with the electric transmission system.

4. *Destruction or damage to property.*—In the event that, prior to the closing date, any substantial part of the property described in said Exhibits A, B, and C shall be destroyed or materially affected by fire, flood, storm, snow, sleet, act of God, explosion, or other cause, either the Government or the Company may, at its election, terminate this contract, without any claim of either party hereto against the other in respect hereof. The parties hereto may mutually agree that such destroyed or damaged property be fully replaced or restored by the Company to its condition prior to such destruction or damage or the parties hereto may mutually agree that the purchase price shall be reduced in an amount to be mutually agreed upon.

5. *Date and place of closing.*—Whenever the closing date is referred to herein, it shall mean the date, including any advanced or postponed date, as hereinafter provided, for the delivery by the Company to the Government of the electric transmission system. Such closing date shall be April 1, 1939; provided, however, that in the event a suit or suits be brought in any court, in which the consummation of the contract of sale hereinbefore referred to between the Company and the District, or the performance of any act necessary thereto, or the issuance and delivery of the utility revenue bonds, or any of them, to be issued by the District to obtain funds to be paid to the Company pursuant to such contract, are restrained or enjoined, or in which the restraint or injunction thereof be sought, then and in that event the closing date shall be advanced to thirty (30) days from and after the entry of the final judgment in such suit or suits; and in case of appeal or appeals therefrom, the closing date shall be advanced to thirty (30) days from and after the final determination of such appeal or appeals, the date of final determination thereof to be computed as of the date of the filing of the remittitur or remittiturs in the trial court. Provided, that the closing date shall not be extended by reason of the pendency of such suit or suits for more than six (6) months beyond April 1, 1939.

The place of closing shall be at such office in Portland, Oregon, as the Government shall designate.

6. *Agreements relative to closing.*—On the closing date, the Company shall convey the real property described in said Exhibit A to the Government by statutory warranty deed and shall vest in the Government a valid, good, and merchantable title to said real property, and all of it free and clear of all liens and encumbrances.

On the closing date, the Company shall convey, transfer, and assign the permits, licenses, easements, and rights in land described in said Exhibit B by such good and sufficient deeds, or other appropriate instruments of conveyance, as shall be necessary to convey to the Government all the right, title, and interest which the Company had in such permits, licenses, easements, and rights in land on September 30, 1938, together with any further right, title, or interest therein thereafter acquired, or to be acquired, by the Company; provided, however, that an easement for a certain right of flowage shall be retained by the Company as set forth in said Exhibit B. All such permits, licenses, easements, and rights in land shall be conveyed, transferred, and assigned to the Government free and clear of all liens and encumbrances created or suffered by the Company.

On the closing date the Company shall deliver to the Government bills of sale or other appropriate instruments of conveyance covering the property described in said Exhibit C and containing special covenants on the part of the Company, warranting possession, title free and clear of all liens and encumbrances, and a good right to convey.

On or before the closing date, the Company shall deliver to the Government proper releases of all mortgages, liens, and encumbrances created or suffered by the Company and showing payment in full of all taxes and local improvements. All expenses relating to the release of mortgages, liens, and other encumbrances, and the recording of such releases, shall be paid by the Company.

The Company shall indemnify and hold harmless the Government against all liability arising against the property described in said Exhibits A, B, and C, or any of it, as a result of any tax or special assessment levied against, or which becomes a lien against, said property, or any of it, before the closing date.

In all instances in which the consent or permission of any person, firm, corporation, governmental body, or governmental agency is necessary to vest in the Government the right, title, and interest of the Company in the electric transmission system and the property described in said Exhibits A, B, and C, or any part thereof, the Company and the Government shall, prior to the closing date, cooperate in securing such consent or permission, and on the closing date the Company shall furnish the Government with such written evidence of such consent or permission as is within its power to obtain.

Not less than fifteen (15) days before the closing date, the Company shall furnish the Government with evidence that all rules, regulations, and statutes necessary to permit the Company to make a valid sale and transfer of the electric transmission system and the property described in said Exhibits A, B, and C have been fully complied with, and the Government shall notify the Company in writing of any objections it may have to the sufficiency of such compliance within ten days thereafter.

Notwithstanding the execution and delivery of the instruments referred to in this section, the Company shall, upon the demand of the Government, execute and deliver such additional instrument or instruments, and make such further assurances of title, consistent with the provisions hereof, as the Government may reasonably demand to effectuate fully the provisions of this contract.

On the closing date, the Company shall convey, transfer, and assign all materials and supplies comprised within or appertaining to the electric transmission system which it may then have. Such materials and supplies shall be conveyed, transferred, and assigned, as hereinbefore provided for, in the case of property described in Exhibit C, and nothing herein contained shall be so construed as to require the Company to deliver to the Government any materials and supplies described in said Exhibit C as may have been used or disposed of in the ordinary course of business after September 30, 1938.

As soon after the closing date as practicable, the Company shall deliver to the Government abstracts of title, continued to show title to the real property described in Exhibit A vested in the Government free and clear of all liens and encumbrances. All such abstracts and all continuations thereof shall be prepared and certified to by an abstractor approved by the Government.

7. Payment.—The purchase price to be paid to the Company by the Government for the property described in said Exhibits A, B, and C shall be One Hundred Fifty-Six Thousand Dollars (\$156,000).

On the closing date, the Government shall pay to the Company the sum of One Hundred Thirty-Six Thousand Dollars (\$136,000) to apply upon said purchase price. The balance of said purchase price shall be paid as soon as the title, as provided by this agreement to the property described in said Exhibits A, B, and C has been vested in and approved and accepted by the Government.

8. Conditions.—It is expressly understood and agreed that the obligations hereunder of the parties hereto are subject to—

(a) The procurement of the approval and consent of such individuals, city councils, public authorities, and political bodies, both state and federal, including subdivisions thereof, as may have jurisdiction or authority in the premises, of the sale and to the transfer of all property to be sold hereunder; provided, that the Government may elect to accept the property to be conveyed, assigned, and transferred to it, notwithstanding the failure of the Company to procure any such consents or approvals. The Company shall use its best efforts to procure such necessary consents and approvals, and the Government shall cooperate fully with the Company in the procurement thereof.

(b) The consummation of the sale to the District of the generating and distributing system on or prior to the closing date.

(c) The obligations of the Company hereunder are subject to its ability to obtain a release of the property to be sold hereunder from the lien of that certain Indenture of Mortgage, dated January 1, 1936, from the Company to The New York Trust Company, a corporation, trustee.

9. Miscellaneous provisions.—(a) From and after the closing date, the Company shall make conveniently available to the Government for examination at all reasonable times, all books and records which relate in any way to the property described in Exhibits A, B, and C, and which it is necessary

for the Company to retain in its business, and at the request of the Government will, where the same are necessary or convenient in the operation of the electric transmission system, furnish the Government copies of any such books and records.

(b) Nothing herein contained shall be construed as to require the Company to sell and convey, or the Government to purchase, the electric transmission system except as an entirety, as herein provided, and for the aggregate purchase price, to be paid therefor as herein provided, nor to make such sale, conveyance, and purchase unless prior to or on the closing date the Company has sold and conveyed the generating and distributing system to the District.

(c) This contract shall be governed, interpreted, and construed under and pursuant to the laws of the State of Washington, insofar as the provisions hereof are not governed by the laws of the United States of America.

(d) In the event that, for any reason, the sale contemplated by this contract is not consummated, and the Government shall institute condemnation proceedings against the electric transmission system, or any part thereof, nothing herein contained, or anything done, or statement made in connection herewith, or in connection with any agreement or negotiations for acquisition of the electric transmission system, or any part thereof, by representatives of the parties hereto, shall be offered or received in evidence, or directly or indirectly used by either party hereto, in any suit or proceeding for the acquisition of the electric transmission system, or any part thereof, and nothing herein contained, or anything so done, or statement so made, shall be taken or construed as an admission by either party hereto of the value of the electric transmission system, or any part thereof, or as any evidence whatsoever relating thereto.

10. *Interest of Member of Congress.*—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom unless it be made with a corporation for its general benefit.

IN WITNESS WHEREOF, the parties hereto have executed this instrument, the said Company by the signature and attest of its duly authorized officers, and the Company's corporate seal has been hereunto duly affixed, the day and year first above written.

UNITED STATES OF AMERICA,
Represented by the Bonneville Project, Department of the Interior,
By CHAS. E. CABEY,

Acting Administrator.

Approved as to form: JCF, Legal Division.

WILLAPA ELECTRIC COMPANY,
a Washington corporation,
By J. R. SNIDER *Vice President.*

Attest:

[CORPORATE SEAL] M. M. FISHER, *Secretary.*

EXHIBIT A

REAL ESTATE

RAYMOND SUBSTATION SITE

A tract of land in Lot 16, Section 19, Township 14 North, Range 8 West, W. M., described as follows, to wit: Beginning at a point which is 2,073.1 feet North and 25.0 feet West from the center line of Eighth and Duryea Streets, Raymond, Washington, and is 301.13 feet South and 83.69 feet West from the quarter-section corner between Sections 18 and 19, Township 14 North, Range 8 West, W. M.; thence from said point of beginning running South 290.4 feet; thence West 150 feet; thence North 290.4 feet; thence East 150 feet to place of beginning containing 1 acre. The bearings of all lines in this description are based on the City Meridian of Raymond, Washington.¹

TOWER SITE SOUTH OF WILLAPA RIVER, RAYMOND, WASHINGTON

A part of Lot 8, Section 18, Township 14 North, Range 8 West, W. M., described as follows, to wit: Beginning at a point which is 169.8 feet North and 124.0 feet West from the quarter-section corner between Sections 18 and 19, Township 14 North, Range 8 West, W. M., and 2,544.0 feet North and 65.31 feet

West from the center of Eighth and Duryea Streets, Raymond, Washington, thence from said point of beginning running South 86°51' West 546.7 feet; thence North 54°38' East 218.6 feet; thence North 60°22' East 111.25 feet; thence South 60°47' East 310.4 feet to the place of beginning, containing 1.07 acres more or less. All courses in this description refer to the City Meridian of Raymond as a base.¹

COSMOPOLIS SUBSTATION SITE

A tract of land beginning at a point in the South right-of-way line of the C. F. White County Road according to the location of said road now on file in the County Engineer's Office for Grays Harbor County, Washington, 237.5 feet South and 978.6 feet East of the quarter-section corner between Sections 14 and 23, Township 17 North, Range 9 West, W. M.; thence running South 33°58' West 240.0 feet; thence South 56°02' East 181.5 feet; thence North 33°58' East 240.0 feet; thence North 56°02' West 181.5 feet to the point of beginning, all of said land being within the Northwest Quarter (NW¼) of Northeast Quarter (NE¼) of Section 23, Township 17 North, Range 9 West, W. M., and containing 1 acre. Subject to all reservations and exceptions contained in that certain deed from John C. and Adelaide M. Fry to grantor dated September 16, 1929, recorded September 27, 1929, in Book 196 of Deeds, page 601, Grays Harbor County, and covering the above-described lands. Excepting therefrom right-of-way of State Road No. 13, as shown by deed to the State of Washington recorded in Vol. 207 of Deeds at page 272, Auditor's Records of Grays Harbor County, Washington; situated in the County of Grays Harbor, State of Washington.

EXHIBIT B

PERMITS

WAR DEPARTMENT OF UNITED STATES

1. Permits issued to said WESTERN WASHINGTON ELECTRIC LIGHT & POWER COMPANY by the War Department of the United States, United States Engineer Office, Seattle, Washington, on April 13, 1929, and June 29, 1929, to construct an overhead wire crossing over the Willapa River at Raymond, Washington, approximately one-half mile upstream from the Riverdale Bridge and over North River at about 500 feet southwest of Arctic Station, Grays Harbor County, Washington, in accordance with the plans shown on the drawings attached to said permits, all subject to the conditions stated in said premises.

UNION PACIFIC RAILROAD COMPANY

2. Wire Line Agreement made and entered into this 19th day of July 1938, by and between OREGON-WASHINGTON RAILROAD AND NAVIGATION COMPANY, an Oregon corporation, and its Lessee, UNION PACIFIC RAILROAD COMPANY, a Utah corporation, collectively called "Railroad Company," and WILLAPA ELECTRIC COMPANY, a Washington corporation, Licensee, whereby the Railroad Company grants unto the Licensee the right to construct, maintain, and operate an overhead electric power transmission line, consisting of nineteen (19) poles together with the necessary wires and appurtenances; also the right to string, maintain, and use a telephone wire on said poles; all upon and over the right-of-way of the Railroad Company, between Bridges and Arctic, County of Grays Harbor, State of Washington.

The said power and telephone lines and appurtenances and the location thereof is more particularly described as follows:

Said wire line extends along the westerly right-of-way line of the Railroad Company from a point opposite, measured at right angles to Engineer's Station 272+00, to a point opposite Engineer's Station 384+00, Primo Branch, Oregon Division.

[NOTE.—Licensee must obtain written consent of Railroad Company before assignment of wire-line agreement.]

¹ All three tracts of land are subject to any and all reservations, easements, rights-of-way, or privileges which may have heretofore been reserved, sold, granted, condemned, or acquired in any lawful manner to or by any person, corporation, municipal corporation, or the public, upon, over, across, or through any of said lands, or any part thereof, for private, county, and state roads, streets, railroads, logging roads, telephone and telegraph lines, electric power lines, ditches, dikes, flumes, pipe lines, etc.

EXHIBIT B

FRANCHISES

WASHINGTON STATE HIGHWAY

1. Franchise No. 468 granted to said WESTERN WASHINGTON ELECTRIC LIGHT & POWER COMPANY, its successors and assigns, by the Director of Highways of the State of Washington by an order dated September 10, 1929, and accepted by said company on September 23, 1929, granting to said company, its successors and assigns, the right to construct, operate, and maintain an electric transmission and distributing line together with the necessary service drop wires upon and across the following-described portion of State Road No. 13 in Grays Harbor and Pacific Counties, Washington, for a period of 50 years from the date of entry of said order, subject to the terms and conditions therein enumerated:

Beginning at a point on the northeasterly side of State Road No. 13 (Willapa-Grays Harbor Highway) as now located and of record in the office of the Director of Highways at Olympia, Washington, said point being on the southeasterly corporate limits of the town of Cosmopolis, Washington, at approximately highway engineer's station 3+28; thence in a general southeasterly direction along the northeasterly side of said road to a point in the NE $\frac{1}{4}$ of NE $\frac{1}{4}$, Section 23, Twp. 17 North, Range 9 West, W. M., at approximately highway engineer's station 21+55; thence crossing to the southwesterly side and continuing in a general southeasterly direction along the southwesterly side of said road to a point in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of said Section 23, at approximately highway engineer's station 36+80; thence crossing to the northeasterly side and continuing in a general southeasterly direction along the northeasterly side of said road to a point in the NW $\frac{1}{4}$ of the SW $\frac{1}{4}$, Section 24, Township 17 North, Range 9 West, W. M., at approximately highway engineer's station 48+94; thence crossing to the southwesterly side and continuing in a generally southeasterly and southerly direction along the southwesterly and westerly side of said road to a point in the SE $\frac{1}{4}$ of SE $\frac{1}{4}$, Section 30, Township 17 North, Range 8 West, W. M., at approximately highway engineer's station 180+90; thence crossing to the easterly side and continuing in a general southerly direction along the easterly side of said road to a point in the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$, Section 8, Township 16 North, Range 8 West, W. M., at approximately highway engineer's station 308+00. Also crossing said State Road No. 13 (Willapa-Grays Harbor Highway) at a point in the NW $\frac{1}{4}$ of NW $\frac{1}{4}$, Section 25, Township 15 North, Range 9 West, W. M., at approximately highway engineer's station 893+88.

2. Franchise No. 343 first granted to said Willapa Electric Company, its successors and assigns by the State Highway Committee of the State of Washington by an order dated December 13, 1927, and accepted by said Willapa Electric Company on January 3, 1928, granting to said Willapa Electric Company, its successors and assigns, the right to construct, operate, and maintain electric transmission and distributing pole line upon the following-described portion of State Road No. 13 in Pacific and Grays Harbor Counties, Washington, for a period of fifty (50) years from the date of the entry of said order, subject to the terms and conditions therein enumerated:

Beginning at a point on State Road No. 13 (Willapa-Grays Harbor Highway) as now located and of record in the office of the State Highway Engineer at Olympia, Washington, said point being in the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 25 in Twp. 15 North, Range 9 West, W. M., and at approximately State Highway Engineer's Station 950+50; thence in a general northerly direction along the easterly side of said State Road No. 13 (Willapa-Grays Harbor Highway) to a point in the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 8, in Twp. 16 North, Range 8 West, W. M. and approximately State Highway Engineer's Station 308+00.

3. Franchise No. 293 first granted to said Willapa Electric Company, its successors and assigns, by the State Highway Committee of the State of Washington by an order dated June 23, 1927, and accepted by said Willapa Electric Company on August 18, 1927, granting to said Willapa Electric Company, its successors and assigns, the right to construct, operate, and maintain electric transmission and distributing lines upon the following-described portion of State Road No. 13, in Pacific County, Washington, for a period of 50 years from the date of the entry of said order, subject to the terms and conditions therein enumerated:

Beginning at a point on State Road No. 13 (Willapa-Grays Harbor Highway) as now located and of record in the office of the State Highway Engineer at Olympia, Washington; said point being the North corporate limits of the town of Raymond which is on the east and west center line of Section 13, Twp. 14

N. R. 9 W. W. M., and approximately Highway Engineer's Station 1158+38; thence in a general northerly direction along the easterly side of said State Road No. 13 (Willapa-Grays Harbor Highway) to an intersection with Smith Creek in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 25, Twp. 15 N. R. 9 W. W. M. and approximately Highway Engineer's Station 950+50.

COUNTY HIGHWAYS

4. Franchise granted to said WESTERN WASHINGTON ELECTRIC LIGHT & POWER COMPANY, its successors and assigns, by the Board of County Commissioners of Pacific County, Washington, by an order dated May 20, 1929, and accepted by said company on May 20, 1929, granting to said company, its successors and assigns, for a period of fifty (50) years from the date thereof, a license and franchise to construct, operate, and maintain an electric transmission line upon, over, across, and along those certain county roads and public highways in Pacific County, Washington, more particularly described as follows, subject to the terms and conditions therein enumerated:

(1) Permanent Highway No. 17, Pacific County, Washington, otherwise known as the Willapa-Monohan Landing Road, in Section 18, Township 14 North, Range 8 West, W. M.;

(2) Willapa River-Smith Creek Road, commonly called the "J. H. Miller" or "Washington Cemetery Road," through Sections 7 and 18, Twp. 14 North, Range 8 West, W. M.; and Section 12, Twp. 14 North, Range 9 West, W. M.

5. Franchise granted to said WESTERN WASHINGTON ELECTRIC LIGHT & POWER COMPANY, its successors and assigns, by the Board of County Commissioners of Grays Harbor County by an order dated August 5, 1929, and accepted by said Company on August 8, 1929, granting to said company, its successors and assigns, the right, privilege, and franchise for a period of fifty (50) years from and after the 5th day of August 1929, to use the county roads in Grays Harbor County, State of Washington, outside of the incorporated towns and cities therein, to place, erect, construct, lay, maintain, and operate poles, wires, and other like structures and/or all necessary and proper appliances for the purpose of transmitting electricity or electric energy, and to maintain and operate power and distribution lines in, over, upon, under, and along the following county roads within Grays Harbor County and State of Washington, subject to the terms and conditions therein enumerated:

County road from Cosmopolis to Artic.—This road runs in a general southerly direction between these points in Sections 23, 24, and 25, all in Township 17, North of Range 9, West W. M., and Sections 19, 30, 31, and 32, all in Township 17, North of Range 8, West W. M.

Little North River County Road.—This road runs in a general southerly direction through Sections 19, 20, 28, 29, 31, and 32, all in Township 17, North of Range 8, West W. M., and Sections 5, 6, and 8, all in Township 16, North of Range 8, West W. M.

Bell County Road.—This road runs in a general easterly direction through Section 8, Township 16, North of Range 8, West W. M.

North River Valley County Road.—This road runs in a general westerly and southerly direction through Sections 8, 17, 18, and 19, all in Township 16, North of Range 8, West W. M., and Section 24, Township 16, North of Range 9, West, W. M.

EASEMENTS

1. Easement granted by instrument dated August 3, 1929, by THE SAGINAW TIMBER COMPANY upon, over, and across the East Half of the Northwest Quarter (E $\frac{1}{2}$ of NW $\frac{1}{4}$) of Section Twenty (20) Township Sixteen (16) North, Range Eight (8) West, W. M., which instrument was recorded in Book 196 of Deeds on page 612 of the records of the County Auditor for Grays Harbor County, Washington.

2. Easement granted by instrument dated July 22, 1932, by MILWAUKEE LAND COMPANY, a corporation, upon, over, and across the following described lands:

Tract 1.—A strip of land fifty (50) feet in width, being twenty-five (25) feet on each side of the center line of the transmission and power line, of the Western Washington Electric Light & Power Company, as the said center line is now surveyed, located, and constructed over and across the East Half of the Northeast Quarter (E $\frac{1}{2}$ NE $\frac{1}{4}$) and the East Half of the Southeast Quarter (E $\frac{1}{2}$ SE $\frac{1}{4}$) of Section Thirty (30) Township Sixteen (16) North of Range Eight (8) West, Willamette Meridian; saving and excepting therefrom

such portions of said strip of land as may overlap and conflict with the right-of-way of State Road No. 13, as now located and constructed and of record in the office of the State Highway Engineer at Olympia, Washington; the center line of said transmission and power line being more particularly described as follows, to wit:

Beginning on the North line of said Section Thirty (30) at approximately Engineers Station 106+26 Transmission Line Survey, at a point which is S. 88°46' W. 506.9 feet distant from the corner common to Sections 19, 20, 29, and 30, T. 16 N., R. 8 W., W. M., and N. 88°46' East 107.5 feet distant from the intersection of said Section line with the center line of State Road No. 13, at approximately Station 463+85; thence from said point of beginning running S. 21°26' W. 370.9 ft.; thence S. 4°40' W. 857.3 ft.; thence S. 7°20' W. 4,120 ft. more or less to an intersection with the South boundary of said Section 30, at a point which is S. 88°41' W. 1,326 ft. distant from the corner common to Sections 29, 30, 31, and 32, T. 16 N., R. 8 W., W. M., and S. 88°41' W. 27.5 ft. distant from the intersection of said line with the center line of State Road No. 13; the aforesaid tract containing approximately 4.12 acres.

Tract 2.—A strip of land fifty (50) feet in width being twenty-five (25) feet on each side of the center line of the transmission and power line of the Western Washington Electric Light & Power Company, as the said center line is now surveyed, located, and constructed over and across Lots Three (3) and Five (5) and the Southeast Quarter of the Northwest Quarter (SE $\frac{1}{4}$ NW $\frac{1}{4}$) of Section Six (6) Township Fifteen (15) North of Range Eight (8) West, Willamette Meridian; saving and excepting therefrom such portions of said strip of land as may overlap and conflict with the right-of-way of State Road No. 13, as now located and constructed and of record in the office of the State Highway Engineer at Olympia, Washington; the center line of said transmission and power line being more particularly described as follows, to wit:

Beginning on the North line of said Section Six (6) at approximately Engineers Station 217+69.2 Transmission Line Survey, at a point which is N. 87°12' E. 1,678.9 ft. more or less distant from the corner common to Sections 1, 6, 31, and 36, Townships 15 and 16 North, Ranges 8 and 9, West of Willamette Meridian; thence from said point of beginning running S. 24°56' W. 1,451.8 ft.; thence S. 38°45' W. 525.5 ft.; thence S. 46°30' W. 977.9 ft.; thence S. 42°35' W. 43.3 ft. more or less to an intersection with the West boundary of said Section 6 at a point which is North 296.0 ft. distant, more or less, from the quarter section corner between Sections 1 and 6, and is approximately at Engineers Station 247+67.7 Transmission Line Survey, and is approximately 45 ft. easterly from the center line of State Road No. 13, the aforesaid tract containing approximately 1.9 acres.

Tract 3.—A strip of land fifty (50) feet in width, being twenty-five (25) feet on each side of the center line of the transmission and power line of the Western Washington Electric Light & Power Company as the said center line is now surveyed, located, and constructed over and across the West half of the Northeast Quarter (W $\frac{1}{2}$ NE $\frac{1}{4}$) of Section Twelve (12) Township Fifteen (15) North, Range Nine (9) West, Willamette Meridian, the center line of said transmission and power line being more particularly described as follows, to wit:

Beginning on the North line of said Section Twelve (12) at approximately Engineers Station 283+83.4 Transmission Line Survey, at a point which is S. 88°14' E. 561.7 ft., more or less, distant from the quarter section corner between Sections 1 and 12, T. 15 N., R. 9 W., W. M., thence running S. 4°45' E. 2,671.6 ft., more or less, to an intersection with the South line of the W $\frac{1}{2}$ NE $\frac{1}{4}$ of said Section Twelve (12), the aforesaid tract containing approximately 3.10 acres.

Tract 4.—A strip of land fifty (50) feet in width being twenty-five (25) feet on each side of the center line of the transmission and power line of the Western Washington Electric Light & Power Company, as the said center line is now surveyed, located, and constructed over and across the East Half of the Southwest Quarter (E $\frac{1}{2}$ SW $\frac{1}{4}$) Section Twenty-Four (24) Township Fifteen (15) North, Range Nine (9) West, Willamette Meridian; saving and excepting therefrom such portions of said strip of land as may overlap and conflict with the right-of-way of State Road No. 13, as now located and constructed and of record in the office of the State Highway Engineer at Olympia, Washington; the center line of said transmission and power line being more particularly described as follows, to-wit:

Beginning on the North line of said $E\frac{1}{2}SW\frac{1}{4}$ of Section 24, at approximately Engineers Station 419+40 Transmission Line Survey, which point is easterly 45.0 ft. distant from and opposite the center line of State Road No. 13, at approximately Station 855+50, thence from said point of beginning, running S. $31^{\circ}01'$ W. 2,060 ft., more or less, to an intersection with the west boundary line of the $SE\frac{1}{4}SW\frac{1}{4}$ of said Section 24 at approximately Engineers Station 440+00 Transmission Line Survey, and opposite and distant 45 ft. easterly from the center line of State Road No. 13 at approximately Station 876+10, the aforesaid tract containing approximately 0.90 acres, which instrument was recorded in Book 213 of Deeds on page 404 of the records of the County Auditor for Grays Harbor County, Washington, and in Book 110 of Deeds on page 255 of the records of the County Auditor for Pacific County, Washington.

3. Easement granted by instrument dated August 12, 1929, by WEYERHAEUSER TIMBER COMPANY, a corporation, upon, over, and across the Northeast quarter of the Northeast quarter ($NE\frac{1}{4}$ of $NE\frac{1}{4}$) of Section twenty-five (25) in Township Seventeen (17) North of Range Nine (9) West of W. M., the Southwest quarter of the Southwest quarter ($SW\frac{1}{4}$ of $SW\frac{1}{4}$) of Section Twenty-nine (29) in Township Seventeen (17) North of Range Eight (8) West of W. M., the Southeast Quarter of the Northwest quarter ($SE\frac{1}{4}$ of $NW\frac{1}{4}$), and the East half of the Southwest quarter ($E\frac{1}{2}$ of $SW\frac{1}{4}$) of Section Seventeen (17) in Township Sixteen (16) North of Range Eight (8) West of W. M., the Southeast quarter of the Southeast quarter ($SE\frac{1}{4}$ of $SE\frac{1}{4}$) of Section Nineteen (19) in Township Sixteen (16) North of Range Eight (8) West of W. M., the North half of the Northeast quarter ($N\frac{1}{2}$ of $NE\frac{1}{4}$), the Southwest quarter of the Northeast quarter ($SW\frac{1}{4}$ of $NE\frac{1}{4}$) the East half of the Southwest quarter ($E\frac{1}{2}$ of $SW\frac{1}{4}$), and the Northwest quarter of the Southeast quarter ($NW\frac{1}{4}$ of $SE\frac{1}{4}$) of Section Thirty-one (31) in Township Sixteen (16) North of Range Eight (8) West of W. M., the Southeast quarter of the Northeast quarter ($SE\frac{1}{4}$ of $NE\frac{1}{4}$) and the Southeast quarter ($SE\frac{1}{4}$) of Section One (1) in Township Fifteen (15) North Range Nine (9) West of W. M., and the West half of the Northeast Quarter ($W\frac{1}{2}$ of $NE\frac{1}{4}$) and the West half of the Southeast quarter ($W\frac{1}{2}$ of $SE\frac{1}{4}$) of Section Thirteen (13) in Township Fifteen (15) North of Range Nine (9) West W. M., the center line of said easement being more particularly described in said instrument, which instrument was recorded in Book 102 of Deeds on page 128 of the records of the County Auditor for Pacific County, Washington, and in Book 199 of Deeds on page 589 of the records of the County Auditor for Grays Harbor County, Washington.

4. Easement granted by instrument dated July 30, 1929, by NORTHERN PACIFIC RAILWAY COMPANY, a corporation, upon, over and across Lot Two (2), Southwest Quarter of the Northeast Quarter ($SW\frac{1}{4}$ of $NE\frac{1}{4}$), and the Southeast Quarter ($SE\frac{1}{4}$) of Section One (1) in Township Fourteen (14) North of Range Nine (9) West, W. M., which instrument was recorded in Book 102 of Deeds on pages 83 to 84, inclusive, of the records of the County Auditor for Pacific County, Washington.

5. Easement granted by Order of the Commissioner of Public Land for the State of Washington, dated July 22, 1929, upon, over, and across certain tide lands in Section Eighteen (18), Township Fourteen (14) North, Range Eight (8) West, W. M., more particularly described in said Order, and which Order was recorded in Book 102 of Deeds on page 84 of the records of the County Auditor for Pacific County, Washington.

6. Easement granted by instrument dated September 7, 1929, by JOHN G. SMITH AND ALMA SMITH, his wife, upon, over, and across the Northeast Quarter of the Northwest Quarter ($NE\frac{1}{4}$ of $NW\frac{1}{4}$) of Section Seventeen (17), Township Sixteen (16) North, Range Eight (8) West, W. M., which instrument was recorded in Book 196 of Deeds on page 613 of the records of the County Auditor for Grays Harbor County, Washington.

7. Easement granted by instrument dated August 3, 1929, by SAGINAW LOGGING COMPANY, a corporation, upon, over, and across the following described real estate in the County of Grays Harbor, State of Washington, to wit:

1. That portion of the Northeast quarter ($NE\frac{1}{4}$) of the Northwest quarter ($NW\frac{1}{4}$), Section Seventeen (17), Township Sixteen (16) North, Range Eight (8) West, W. M., lying Easterly of the Westerly right-of-way line of the Grays Harbor Pacific Railway Line as now located over and across said $NE\frac{1}{4}$ of $NW\frac{1}{4}$ of said section, township, and range.

2. That portion of the Northwest quarter ($NW\frac{1}{4}$) of the Northwest quarter ($NW\frac{1}{4}$) of Section Thirty-two (32), Township Seventeen (17) North, Range Eight (8) W., W. M., lying Westerly of the existing North River County Road

in said NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of said section, township, and range, which instrument was recorded in Book 196 of Deeds on page 611 of the records of the County Auditor for Grays Harbor County, Washington.

8. Easement granted by instrument dated June 18, 1929, by WILLIAM M. WINDER and LILLIAN WINDER, upon, over, and across the Southwest Quarter of the Northeast Quarter (SW $\frac{1}{4}$ of NE $\frac{1}{4}$), Section Thirty (30), Township Seventeen (17) North, Range Eight (8), West W. M., which instrument was recorded in Book 196 of Deeds on page 614 of the records of the County Auditor for Grays Harbor County, Washington.

9. Easement granted by instrument dated August 12, 1929, by WEYERHAEUSER LOGGED OFF LAND COMPANY, a corporation, upon, over, and, across Lot Four (4), the Southwest Quarter of the Northwest Quarter (SW $\frac{1}{4}$ of NW $\frac{1}{4}$), and the West half of the Southwest Quarter (W $\frac{1}{2}$ of SW $\frac{1}{4}$) of Section Five (5) in Township Sixteen (16) North of Range Eight (8) West of W. M., and the West half of the Northwest Quarter (W $\frac{1}{2}$ of NW $\frac{1}{4}$), and the Northwest Quarter of the Southwest Quarter (NW $\frac{1}{4}$ of SW $\frac{1}{4}$) of Section Twenty-five (25) in Township Fifteen (15) North of Range Nine (9) West of W. M., the center line of said easement being more particularly described in said instrument, which instrument was recorded in Book 102 of Deeds on page 133 of the records of the County Auditor for Pacific County, Washington, and in Book 199 of Deeds on page 587 of the records of the County Auditor for Grays Harbor County, Washington.

10. Easements granted by the Order of Necessity, Judgment and Decree of Appropriation, being Cause No. 26721, by the Superior Court of the State of Washington for Grays Harbor County, in a cause entitled *Western Washington Electric Light & Power Company, a corporation, Petitioner, vs. Grays Harbor Commercial Company, a corporation, Peter Oseng, a widower, Carl G. Glander, a bachelor, and Tom Svendsen, a widower, respondents*, upon, over, and across the lands more particularly described in said decree of appropriation, a certified copy of such decree was recorded in Book 200 of Deeds on page 190 of the records of the County Auditor for Grays Harbor County, Washington.

11. Easement granted by instrument dated June 19, 1929, by J. R. SNYDER and ABBY SNYDER, upon, over, and across Block One (1) and vacated View Street and South Half (S $\frac{1}{2}$) of vacated Prospect Avenue, all in Riverside Addition to Raymond, according to the plat thereof on file and of record in the office of the Auditor of Pacific County, Washington, which instrument was recorded in Book 102 of Deeds on page 75 of the records of the County Auditor for Pacific County, Washington.

12. Easement granted by instrument dated April 23, 1929, by MARY MILLER, a widow, upon, over, and across the South Half (S $\frac{1}{2}$) of Lot Two (2) and the North Sixteen (16) acres of Lot Three (3), Section Eighteen (18), Township Fourteen (14) North, Range Eight (8) West, W. M., which instrument was recorded in Book 102 of Deeds on page 78 of the records of the County Auditor for Pacific County, Washington.

13. Easement granted by instrument dated June 19, 1929, by ERNEST F. RHODES and ALLIE B. RHODES, husband and wife, and O. V. WEBBER, a widower, upon, over, and across Lot One (1) and the North Half (N $\frac{1}{2}$) of Lot Two (2) and the West Eighteen and One-half (18 $\frac{1}{2}$) acres of the Northeast Quarter (NE $\frac{1}{4}$) of the Southwest Quarter (SW $\frac{1}{4}$) of Section Eighteen (18), Township Fourteen (14) North, Range Eight (8) West, W. M., and Tax Lot Seven (7) in the Northeast Quarter (NE $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) of Section Thirteen (13), Township Fourteen (14) North, Range Nine (9) West, W. M., and the North Half (N $\frac{1}{2}$) of Prospect Avenue, as shown on the plat of Riverside Addition to Raymond which plat is on file and of record in the office of the Auditor of said Pacific County, which instrument was recorded in Book 102 of Deeds on page 80 of the records of the County Auditor for Pacific County, Washington.

14. Easement granted by instrument dated April 25, 1929, by LESLIE V. RAYMOND and STELLA J. RAYMOND, upon, over and across the East Half (E $\frac{1}{2}$) of the Southeast Quarter (SE $\frac{1}{4}$) of Section Twelve (12) and the Northeast Quarter (NE $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$), except Tax Lot 7, of Section Thirteen (13); all in Township Fourteen (14) North, Range Nine (9) West, W. M., which instrument was recorded in Book 102 of Deeds on page 78 of the records of the County Auditor for Pacific County, Washington.

15. Easement granted by instrument dated June 12, 1929, by CITY OF RAYMOND, a municipal corporation, upon, over, and across a strip of land fifty (50) feet in width across the City of Raymond Water Supply Reserve known as Tax Lot No. Three (3) in the Northeast Quarter (NE $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$)

of Section 12, Township 14 North, Range 9 West of Willamette Meridian; more particularly set forth on map attached to original instrument; which instrument was recorded in Book 102 of Deeds on page 82 of the records of the County Auditor for Pacific County, Washington.

16. Easement granted by instrument dated April 24, 1929, by WILLIAM R. JOHNSON and MARGARET J. JOHNSON, upon, over, and across the Northeast Quarter (NE $\frac{1}{4}$) of Section Twelve (12), Township Fourteen (14) North, Range Nine (9) West, W. M., which instrument was recorded in Book 102 of Deeds on page 72 of the records of the County Auditor for Pacific County, Washington.

17. Easement granted by instrument dated June 13, 1929, by W. H. FRIBLEY and RUTH C. FRIBLEY, his wife, upon, over, and across all that portion of the East Half (E $\frac{1}{2}$) of the Northwest Quarter (NW $\frac{1}{4}$) of Section Thirty-Six (36), and the South Half (S $\frac{1}{2}$) of the Southwest Quarter (SW $\frac{1}{4}$) of Section Twenty-Five (25), all in Township Fifteen (15) North, Range Nine (9) West, W. M., abutting and lying within twenty-five (25) feet of State Road No. 13; which instrument was recorded in Book 102 of Deeds on page 75 of the records of the County Auditor for Pacific County, Washington.

18. Easement granted by instrument dated June 28, 1929, by S. M. MAULDING and MAUDE MAULDING, his wife, upon, over, and across the Southwest Quarter (SW $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$) Section Thirty-six (36) Township Fifteen (15) North, Range Nine (9) West, together with the right to enter upon that portion of the Northwest Quarter (NW $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$) and the Northeast Quarter (NE $\frac{1}{4}$) of the Southwest Quarter (SW $\frac{1}{4}$) of said Section Thirty-six (36) Township Fifteen (15) North, Range Nine (9) West, abutting and lying within twenty-five (25) feet of State Road #13 as now located over and across said Section Thirty-six (36); which instrument was recorded in Book 102 of Deeds on page 71 of the records of the County Auditor for Pacific County, Washington.

19. Easement granted by instrument dated August 9, 1929, by MAUDE MAULDING, a widow, upon, over, and across the following-described land, to wit, all that portion of the Northwest Quarter (NW $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$) and the Northeast Quarter (NE $\frac{1}{4}$) of the Southwest Quarter (SW $\frac{1}{4}$) of said Section Thirty-six (36), Township Fifteen (15) North, Range Nine (9) West, abutting and lying within twenty-five (25) feet of State Road No. 13 as now located over and across said Section Thirty-six (36), abutting and lying within Twenty-five (25) feet of State Highway No. 13, which instrument was recorded in Book 102 of Deeds on page 77 of the records of the County Auditor for Pacific County, Washington.

20. Easement granted by instrument dated June 13, 1929, by PAUL ZAWDZKI, a bachelor, upon, over, and across the following lands: All that portion of the South ten (10) acres of the Southwest Quarter (SW $\frac{1}{4}$) of the Southwest Quarter of Section Twenty-four (24), Township Fifteen (15) North, Range Nine (9) West, W. M. abutting and lying within twenty-five (25) feet of State Highway No. 13; which instrument was recorded in Book 102 of Deeds on page 73 of the records of the County Auditor for Pacific County, Washington.

21. Easement granted by instrument, dated August 23, 1929, by GEORGIA SCHWINTZ, EARL N. SCHWINTZ, A. G. RUGGER, and NETTIE C. RUGGER, upon, over, and across all that portion of the North thirty (30) acres of the Southwest Quarter (SW $\frac{1}{4}$) of the Southwest Quarter (SW $\frac{1}{4}$) of Section Twenty-four (24), Township Fifteen (15) North, Range Nine (9) West, W. M., abutting and lying within twenty-five (25) feet of State Highway No. 13; which instrument was recorded in Book 102 of Deeds on page 73 of the records of the County Auditor for Pacific County, Washington.

22. Easement granted by instrument dated July 15, 1929, by B. W. JOHNSON, a widower, upon, over, and across all that portion of the Southwest Quarter (SW $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) and the Southeast Quarter (SE $\frac{1}{4}$) of the Northwest Quarter (NW $\frac{1}{4}$) of Section Twenty-four (24), Township Fifteen (15) North, Range Nine (9) West, W. M., abutting and lying within twenty-five (25) feet of the easterly right-of-way line of State Road No. 13; which instrument was recorded in Book 102 of Deeds on page 74 of the records of the County Auditor for Pacific County, Washington.

23. Easement granted by instrument dated September 18, 1929, by EDWIN H. FLICK and MADELINE M. FLICK, upon, over, and across all that portion of the southwest quarter (SW $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) and the Southeast Quarter (SE $\frac{1}{4}$) of the Northwest Quarter (NW $\frac{1}{4}$) of Section Twenty-four (24), Township Fifteen (15) North, Range Nine (9) West, W. M., abutting and lying within twenty-five (25) feet of State Highway No. 13; which instru-

ment was recorded in Book 102 of Deeds on page 120 of the records of the County Auditor for Pacific County, Washington.

24. Easement granted by instrument dated April 25, 1929, by NELLIE HARVEY, a widow, upon, over, and across the Northwest Quarter of the Northeast Quarter (NW $\frac{1}{4}$ of NE $\frac{1}{4}$) of Section Twenty-four (24), Township Fifteen (15) North, Range Nine (9) West, W. M.; which instrument was recorded in Book 102 of Deeds on page 76 of the records of the County Auditor for Pacific County, Washington.

25. Easement granted by instrument dated May 8, 1929, by RAYMOND VENEER COMPANY, a corporation, upon, over, and across the West Half of the Southeast Quarter (W $\frac{1}{2}$ of SE $\frac{1}{4}$) of Section Twelve (12), Township Fifteen (15) North, Range Nine (9) West, W. M.; which instrument was recorded in Book 196 of Deeds on page 614 of the records of the County Auditor for Grays Harbor County, Washington.

26. Easement granted by instrument dated May 7, 1929, by JULIA LUCAS and STEVE LUCAS, upon, over, and across the North Half (N $\frac{1}{2}$) of Lot Nine (9), Section Eight (8), Township Sixteen (16) North, Range Eight (8) West, W. M.; which instrument was recorded in Book 196 of Deeds on page 611 of the records of the County Auditor for Grays Harbor County, Washington.

27. Easement granted by instrument dated May 3, 1929, by IDA HAVERLAND, a widow, upon, over, and across the South Half (S $\frac{1}{2}$) of Lot Nine (9) of section Eight (8), Township Sixteen (16) North, Range Eight (8) West, W. M.; which instrument was recorded in Book 196 of Deeds on page 610 of the records of the County Auditor for Grays Harbor County, Washington.

28. Easement granted by instrument dated April 26, 1929, by NIELS M. NIELSEN, a widower, upon, over, and across Tax Lot Two (2), Lot Five (5), of Section Eighteen (18), Township Fourteen (14) North, Range Eight (8) West, W. M.; which instrument was recorded in Book 102 of Deeds on page 79 of the records of the County Auditor for Pacific County, Washington.

29. Easement granted by instrument dated December 17, 1929, by JOHN G. FRY and ADELAID M. FRY, upon, over, and across the North Half of the Northeast Quarter (N $\frac{1}{2}$ of NE $\frac{1}{4}$) of Section Twenty-three (23), Township Seventeen (17) North, Range Nine (9) West, W. M.; which instrument was recorded in Book 201 of Deeds on page 247 of the records of the County Auditor for Grays Harbor County, Washington.

30. Easement granted by instrument dated December 24, 1936, by WESTERN WASHINGTON ELECTRIC LIGHT AND POWER COMPANY, a corporation, to WILLAPA ELECTRIC COMPANY, a corporation, upon, over, and across—

Tract 1.—A strip of land 50 feet wide, being 25 feet on each side of the center line of said transmission and power line as the center line is now surveyed, located, and constructed, over and across the South Half of the Northeast Quarter of the Southwest Quarter of Section 24, Township 17 North, Range 9 West, Willamette Meridian, the above center line being more particularly described as follows:

Beginning at Engineer's Station 45-50, the approximate intersection of said center line with the north boundary of the South Half of the Northeast Quarter of the Southwest Quarter of said Section 24, approximately 375 feet distant easterly from the Northwest corner thereof; thence running S. 52°23' E. 1,123.3 feet more or less to approximately Engineer's Station 56-73.3 on the Southerly boundary line of aforesaid lands, 60 feet distant more or less, Westerly from the Southeast corner thereof.

Tract 2.—A strip of land 50 feet wide, being 25 feet on each side of the center line of said transmission and power line as the center line is now surveyed, located and constructed, over and across the West Half of the Northwest Quarter of Section 32, Township 17 North, Range 8 West, Willamette Meridian, lying East of the existing North River County Road in said W $\frac{1}{2}$ of NW $\frac{1}{4}$ said Section, the above center line being more particularly described as follows:

Beginning at a point approximately Engineer's Station 160-30, being the approximate intersection of said center line and the Easterly line of the existing North River County Road, distant Easterly 280 feet and Southerly 425 feet, more or less, from the Northwest corner of said Section 32, thence running S. 23°31' E. 970 feet more or less, to Engineer's Station 170-00, thence S. 25°43' E. 690.8 feet to Engineer's Station 176-90.8, in, and near the westerly line of the right-of-way of the Oregon-Washington Railroad & Navigation Company, at a point approximately opposite to the Railway Engineer's Station 281-10. Engineer's Station 176+ 90.8 is equivalent to Engineer's Station 741-00 ahead.

Tract 3.—A strip of land 50 feet wide, being 25 feet on each side of the center line of said transmission and power line as the center line is now surveyed, located and constructed, over and across Lot 3, Section 8, Township 16 North, Range 8 West, Willamette Meridian, the above center line being more particularly described as follows:

Beginning at the intersection of the center line of said transmission and power line with the Westerly right-of-way line of the Oregon-Washington Railroad & Navigation Company, said point being approximately Engineer's Station 844-00, and 315 feet southerly and 130 feet easterly from the Northwest corner of said Lot 3, thence running S. 16°47' E. 663.6 feet; thence S. 16°35' E. 311.4 feet to Engineer's Station 853-75 on the North bank of North River, the Southerly boundary of said Lot 3.

Tract 4.—A strip of land 50 feet wide, being 25 feet on each side of the center line of said transmission and power line as the center line is now surveyed, located, and constructed, over and across the South Half (S½) of Lot Nine (9) and the East Half (E½) of the Southeast quarter (SE¼) of the Southwest Quarter (SW¼) of Section 8, Township 16 North, Range 8 West, Willamette Meridian, the above center line being more particularly described as follows:

Beginning at the intersection of said center line with the North boundary of the S½ of said Lot 9, Westerly 660 feet more or less from the Northeast corner thereof, and approximately at Engineer's Station 861-40, thence running S. 16°35' E. 1,571 feet, more or less, to Engineer's Station 877-11; thence S. 12°02' W. 505 feet, more or less, to approximately Engineer's Station 882-16, said point being the intersection of said center line and the South line of Section 8. Westerly 300 feet more or less, from the Quarter Section Corner between Sections 8 and 17, Township 16 North, Range 8 West, Willamette Meridian, which instrument is recorded in Book 220 of Records of Deeds at Page 111, Grays Harbor County, State of Washington.

(a) A perpetual easement granted in instrument dated December 24, 1936, by the Western Washington Electric Light & Power Company upon, over, and across the lands lying immediately North and West of the Willapa Electric Company's Tide Flat Substation, and over and across Eighth Street extended in the City of Raymond, Washington, which instrument is recorded in Book 115 of Deeds, page 209, of the records of the County Auditor for Pacific County, Washington.

(b) A right-of-way and perpetual easement granted in instrument dated December 24, 1936, by Western Washington Electric Light & Power Company upon, over, and across a portion of Lot 8, Section 18, Township 14 North, Range 8 West, W. M., as described in said instrument recorded in Book 115D of Deeds, page 209, records of the County Auditor of Pacific County, Washington.

(c) Easement granted in instrument dated February 1st, 1939, by Grays Harbor Railway and Light Company, a corporation, upon, over, and across East Half (E½) of Southeast Quarter (SE¼) of the Southwest Quarter (SW¼), Section Eight (8), Township 16 North, Range 8 West, W. M., which instrument is of record in Grays Harbor County, Washington.

RESERVATION—FLOWAGE EASEMENT

31. The Willapa Electric Company, a corporation, its successors and assigns, reserves the full and perpetual right, power, privilege, and easement to overflow all portions of the steel tower electric transmission line right-of-way lying below an elevation of 120 feet above mean sea level, as determined by reference to the United States Geological Survey datum, located in, on, over, and across The West one-half (W½) Northwest quarter (NW¼), Section Thirty-two (32), Township Seventeen (17) North, Range Eight (8) West, Willamette Meridian, and West one-half (W½) West one-half (W½), Section Five (5), the Northwest quarter (NW¼) Northwest quarter (NW¼), Section Eight (8), Township Sixteen (16) North, Range Eight (8) West, Willamette Meridian, Grays Harbor County, State of Washington, in the construction, operation, and maintenance of a reservoir on the North River and its tributaries by said Company, its successors and assigns; Provided, The Willapa Electric Company, its successors and assigns, will pay the cost of elevating the concrete foundation of each and every steel tower above the high-water level of said reservoir in the event any of said foundations are inundated by the water of said reservoir.

EXHIBIT B

RIGHTS IN LAND

LAND—NORTH SIDE WILLAPA RIVER, RAYMOND, WASHINGTON

Lots One (1), Two (2), Three (3), Four (4), Five (5), Six (6), Seven (7), Eight (8), Nine (9), Ten (10), Eleven (11), Twelve (12), Thirteen (13), Fourteen (14); all in Block Two (2): In Riverside according to the official plat thereof on file in the office of the County Auditor of Pacific County, Washington; situated in the County of Pacific, State of Washington.

EXHIBIT C

PERSONAL PROPERTY

1. *Electric transmission system.*—A 66,000-volt transmission line and switching station framework, constructed with 3-4/0 H. D. 7-strand bare copper conductors, suspension type insulators and fittings, mounted on 177 fabricated steel towers and one spruce pole, beginning at the undeveloped Cosmopolis Substation site in the Northwest quarter (NW¼) Northeast Quarter (NE¼), Section Twenty-Three (23), Township Seventeen (17) North, Range Nine (9) West, Willamette Meridian, Grays Harbor County, Washington; thence in a southeasterly direction over and across Sections Twenty-four (24) and Twenty-Five (25), Township Seventeen (17) North, Range Nine (9) West, Willamette Meridian, Sections Thirty (30) and Thirty-Two (32), Township Seventeen (17) North, Range Eight (8) West, Willamette Meridian; thence in a southerly direction over and across Sections Five (5), Eight (8), Seventeen (17), Twenty (20), Nineteen (19), Thirty (30), and Thirty-One (31), Township Sixteen (16) North, Range Eight (8) West, Willamette Meridian; Section Six (6), Township Fifteen (15) North, Range Eight (8) West, Willamette Meridian, Sections One (1), Twelve (12), Thirteen (13), Twenty-Four (24), Twenty-Five (25), and Thirty-Six (36), Township Fifteen (15) North, Range Nine (9) West, Willamette Meridian, Sections One (1), Twelve (12), and Thirteen (13), Township Fourteen (14) North, Range Nine (9) West, Willamette Meridian, Sections Eighteen (18), Township Fourteen (14) North, Range Eight (8) West, Willamette Meridian, to Raymond Substation located on Lot Sixteen (16), Section Nineteen (19), Township Fourteen (14) North, Range Eight (8) West, Willamette Meridian, Pacific County, Washington, a distance of 19.85 miles.

2. *Raymond substation equipment.*—An outdoor substation consisting of a fabricated steel structure with concrete foundation, 3-1,000-kilovolt ampere Maloney transformers, Type OISC, single-phase, 66,000/22,000 volts primary, 500 kilovolt amperes, 6,900/13,800 kilovolts secondary, 500 kilovolt amperes, 23,000 kilovolts, tertiary, lightning arrestors, disconnects, switches, 13,800-volt bus, 23,000-volt bus, supports, and appurtenances, all enclosed in a steel-wire fence located on Lot Sixteen (16), Section Nineteen (19), Township Fourteen (14) North, Range Eight (8) West, Willamette Meridian, Pacific County, State of Washington.

3. Inventory of Material and Supplies as of September 30, 1938.

	Quantity	Unit price	Extension
Transformer Manhole Gaskets.....	6	\$1.72	\$10.34
Conductor Copper 4/0 7-strand bare 140#.....	140#	.2116	29.61

NOTE.—The following eleven (11) items are not priced or carried on Willapa Electric Company's books as Materials and Supplies:

	Quantity		Quantity
S#316802 Westinghouse suspension insulators.....	49	#10093 Thomas suspension clamps.....	3
4/0 copper splicing sleeves.....	8	#3709 Thomas oval eyes.....	46
#437080 Westinghouse strain tongue clevises.....	1	#8213-8 C-B strain clamps.....	11
#5642 Thomas socket tongue.....	2	#6795 Hubbard 3/4 U bolts.....	13
#5810 Thomas hooks.....	30	#6437 Locke V clevises.....	13

Miscellaneous steel plates and angles, with bolts and nuts, approximately 197 pieces, 3,080 pounds.

CONTRACT BETWEEN THE UNITED STATES OF AMERICA, REPRESENTED BY THE BONNEVILLE PROJECT, DEPARTMENT OF THE INTERIOR, PAUL J. RAVER, ADMINISTRATOR, AND THE WILLAPA ELECTRIC COMPANY

IT IS AGREED by and between the UNITED STATES OF AMERICA, Department of the Interior, represented by the Bonneville Administrator, and the WILLAPA ELECTRIC COMPANY, a Washington corporation, that the closing date of the contract for the purchase of the Raymond-Cosmopolas transmission line of the Willapa Electric Company dated March 8, 1939, shall be extended to November 1, 1939, upon the condition that the Government shall pay to the Company, in addition to the purchase price set forth in said contract, the sum of FORTY-ONE DOLLARS (\$41.00) and the Company shall pay the 1940 taxes on said property and save the Government harmless from any liability or obligation with respect to such real property taxes.

Dated at Portland, Oregon, September 29, 1939.

UNITED STATES OF AMERICA,
Represented by the Bonneville Project, Department of the Interior,
By PAUL J. RAVER, Administrator.

Approved as to form HSM, Legal Division.

WILLAPA ELECTRIC COMPANY,
A Washington Corporation.
By J. R. SNIDER, Vice President.

Attest:

APPENDIX D

PROGRESS OF CONSTRUCTION ACTIVITIES

The following discussion of the details of the activities under the various appropriations breaks each Appropriation or Official Project into the Work Orders and Job Orders which it covers.

The purpose of each item, the extent of its design and construction accomplished, are each briefly covered.

Appropriation No. 148/90614C

This appropriation covers the construction of a double-circuit, 230,000-volt line from Bonneville to Vancouver, Washington, a 230,000-volt substation at North Bonneville, a 230,000-volt and 115,000-volt substation at Vancouver, Washington, and 13,800-volt substations at North Bonneville, Washington, and Bonneville, Oregon.

Work under this appropriation is performed under Work Order C5 (Job Orders C5-J1, C5-J2, and C5-J3), Work Orders C7 and C8, and Work Order C13 (Job Orders C13-J1 and C13-J2).

Appropriation 148/90614C, Work Order C5, Bonneville-Vancouver Transmission Lines

Job Order C5-J1—Bradford Island Crossing.—This job order covers the construction of that part of the Bonneville-Vancouver lines where they cross from the Bonneville power house over the Columbia River to North Bonneville, Washington, by way of Bradford Island. The right-of-way for the Bradford Island Crossing is 560 feet wide; it is arranged to accommodate five single circuit crossings spaced 90 feet apart center to center. At present two of these crossings have been designed and constructed.

The Columbia Gorge in the locality of the Bonneville Dam Project is considered to be one of the heaviest ice loading zones in the United States. For this reason the Bradford Island Crossing circuits have been designed to withstand the loading condition of a 2-inch radial ice formation on the conductors and overhead ground wires with an 8-pound per square foot wind pressure at 0° F. The design of the Bradford Island Crossing was also governed by minimum clearances established by the U. S. Engineer Department for maintenance and operation work around the Bonneville Dam Project.

A special 801,900 circular mil aluminum cable steel reinforced, having a copper equivalent of 531,120 circular mils, is used on these crossings. This conductor

has a diameter of 1.260 inches, weighs 1.8075 pounds per lineal foot, and possesses an ultimate rated strength of 64,500 pounds. Two $\frac{3}{4}$ -inch extra high strength galvanized steel stranded cables are used for overhead ground wires on the crossings.

The conductors and overhead ground wires are carried from the switching and bus structure on the roof of the Bonneville power house over special 321-foot single circuit suspension towers located on Bradford Island to special 120-foot dead-end towers on the Washington shore of the Columbia River, a distance of approximately 3,300 feet. The conductors are spaced on the suspension towers 30 feet apart in a horizontal plane. The ground wires are supported 24½ feet above the plane of the conductors and about 10 feet in from the vertical projection of the outer conductors.

Six strings of insulators, each consisting of 18 units, mounted on special dead-ending yokes, attach the conductors at the power house bus structure and at the dead-end towers. A special assembly of two triple-strain yokes of insulators, each string containing 16 units, supports the conductor in a two-clamp arrangement on the Bradford Island towers.

Construction of the crossings began April 11, 1939, by West Coast Construction Company of Seattle, Washington. They were completed and placed in service on November 30, 1939.

Job Order C5-J2—Bonneville-Vancouver Lines No. 1 and No. 2.—The Bonneville-Vancouver line is a double circuit, three-phase, 230-kv. transmission line of steel tower construction. It is nearly 37 miles long and extends from the north shore of the Columbia River near North Bonneville, Washington, to the Ampere (North Vancouver, Washington) substation. The lines follow, for the most part, in a direct line west from North Bonneville, approximately paralleling the general course of the Columbia River in that stretch.

The terrain of the easterly third of the line is rough and mountainous and covered in parts with heavy timber; the middle third of the line follows through rolling country and has some scattered timber on it; the westerly end is comparatively flat and runs through both unimproved and cultivated areas.

The line will have a normal operating capacity of approximately 120,000 kilovolt amperes and will serve as a primary means of power distribution for the Western Oregon and Western Washington territories.

The Bonneville-Vancouver lines are built on a right-of-way 300 feet wide; the lines are spaced 125 feet apart, center to center, 62½ feet each side of the center line of the right-of-way.

For design purposes the line is divided into two loading zones: the easterly third of the line is designed for a 1-inch radial ice formation on the conductors and overhead ground wires and an 8-pound-per-square-foot wind pressure at 0° F., the balance of the line is designed for a ½-inch radial ice formation on the wires with an 8-pound-per-square-foot wind pressure at 0° F. Throughout the line 795,000 circular mil Aluminum cable steel reinforced, having a copper equivalent of 500,000 circular mils, is used for conductor. The average spacing of towers along the line is 831 feet for the 1-inch ice-loading zone and 1,113 feet for the ½-inch ice-loading zone. This line was completed and placed in service on November 30, 1939.

Job Order C5-J3—W. P. A. Clearing.—The clearing operations on the right-of-way for the Bonneville-Vancouver Transmission Lines were started August 23, 1938, by forces of the Works Progress Administration, and the right-of-way is now approximately 93 percent cleared. The clearing remaining involves "danger trees" and the burning of timber which was held up by dry forest weather conditions.

Appropriation 148/906140, Work Order C7, North Bonneville Substation

The North Bonneville Substation will be located across the Columbia River from the Bonneville Power Plant near the town of North Bonneville, Skamania County, Washington. This station is to be primarily a high-voltage switching station for interconnecting the 230-kilovolt transmission lines with the Bonneville Plant, North Vancouver Substation and Grand Coulee Plant. Ultimately there may be four 230-kilovolt lines and one 115-kilovolt line from the Bonneville Plant into the station, three 230-kilovolt lines from the station to North Vancouver, and two 230-kilovolt lines from the station to Grand Coulee. Provision will be made for addition of a 115-kilovolt bus so that 115-kilovolt lines can be added as required. The 1939 construction program included two lines to North Vancouver, one line to Grand Coulee, and two lines from the Bonneville Plant to the substation. A future second line to Grand Coulee is planned.

The station is being laid out so that a 75,000-kilovolt ampere, 230/115/13.8-kilovolt transformer bank can be installed either to step up power from the Bonneville Plant for the 230-kilovolt bus or to step down from the bus for 115-kilovolt transmission lines. This transformer bank will have a 13.8-kilovolt tertiary winding which can be used for local distribution and will supplant the previously planned North Bank Substation. When this station is fully developed it will have a 230-kilovolt double bus arrangement for flexibility and interconnecting the transmission lines and feeder lines from the power plant.

The station will be all outdoors except for the switchboard and certain other small accessories which will be in a reinforced concrete control house.

A site has been secured approximately one mile northwest of the Bonneville powerhouse on the north site of the Evergreen Highway. The site has been cleared and partially graded. Plans for grading the site and for the general lay-out of equipment in the yard have been prepared.

Buildings which are planned for this substation site include a control house and a warehouse with track and facilities for unloading transformers. Plans for these buildings will be made to fit in with future requirements.

On December 31, 1939, four 230-kilovolt steel dead-end towers had been installed as part of the initial installation, and the 230-kilovolt, 3-cycle oil circuit breakers and the 230-kilovolt disconnecting switches for this substation were being manufactured.

Appropriation 148/90614C, Work Order C8, North Vancouver Substation

The North Vancouver Substation is located approximately one mile north of the City of Vancouver, Clark County, Washington, on the east side of the Pacific Railroad siding at Ampere.

This substation will be the main distributing point of Bonneville power for Western Oregon and Washington. The main transmission lines from the Bonneville Power Plant will terminate at this substation and branch out north through the City of Kelso and south to Eugene. The substation is also planned to be the main dispatching and supervisory operating center of the Bonneville system. When this substation is fully developed, it may ultimately accommodate twenty 230-kilovolt oil circuit breakers, four transformer banks, twenty-six 115-kilovolt oil circuit breakers, six 230-kilovolt lightning arresters, and nine 115-kilovolt lightning arresters, comprising switching and high-speed protective, transformer and voltage control equipment for the transmission system for the States of Washington and Oregon.

The plans for the 1939 construction program, in addition to the purely electrical equipment and structures, include the construction of a warehouse, a transformer unloading tower, machine shops, and other operating facilities. The substation site is provided with outdoor storage areas connected by a standard gauge railroad spur to the Northern Pacific Railroad track. All substation grounds are to be landscaped in keeping with the master plan.

The initial installation at this substation includes two 230-kilovolt incoming lines from the Bonneville Power Plant, to be operated initially at 115 kilovolts. When 230 kilovolts is later available at Bonneville, by installation of units 3 and 4 at the powerhouse or by installation of a 115/230-kilovolt bank at North Bonneville, then at least one of the lines will be raised to 230-kilovolt operation. Three outgoing 115-kilovolt lines, one north to Kelso and two south toward Eugene, take off from double bus switching and protective equipment.

Design work on the North Vancouver Substation is at this time essentially completed except for the preparation of some detail and installation drawings.

The site location, grading, ground plans, and substation footing drawings have already been issued for use in the field. The contract drawings for the substation buildings, steel structures, switchboards, construction of the outdoor portion of substation, and other equipment have also been issued. Bids have been called on all material and equipment and delivery has been made on some items. Delivery is scheduled for the near future on the remaining items.

The fieldwork at North Vancouver Substation is well under way with the grading of the site practically complete. The grading work included leveling off the site to accommodate the future additions and expansion of the outdoor substation structures. Access roads and a railroad spur for the delivery of equipment have been constructed.

The initial substation will be completed in February 1940, and the second step in its development will be completed the following June.

Appropriation 148/90614C, Work Order C13-J1, North Bank Substation

The design of this substation is closely associated with present designs of North Bonneville Substation and is being held in abeyance until its complete requirements have been determined.

Appropriation No. 148/90614C, Work Order C13-J2, South Bank Substation

The South Bank Substation is located close to the Bonneville Power House on the south bank of the Columbia River. This substation will supply power for use of consumers at the rate schedules which provide for distribution within 15 miles of Bonneville Dam. The operating voltage will be 13,800 volts at the station, with approximately 13,200 volts expected at the consumers' receiving points.

The initial installation of this substation consists of a metal-clad switch-gear unit with four 15-kv. oil circuit breakers, a 15-kv. double bus, and two lead cable feeders from the Bonneville Power Plant. Current-limiting reactors are installed in the basement of the substation building to limit the possible short-circuit current on the oil circuit breakers.

A small station service panel and 24-volt battery are provided for operating the station, but the main meters, relays, and control switches are on the panels of the cubicles. This is to be an unattended station, therefore automatic reclosing breakers have been selected.

As of December 31, 1939, this station has been completed ready for service as soon as outgoing feeders are installed.

Appropriation No. 14-408/00513C

Appropriation 14-408/00513C provides funds for work under Public Works Administration Official Projects Nos. 752-05-168, 169, 170, and 171. The progress of the activities is given separately under each of the official projects.

Official Project No. 752-05-168

This official project covers the construction of a single-circuit, 230,000-volt transmission line from Bonneville to Grand Coulee, and a substation on the line approximately halfway between Bonneville and Grand Coulee.

Work under this official project is performed under Work Order PC15 (Job Orders PC15-J1a, PC15-J1b, PC15-J2, and PC15-J3) and Work Order PC16.

Appropriation 14-408/00513C, Official Project 752-05-168, Work Order PC15—Bonneville-Coulee Transmission Line

Job Orders PC15-J1a, J1b, J2.—The Bonneville-Coulee Line of the Bonneville Project is to be a single-circuit, three-phase, 230-kv. transmission line of steel tower construction. It will be approximately 235 miles long and will extend from the substation at North Bonneville, Washington, easterly along the Columbia River to Condit, thence to Klickitat and Goldendale, and thence east and north across the central part of the state of Washington to a connection with the switching structure of the United States Bureau of Reclamation at Grand Coulee, Washington, near the Coulee Dam.

In addition to serving as an interconnection for the Bonneville and Grand Coulee Plants, the Bonneville-Coulee Line will supply power for communities in the Yakima River Valley and for the areas to be irrigated south and east of Yakima and north and west of Pasco.

The Midway Substation is to be located in the Yakima Valley at the South bank of the Columbia River near Vernita, Washington. From this substation transmission lines are to be built for service to Yakima and Ellensburg to the west, and to Pasco to the southeast.

The steady state power limit of a single circuit 230-kilovolt line such as will be built from Bonneville to Grand Coulee varies from 50,000 to 150,000 kw., depending on the type of load it serves. For an expected average condition of load comprising 30 percent induction motors, 30 percent synchronous machines, and 40 percent resistance load, the power limit is 100,000 kilowatts.

The width of the right-of-way is 300 feet in timbered land and 250 feet in open country. The line will be 62½ feet to one side of the center line providing space for a future line.

For construction purposes the line has been divided into the three job orders numbered PC15-J1a, J1b, and J2, which cover the 33-mile, one-inch ice-loading section from North Bonneville Substation through Condit to the East Fork of Major Creek; the 102-mile, ½-inch ice section from there to the north bank of the Columbia River near Vernita, Washington; and the 100-mile, ½-inch ice section from there to Grand Coulee.

Throughout the line 795,000 C. M. aluminum cable steel reinforced, having a copper equivalent of 500,000 C. M., is to be used for conductor. The average tower spacing along the line will be approximately 917 feet for the 1-inch ice-loading zone and 1,100 feet for the ½-inch ice-loading zone.

On December 31, 1939, construction of this line was 48 percent completed. This line is scheduled for completion on August 1, 1940.

Job Order PC15-J3—W. P. A. Clearing.—Crews of the Works Progress Administration started clearing the right-of-way on December 22, 1938. To date 77 percent of the line is ready for construction.

Appropriation 14-408/00513C, Official Project 752-05-168, Work Order PC16, Midway Substation

This substation was originally called Yakima Substation, but as the location will be midway between Bonneville and Grand Coulee and some distance from Yakima, the name has been changed to Midway. Its original location was to have been near the Northern Pacific Railway Station of Outlook, Washington, but later designs were adopted placing it at the South bank of the Columbia River near Vernita, Washington. This substation will provide for distribution of Bonneville and Grand Coulee power in Eastern and Central Washington and for controlling and sectionalizing the two 230-kilovolt lines between Bonneville and Grand Coulee. Eventually the station will provide for distributing 50,000 kilowatts or more of power and will contain a synchronous condenser in addition to the transforming and distributing equipment. The initial installation will be equipped only for sectionalizing the first transmission line between Bonneville and Grand Coulee. The second stage of this substation will provide four 230-kilovolt oil circuit breakers and eight 230-kilovolt disconnecting switches to provide the utmost flexibility. A three-winding transformer bank stepping down from 230 to 115 and 13.8 kilovolts will be provided. The synchronous condenser previously mentioned will be connected to the 13.8-kilovolt winding. On the 115-kilovolt side of the transformer a bus arrangement and three 115-kilovolt oil circuit breakers will provide switching facilities for the 115-kilovolt transmission lines to Pasco and Yakima. The lines will extend on from Pasco to Walla Walla, Umatilla, and Pendleton, and from Yakima to Ellensburg and Wenatchee, permitting these cities to be supplied either from Grand Coulee or Bonneville.

For the preliminary installation a special 230-kilovolt substation dead-end tower has been ordered, as well as a steel rack for the disconnecting switch. The 230-kilovolt disconnecting switches and necessary fittings and conductor to connect to the transmission lines have been ordered. Suitable enclosures will be provided for these towers.

When future demands require additions to the substation, materials can be purchased in a minimum time by using specifications for similar equipment of other substations.

Official Project No. 752-05-169

This official project covers the construction of transmission lines from Bonneville to The Dalles, Oregon, together with substations at Hood River, Oregon, and The Dalles, Oregon.

Work under this official project is performed under Work Order PC35 (Job Orders PC35-J1, PC35-J2, PC35-J3) and Work Orders PC36 and PC37.

Appropriation 14-408/00513C, Official Project 752-05-169, Work Order PC35, Bonneville-The Dalles Transmission Line

Job Order PC35-J1—Line.—This job order covers the construction of the Bonneville-The Dalles line excepting that part of it which is designated as the "Ship Canal Crossing" (J. O. PC35-J2).

The Bonneville-The Dalles line of the Bonneville Project is to be a single-circuit, three-phase, 115-kilovolt transmission line of wood-pole construction. It will extend from the Bonneville Power House to The Dalles, Oregon, by way of Hood River, Oregon, a distance of approximately 39 miles.

The line will have a normal operating capacity of 50,000 kilovolt-amperes. The first 18 miles of the line from Bonneville are designed for a 1-inch radial ice load, and the remainder of the line is designed for a ½-inch radial ice load. A 250,000-circular mil stranded copper conductor will be used on the line except for one very long span over the Eagle Creek Canyon. The conductor to be used over the Eagle Creek Span is a 795,000-circular mil Aluminum Cable Steel Reinforced. The structures used will be of the H-Frame type and will have an average spacing of 516 feet. Specifications for the construction of the line have been prepared. This line is scheduled for completion in June 1940.

Job Order PC35-J2—Ship Canal Crossing.—This job order covers the construction of a specially designed crossing over the Ship Navigation Canal at Bonneville. This crossing is designed for a single-circuit, three-phase, 115-kilovolt operation and will meet the requirements of the War Department with respect to minimum clearances over navigable waters. This crossing will consist of four spans, having a combined length of approximately 0.8 mile. The 795,000-circular mil Aluminum Cable Steel Reinforced conductors and the overhead ground wires used on the crossing will be supported on four special steel towers. Bids for construction of this crossing were opened on December 18, 1939, and construction will start in January 1940.

Job Order PC35-J3—W. P. A. Clearing.—The operations of the Works Progress Administration on the clearing of right-of-way for the Bonneville-The Dalles Line were started on December 5, 1938. Clearing is now about 70 percent completed, with 350 acres having been cleared.

Appropriation 14-408/00513C, Official Project 752-05-169, Work Order PC36, Hood River Substation

The Hood River Substation site is located approximately a mile from the town of Hood River, on a paved highway in the highly cultivated Hood River Valley. The substation will provide for distribution of Bonneville power in the immediate vicinity. The initial equipment to be installed at this station consists of one 115-kilovolt oil circuit breaker with disconnecting switches, one bank of three 2,500-kilovolt-ampere transformers to reduce the voltage from 115 to 69 kilovolts, and a 69-kilovolt oil circuit breaker with its attendant disconnecting switches. In addition to the outdoor equipment as listed above, there will be required a substation control house which will contain the switchboard, station battery, battery charger, carrier-current equipment, and other station auxiliaries.

Plans and specifications have been completed for the construction of the control house, handholes, duct runs, and foundations required for the outdoor equipment and bus structures. Plans for the general arrangement of outdoor equipment, including grading and fencing, have also been completed. The station has been laid out with a 115-kilovolt bus which will enable the extension of the 115-kilovolt line to The Dalles with a minimum of disturbance. An additional 115-kilovolt position for any future requirement is provided by this arrangement.

All major items of equipment have been purchased or are scheduled for delivery in the near future.

Appropriation 14-408/00513C, Official Project 752-05-169, Work Order PC37, The Dalles Substation

The Dalles Substation will be located near The Dalles, Oregon, approximately one mile to the south and west of the city. This will be similar in nearly all respects to the station at Hood River. A future extension of the transmission line to Bend, Oregon, is anticipated. As this is a deferred station, no work has been done on the construction and no material has been ordered. The specifications for the oil circuit breakers, disconnecting switches, transformers, and other equipment as written for the Hood River Substation will apply to this station also.

Official Project No. 752-05-170

This official project covers the construction of transmission lines from Vancouver, Washington, to Kelso, Washington, and from Kelso to Raymond, Washington.

Work under this official project is performed under Work Order PC27 (Job Orders PC27-J1, PC27-J3), Work Order PC28, and Work Order PC30 (Job Orders PC-30-J1 and PC30-J3), and Work Order PC33.

*Appropriation 14-408/00513C, Official Project 752-05-170, Work Order PC27,
Vancouver-Kelso Transmission Line*

Job Order PC27-J1—Line.—This job order covers the construction of the Vancouver-Kelso transmission line which extends from the substation at Ampere (North Vancouver), Washington, to a substation near Kelso, Washington, a distance of approximately 41 miles.

The Vancouver-Kelso line of the Bonneville Project will be a single-circuit, three-phase, 230-kilovolt transmission line of steel-tower construction, having a designed normal operating capacity of 100,000 kilovolt-amperes. The line is designed for a ½-inch radial ice loading except for a short stretch of about 1.4 miles through the Kalama River Gorge where a 1-inch radial ice loading is used. River crossings over the Lewis, Cowlitz, and Coweman Rivers were designed to meet the requirements of the War Department for minimum clearances over navigable waters. The right-of-way for this line follows through 21.9 miles of settled areas where the width is 250 feet, and 19.1 miles through wooded hills where the width is 300 feet. A 795,000-circular-mil Aluminum Cable Steel Reinforced, having a copper equivalent of 500,000 circular mils, is to be used for conductor throughout the line. The average spacing of the towers will be 1,145 feet.

Construction of this line started on October 12, 1939, with notice to the contractor to proceed, and completion is scheduled for May 10, 1940.

Job Order PC27-J3—W. P. A. Clearing.—Works Progress Administration forces have now completed approximately 85 percent of the work required to clear the line.

*Appropriation 14-408/00513C, Official Project 752-05-170, Work Order PC28,
Kelso Substation*

The Kelso Substation will be located about one and one-half miles north of the town of Kelso, Washington, on the north side of the Cowlitz River. The site has been located on a rounded hilltop, well above the level of any recorded floodwaters. Sufficient land has been requested to take care of the ultimate installation, to provide wood-pole storage space, warehouse space, and room for future patrol or operators' cottages. As the substation is about one-half mile from a road it will be necessary to build a road from the site to the nearest highway.

The initial development provides for one incoming 115-kilovolt line, one outgoing 115-kilovolt line, and one outgoing 69-kilovolt line. As the incoming, and probably the outgoing, 115-kilovolt lines are eventually to be operated at 230 kilovolts, the station will be designed on that basis and the equipment will be so arranged that the change-over may be made in the minimum time possible.

Work done on this station covers a general design which will fit into the ultimate plan with a minimum of changes and still maintain a reasonably compact and well-laid-out initial installation. Lay-out drawings have been made showing the station in various stages of development and all of the major items of equipment have been ordered except the control building. Drawings have also been made covering the detailed plans of the bus work, cable and conduit, foundations, ground network, building equipment, and lighting plans. Practically all of the drawings covering the equipment of the initial installation have been made.

Due to revised plans which have been adopted work has been deferred on this station, although some of the materials have been ordered. A large part of these materials have been transferred for use at locations with earlier construction schedules.

*Appropriation 14-408/00513C, Official Project 752-05-170, Work Order PC30,
Kelso-Raymond Transmission Line*

Job Order PC30-J1—Line.—As originally projected this job order covered construction of the Kelso-Raymond transmission line for 115-kilovolt operation from the substation at Kelso, Washington, to a substation at Raymond, Washington, a distance of approximately 69.5 miles.

The Kelso-Raymond line of the Bonneville Project, as now designed, will be a single-circuit, three-phase, 230-kilovolt transmission line, of steel-tower construction, from Kelso to Chehalis, Washington. This section of line will be on a 300-foot right-of-way in wooded areas, and 250-foot right-of-way in open country. 795,000 C. M. Aluminum Cable Steel Reinforced conductors will be used. From

Chehalis to Raymond the line will be constructed for 115-kilovolt operation. H-Frame wood-pole structures, having an average spacing of 550 feet, will be located on the center of a 100-foot right-of-way. This section is designed for ½-inch radial ice loading conditions using 250,000 circular mil stranded copper conductors.

Construction of the wood-pole section of line was started on November 20, 1939, with a scheduled completion date of February 1940, while specifications for the construction of the steel-tower section of line are in the final stages preparatory to issuance with construction completion scheduled for June 1940.

Job Order PC30-J3—W. P. A. Clearing.—Clearing of the right-of-way by forces of the Works Progress Administration is now 69 percent completed from Kelso to Chehalis, and 82 percent complete from Chehalis to Raymond.

Appropriation 14-408/00513C, Official Project 752-05-170, Work Order PC33, Raymond Substation

The Raymond Substation will be located about one and one-half miles north of the City of Raymond. This site chosen is flat, has a good water supply, and the present Raymond-Cosmopolis transmission line crosses the area. The site also has plenty of room for storage and for future patrol and operators' cottages. The Raymond-Cosmopolis transmission line will be cut in two and both ends brought into the Raymond Substation. The feed to the City of Raymond will be over the short section of this line while power will be supplied to Aberdeen through Cosmopolis over the longer section.

The initial development provides for one incoming 115-kilovolt line and two outgoing 22-kilovolt lines. The 22-kilovolt lines are expected to be changed over to 69 kilovolts as the load grows, so provision is being made to take care of this with a minimum interruption to service. As this station is at the end of a long line, a synchronous condenser is provided for voltage control, power-factor correction, and system stability. All major items and most smaller items of equipment have been ordered.

Construction of this substation is now in progress with a scheduled completion date in April of 1940.

Official Project No. 752-05-171

This official project covers the construction of transmission lines from Vancouver, Washington, to Eugene, Oregon, together with substations at Portland, Oregon City, Salem, Albany, and Eugene, Oregon.

Work under this official project is performed under Work Orders PC20 (Job Orders PC20-J1, PC20-J2, PC20-J3), PC21, PC22, PC23, PC24, and PC25.

Appropriation 14-408/00513C, Official Project 752-05-171, Work Order PC20, Vancouver-Eugene Transmission Lines

Job Order PC20-J1—Lines No. 1 and No. 2.—This job order covers the construction of the Vancouver-Eugene lines, excepting the parts designated as the "Columbia-Willamette River Crossing" (J. O. PC20-J2) and the "Spongs Landing and Harrisburg River Crossing" (J. O. PC20-J5). The W. P. A. work of clearing the right-of-way for the Vancouver-Eugene lines is done under J. O. PC20-J3.

The Vancouver-Eugene line of the Bonneville Project is a single-circuit, three-phase, 115-kilovolt transmission line of wood-pole construction. It is approximately 128 miles long (including the length of all crossings), and will extend from the North Vancouver substation to a substation located near Eugene, Oregon.

A second circuit may ultimately parallel the first line, for its entire distance. At present, the second circuit is being built only to St. Johns, a distance of approximately 5 miles from North Vancouver Substation. In the future this duplicate circuit will probably be extended at least to the proposed Wilsonville (Oregon City) Substation, an additional distance of approximately 25 miles; and it may be extended as far as Salem.

Approximately 74 miles of the line are located on the right-of-way of the Oregon Electric Railroad. The width of the right-of-way on the balance of the right-of-way is 100 feet, except for that portion from Vancouver Substation to the west bank of the Willamette River, which is 150 feet wide.

Each line will have a normal operating capacity of approximately 50,000 kilovolt-amperes, and is designed for a ½-inch radial ice loading on the conductors. Three types of conductors are used on the Vancouver-Eugene lines.

A 350,000 Circular Mil stranded copper conductor is used on the lines between North Vancouver Substation and the St. Johns Substation and from there to the substation at Wilsonville, Oregon (except at river crossings); a 250,000 Circular Mil stranded copper conductor is used between the Wilsonville and Salem substations; and a 397,500 Circular Mil Aluminum Cable Steel Reinforced, having a copper equivalent of 250,000 Circular Mills is used for conductor on the section between the Salem and Eugene substations. Both H-Frame and single pole structures are used for this line. The average span for the H-Frame sections is about 500 feet long and for the single pole section is 290 feet long.

Bids for the line construction contract were opened on March 10, 1939. Actual construction began on March 30, 1939, and the line was entirely completed ready for testing on December 30, 1939. The section between Vancouver and St. Johns has been in service delivering power to the Portland area since December 1, 1939.

Job Order PC20-J2—Columbia-Willamette Crossings.—This job order covers the construction of special river crossings over the Columbia River, the Oregon Slough, the Columbia Slough, and the Willamette River. These crossings have been especially designed to meet the requirements of the War Department for minimum clearances over navigable waters.

Special high strength 801,900 Circular Mil Aluminum Cable Steel Reinforced, having a copper equivalent of 531,120 Circular Mil is used for conductors on the Columbia-Willamette Crossings. This conductor has a diameter of 1.260 inches, weighs 1.8075 pounds per lineal foot, and possesses an ultimate rated strength of 64,500 pounds. Two ground wires of $\frac{3}{4}$ -inch extra high-strength galvanized-steel stranded cable are used on the crossings.

A total of 13 especially designed double circuit towers are used on the Columbia-Willamette crossings. They are 499 feet high for the Columbia River Crossing, 356 feet high for the Willamette River Crossing, 230 feet-high for the Oregon Slough Crossing, and 124 feet high for the Columbia Slough Crossing. The dead end towers used on these crossings are 105 feet high.

The river crossings are insulated for 230 kilovolts. Specially designed hardware is used on the crossings. Multiple strings of 16 insulator units are used at suspension points and 6 strings of 18 units each are used at dead end points.

Bids for construction of the Columbia-Willamette River Crossings, including the furnishing of tower steel were opened March 25, 1939. Construction was started April 15, 1939, and has now been completed, including the painting of airway markings. The Columbia River Crossing has been in service delivering power to the Portland area since December 1, 1939.

Job Order PC20-J3—W. P. A. Clearing.—The Works Progress Administration crews started clearing operations for the Vancouver-Eugene Line along the Oregon Electric Railroad right-of-way on December 26, 1938, making the 74-mile section of line available for construction. Clearing of the Vancouver-Wilsonville section of line started on March 7, 1939, and operations on the Salem detour were started on June 20, 1939. To date this line is completely cleared except for a small amount of cleanup.

Job Order PC20-J5—Spong's Landing and Harrisburg Crossings.—This job order covers the construction of special crossings over the Willamette River at Spong's Landing and near Harrisburg. These crossings have been designed to meet the requirements of the War Department for minimum clearances over navigable streams.

397,500 circular mil Aluminum Cable Steel Reinforced, having a copper equivalent of 250,000 circular mils, is used for conductors on these crossings. This conductor possesses an ultimate strength of 16,190 pounds. The structures used for the Harrisburg and Spong's Landing Crossings are specially designed double-circuit steel towers 133 feet high.

Construction of these crossings was completed on December 22, 1939, including all airway marking.

Appropriation 14-408/00513C, Official Project 752-05-171, Work Order PC21, St. Johns Substation.

The St. Johns Substation will be located just outside the city limits of Portland, Oregon, near the intersection of the Columbia and Willamette Rivers. The initial installation will consist of two 115-kilovolt oil circuit breakers with the necessary disconnecting switches and sufficient bus structure to accommodate a single bus for two incoming and one outgoing lines. The two incoming lines will be from the North Vancouver Substation and the outgoing line will go to Eugene, Oregon.

This substation is now under construction. The first step has been completed, and the second step is scheduled for completion in June 1940.

Appropriation 14-408/00513C, Official Project 752-05-171, Work Order PC22, Oregon City Substation

The Oregon City Substation will be located on the transmission line from St. Johns to Eugene, in the vicinity of Oregon City. As this is a deferred station, no actual field work has been done and no material has been ordered except that there has been installed on the transmission line overhead ground wires in the vicinity of the station. Engineering and design work which has been done includes drawings showing a three-line diagram, single-line diagram, preliminary lay-out, equipment and foundation footings, and conduit lay-out. Sufficient information is available to complete designs within a short time.

Appropriation 14-408/00513C, Official Project 752-05-171, Work Order PC23, Salem Substation

The Salem Substation will be located across the Willamette River, a short distance south of the City of Salem, Oregon. This station is on the transmission line right-of-way where the line crosses the Willamette River. The initial installation at Salem will consist of one incoming 115-kilovolt line from St. Johns and one outgoing 115-kilovolt line to Eugene through Albany.

Until the permanent facilities are available, a temporary substation is being constructed which is scheduled for service in February 1940. The permanent station is scheduled for completion in June 1940.

Appropriation 14-408/00513C, Official Project 752-05-171, Work Order PC24, Albany Substation

The Albany Substation will be located near Albany, Oregon, and adjacent to the transmission line right-of-way of the Vancouver-Eugene line. The initial installation will consist of one 115-kilovolt incoming line from St. Johns and one 115-kilovolt outgoing line to Eugene.

The site for this station has been secured and station designs are being carried on. As this is a deferred substation no materials have been purchased as yet, but specifications adapted from other stations will minimize the time required to procure equipment.

Appropriation 14-408/00513C, Official Project 752-05-171, Work Order PC25, Eugene Substation

Eugene Substation is located approximately two miles north of the City of Eugene, Oregon. This station is the initial terminus of the Vancouver-Eugene transmission line and consists initially of one 115-kilovolt incoming line. Load ratio control of the transformers provides a much more economical control of voltage for the present installation than the 15,000-kilovolt-ampere synchronous condenser which may ultimately be required due to load increase.

This station is under construction and scheduled for completion in May 1940; however, it will probably be completed during January 1940.

ENGINEERING DIVISION

Personnel employed June 1939

	In the office	In the field
Appropriation No. 149-0608.....	2	
Appropriation No. 148/90614C.....	54	275
Appropriation No. 14-408/00513C:		
OP 752-05-168.....	54	46
OP 752-05-169.....	23	24
OP 752-05-170.....	55	43
OP 752-05-171.....	61	64
Total.....	249	452

Detail of Personnel

Office :	
Engineers, all grades.....	83
Draftsmen.....	121
Miscellaneous.....	45
Total.....	249
Field : Survey parties and laborers.....	452
Total Personnel, Engineering Div.....	701

In addition, approximately 2,263 men under W. P. A. doing right-of-way clearing.

Drawings, etc., fiscal year ending June 30, 1939

Drawings and tracings produced :	
Signed and indexed tracings.....	3, 156
Miscellaneous detail and study drawings.....	3, 309
Hardshell field maps and profiles.....	2, 300
Miscellaneous drawings for reports.....	374
Total.....	9, 139

Prints :	
Contact prints :	
Number.....	185, 133
Square feet.....	354, 131
Photo prints :	
Number.....	11, 608
Square feet.....	19, 144
Totals :	
Number.....	196, 741
Square feet.....	373, 275

Summary of mapping

	Total on lines	In mapping	Traced
Plans.....	563	459	281
Property maps.....	644	567	567
Profiles.....	590	590	561
Crossing maps.....	159	157	129
Washington State land maps.....	18	18	18
Franchise maps.....	4	4	4
Total.....	1, 968	1, 795	1, 560

75 percent complete.

APPENDIX E

PUBLIC UTILITY DISTRICT LAW—WASHINGTON

AN ACT relating to and authorizing the establishment of public-utility districts, and the consolidation thereof and annexation thereto; providing for the construction, purchase, condemnation and purchase, acquisition, maintenance, conducting, operation, development, and regulation by such districts of certain kinds of public utilities; providing methods of payments therefor; and providing for the creation of local assessment districts by, and defining, prescribing, and regulating the powers, duties, and government of, such utility districts

Be it enacted by the Legislature of the State of Washington:

SECTION 1. The purpose of this act is to authorize the establishment of public-utility districts to conserve the water and power resources of the State of Washington for the benefit of the people thereof and to supply public-utility service, including water and electricity, for all uses.

Sec. 2. Municipal corporations, to be known as public-utility districts, are hereby authorized for the purposes of this act and may be established within the limits of the State of Washington, as provided herein.

Sec. 3. At any general election the Board of County Commissioners of any county in this state may, or on petition of ten (10%) percent of the qualified electors of such county, based on the total vote cast in the last general county election, shall, by resolution, submit to the voters of such county the proposition of creating a public-utility district which shall be coextensive with the limits of such county as now or hereafter established. Such petition shall be filed with the County Auditor, who shall within fifteen days examine the signatures thereof and certify to the sufficiency or insufficiency thereof, and for such purpose the County Auditor shall have access to all registration books in the possession of election officers within such county. If such petition be found to be insufficient, it shall be returned to the persons filing the same, who may amend or add names thereto for ten days, when the same shall be returned to the County Auditor, who shall have an additional fifteen days to examine the same and attach his certificate thereto. No person having signed such petition shall be allowed to withdraw his name therefrom after the filing of the same with the County Auditor. Whenever such petition shall be certified to as sufficient, the County Auditor shall forthwith transmit the same, together with his certificate of sufficiency attached thereto, to the Board of County Commissioners, who shall thereupon immediately transmit such proposition to the Election Board of such county, and it shall be the duty of such County Election Board to submit such proposition to the voters at the next general election. The notice of the election shall state the boundaries of the proposed public-utility district and the object of such election, and shall in other respects conform to the requirements of the general laws of the State of Washington governing the time and manner of holding elections. In submitting the said question to the voters for their approval or rejection, the proposition shall be expressed on said ballot substantially in the following terms:

Public Utility District No.-----YES
 Public Utility District No.-----NO

Any petition for the formation of a public-utility district may describe a less area than the entire county in which the petition is filed, the boundaries of which shall follow the then existing precinct boundaries and not divide any voting precinct; and in the event that such a petition is filed the Board of County Commissioners shall fix a date for a hearing on such petition, and shall publish the petition, without the signatures thereto appended, for two weeks prior to the date of the hearing, together with a notice stating the time of the meeting when such petition will be heard. Such publication, and all other publications required by this act, shall be in a newspaper published in the proposed or established public-utility district, or, if there be no such newspaper, then in a newspaper published in the county in which such district is situated and of general circulation in such county. The hearing on such petition may be adjourned from time to time, not exceeding four weeks in all. If upon the final hearing the Board of County Commissioners shall find that any lands have been unjustly or improperly included within the proposed public-utility district and will not be benefited by inclusion therein, the said Board shall change and fix the boundary lines in such manner as it shall deem reasonable and just and conducive to the public welfare and convenience and make and enter an order establishing and defining the boundary lines of the proposed public-utility district: Provided, that no lands shall be included within the boundaries so fixed lying outside the boundaries described in the petition, except upon the written request of the owners of such lands. Thereafter the same procedure shall be followed as prescribed in this act for the formation of a public-utility district including an entire county, except that the petition and election shall be confined solely to the lesser public-utility district.

Sec. 4. Within five days after such election, the Election Board of the county shall canvass the returns, and if at such election a majority of the voters voting upon such proposition shall vote in favor of the formation of such District, the Election Board shall so declare in its canvass of the returns of such election, and such public-utility district shall then be and become a municipal corporation of the State of Washington, and the name of such public-utility district shall be Public Utility District No. -----, of ----- County. The powers of the public-utility district shall be exercised through a commission consisting of three members, one from each of the three county-commissioner districts of the county in which the public-utility district is located, when the public-utility district is coextensive with the limits of such county. When the public-utility district com-

prises only a portion of the county, three commissioner districts, numbered consecutively, having approximately equal population and boundaries, following ward and precinct lines as far as practicable, shall be described in the petition for the formation of the public-utility district, and one commissioner shall be elected from each of said commissioner districts. No person shall be eligible to hold the office of Public Utility District Commissioner unless he is a qualified voter and a freeholder within such Public Utility District and is and has been a resident for a period of three years, except as hereinafter provided, of the commissioner district from which he is elected.

Public Utility District Commissioners shall hold office for the term of three (3) years and until their respective successors are elected and qualified, each term to commence on the fourth Tuesday in March in each year in Class A counties and counties of the first class, and in all other counties on the second Monday in January in each year, following the election thereto. At the same election at which the proposition is submitted to the voters as to whether a public-utility district shall be formed three (3) commissioners shall be elected to hold office, respectively, for the term of one, two, and three years. All candidates shall be voted upon by the entire public-utility district, and the candidate residing in commissioner district number one receiving the highest number of votes in the public-utility district shall hold office for the term of three (3) years; and the candidate residing in commissioner district number two receiving the highest number of votes in the public-utility district shall hold office for the term of two (2) years, and the candidate residing in commissioner district number three receiving the highest number of votes in the public-utility district shall hold office for the term of one (1) year, each of said terms to date from the times specified in this section following the election, but also to include the period intervening between the election and the beginning of the regular terms specified in this section. All expense of elections for the formation of such public-utility district shall be paid by the county holding such election, and such expenditure is hereby declared to be for a county purpose, and the money paid out for such purpose shall be repaid to such county by the public-utility district, if formed. Nominations for Public Utility District Commissioners shall be by petition signed by one hundred (100) qualified electors of the public-utility district to be filed in the office of the County Auditor not more than sixty (60) days, and not less than thirty (30) days prior to the day of such election: Provided, however, that in any public-utility district having a population of less than four thousand, such nominating petition shall be signed by a number of qualified electors equaling ten (10%) percent or more of the qualified electors of the public-utility district. A vacancy in the office of public-utility-district commissioner shall occur by death, resignation, removal, conviction of a felony, nonattendance at meetings of the public-utility district commission for a period of sixty (60) days unless excused by the public-utility-district commission, by any statutory disqualification, or by any permanent disability preventing the proper discharge of his duty. In the event of a vacancy in said office such vacancy shall be filled at the next general election, the vacancy in the interim to be filled by appointment by the remaining commissioners. If there should be at the same time such number of vacancies that there are not in office a majority of the full number of commissioners fixed by law, a special election shall be called by the County Election Board upon the request of the remainder, or, that failing, by the County Election Board, such election to be held not more than forty (40) days after the occurring of such vacancies.

A majority of the persons holding the office of public-utility-district commissioner at any time shall constitute a quorum of the commission for the transaction of business, and the concurrence of a majority of the persons holding such office at the time shall be necessary and shall be sufficient for the passage of any resolution, but no business shall be transacted unless there are in office at least a majority of the full number of commissioners fixed by the law.

The boundaries of the commissioners districts shall not be changed oftener than once in four (4) years, and only when all members of the commission are present: Provided, that any proposed change therein must be made by resolution and notice of the time of a public hearing thereon shall be published for two (2) weeks prior thereto: and provided further that upon a referendum petition signed by six (6%) percent of the qualified voters of the public-utility district being filed with the Clerk, the commission shall submit such proposed change to the voters of the public-utility district for their approval or rejection. The checking of said petition as to its sufficiency or insufficiency shall be governed by the provisions in this act relating thereto.

Sec. 5. The term general election as used in this act shall be held and construed to mean biennial general elections at which state and county officers are elected, and also public-utility-district elections for the election of commissioners. Public-utility-district elections for the election of commissioners held in Class A counties and counties of the first class shall be held on the second Tuesday in March in each year, and in all other counties on the first Saturday in December in each year. The election board of the county shall give notice of all elections held under the provisions of this act for the time and in the manner and form provided by law for city, school-district, and port-district elections. Whenever in the judgment of the Election Board of the county an emergency exists, and such Board is requested so to do by a resolution of the public-utility-district commission, it may call a special election at any time in such public-utility district, and at any such special election said Board may combine, unite, or divide precincts for the purpose of holding such special election, and every such special election so called shall be conducted and notice thereof given in the manner provided by law.

The chairman of the Board of County Commissioners, the County Auditor, and the Prosecuting Attorney of the county in which the election is held shall constitute an election board for all elections held under the provisions of this act; and it shall be the duty of such board to provide polling places for holding elections under this act, to appoint the election officers, to provide their compensation, to provide ballot boxes, and ballots or voting machines, poll books and tally sheets, and deliver them to the election officers at the polling places, to publish and post notices of calling such elections in the manner provided by law, and to apportion to the public-utility district its share of the expense of holding such election.

The election officers appointed by the election board of the county shall conduct such elections and shall receive and deposit ballots cast thereat in a separate ballot box, and shall count said ballots and make returns thereof to the election board of the county, which board shall constitute a canvassing board for all elections held under the provisions of this act. The manner of conducting and voting at elections under this act, opening and closing of polls, keeping of polls lists, canvassing the votes, declaring the results, and certifying the returns, shall be the same as provided by the general election laws governing the election of state and county officers, except as otherwise provided in this act.

The public-utility-district commission shall certify to the election board a list of offices to be filled at any election to be held under the provisions of this act, and such commission, if it desires to submit to the voters of such public utility district any proposition for their approval or adoption, or rejection, at any election held under the provisions of this act, shall require the secretary of such commission to certify the same to the election board at the time and in the manner and form now provided by law for certifying propositions to said board by the governing boards of cities, towns, and port districts.

Sec. 6. All public-utility districts organized under the provisions of this act shall have power—

(a) To make a survey of hydroelectric power, irrigation, and domestic water supply resources within or without the district, and to compile comprehensive maps and plans showing the territory that can be most economically served by the various resources and utilities, the natural order in which they should be developed, and how they may be joined and coordinated to make a complete and systematic whole;

(b) To construct, condemn and purchase, purchase, acquire, lease, add to, maintain, operate, develop, and regulate all lands, property, property rights, water, water rights, dams, ditches, flumes, aqueducts, pipes, and pipe lines, water power, leases, easements, rights-of-way, franchises, plants, plant facilities, and systems for generating electric energy by water power, steam, or other methods, plant, plant facilities, and systems for developing, conserving and distributing water for domestic use and irrigation, buildings, structures, poles, and pole lines, and cables and conduits and any and all other facilities, and to exercise the right of eminent domain to effectuate the foregoing purposes or for the acquisition and damaging of the same or property of any kind appurtenant thereto, and for the purpose of acquiring the right to make physical connection with plants and plant facilities of any and all persons, corporations and municipalities, and such right of eminent domain shall be exercised and instituted pursuant to resolution of the Commission and conducted in the same manner and by the same procedure as is or may be provided by law for the exercise of the power of eminent domain by incorporated cities and towns of the State of Washington in the acquisi-

tion of like property and property rights. It shall be no defense to a condemnation proceeding hereunder that a portion of the electric current generated or sold by such Public Utility District will be applied to private purposes provided the principal uses intended are public: Provided, that no public utility owned by a city or town shall be condemned hereunder, and none shall be purchased without submission of the question to the voters of the utility district. In any condemnation proceeding under this act, the court shall submit to the jury the values placed upon such property by the County Assessor or other taxing authority, for taxation purposes, and in respect to property, plants, and facilities of persons and corporations using public highways for the furnishing of public service without franchises, shall consider in determining the value thereof the fact that such property, plants, and facilities are subject to be removed from such highways by reason of being so operated without such franchises.

(c) To construct, purchase, condemn and purchase, acquire, add to, maintain, conduct, and operate waterworks and irrigation plants and systems, within or without its limits, for the purpose of furnishing such public utility district, and the inhabitants thereof, and any other persons, including public and private corporations within or without its limits, with an ample supply of water for all uses and purposes, public and private, including water power, domestic use and irrigation, with full and exclusive authority to sell and regulate and control the use, distribution, and price thereof.

(d) To purchase, within or without its limits, electric current for sale and distribution within or without its limits, and to construct, condemn and purchase, purchase, acquire, add to, maintain, conduct, and operate works, plants, transmission and distribution lines and facilities for generating electric current, operated either by water power, steam, or other methods, within or without its limits, for the purpose of furnishing said public utility district, and the inhabitants thereof, and any other persons, including public and private corporations, within or without its limits, with electric current for all uses, with full and exclusive authority to sell and regulate and control the use, distribution, rates, service, charges, and price thereof, free from the jurisdiction and control of the director of public works and division of public utilities, in all things, together with the right to purchase, handle, sell, or lease motors, lamps, transformers, and any and all other kinds of equipment and accessories of every nature and kind whatsoever necessary and convenient for the use, distribution, and sale thereof: Provided, that the Commission shall not supply water to a private owned utility for the production of electric energy, and may supply, directly or indirectly to privately owned public utilities which sell electric energy or water to the public any of the surplus electric energy or water under its control, and contracts therefor shall not extend over a longer period than three (3) years: Provided, that it must at all times first make adequate provision for the needs of the district, both actual and prospective.

(e) And for the purposes aforesaid, it shall be lawful for any public-utility district so organized to take, condemn and purchase, purchase, and acquire any and all public and private property, franchise, and property rights, including state, county, and school lands, and property and littoral and water rights, for any of the purposes aforesaid, and for railroads, tunnels, pipe lines, aqueducts, transmission lines, and any and all other facilities necessary or convenient and, in connection with the construction, maintenance, or operation of any such utility or utilities, to acquire by purchase or condemnation and purchase the right to divert, take, retain, and impound, and use water from or in any lake or watercourse, regardless of whether such lake or watercourse or the water therein be public or private, navigable or nonnavigable, or held, owned, or used by the state, or any subdivision thereof, or by any person or corporation for any public or private use, proprietary or governmental, or any underflowing water within the state; and such public-utility district is hereby authorized and empowered to erect and build, within or without its limits, dams or other works across any river or watercourse, or across or at the outlet of any lake, up to and above high-water mark; and for the purpose of constructing or laying aqueducts or pipe lines, dams, or waterworks, or other necessary structures in storing, retaining, and distributing water as above provided, or for any of the purposes provided for by this act, such public-utility district shall have the right to occupy and use the beds and shores up to the high-water mark of any such lake, river, or watercourse and to acquire by purchase or by condemnation and purchase, or otherwise, any water, water rights, easements, or privileges named in this act or necessary for any of said purposes, and any such public-utility district shall have the right to acquire by purchase or condemnation and purchase, or otherwise, any land, prop-

erty, or privileges necessary to be had to protect the water supply of such public-utility district from pollution: Provided, that should private property be necessary for any such purposes, or for storing water above high-water mark, such public-utility district may condemn and purchase or purchase and acquire such private property. Such public-utility district shall have power to build and maintain intertie lines connecting its power plant and distribution system with the power plant and distribution system owned by any other public-utility district, or municipal corporation, or to connect with the power plants and distribution systems owned by any municipal corporation in the district, and from any such intertie line to sell electric energy to any individual, or public-utility district, or any city or town, or other corporations, public or private, and, by means of transmission or pole lines, to conduct electric energy from the place of production to the point of distribution and to construct and lay said aqueducts, pipe or pole lines, and transmission lines along and upon public highways, roads, and streets, and to condemn and purchase, purchase or acquire lands, franchises and rights-of-way necessary for the same.

(f) To contract indebtedness or borrow money for corporate purposes on the credit of the corporation or the revenues of the public utilities thereof, and to issue general obligation or utility bonds therefor, bearing interest at a rate not exceeding six (6%) percent per annum, payable semiannually, said bonds not to be sold for less than par and accrued interest; to purchase with surplus funds local utility district bonds of districts created by the Commission and sell the same, giving preference to residents of the district, and to create a revolving fund to insure the prompt payment of all local utility district bonds.

(g) To raise revenue by the levy of an annual tax on all taxable property within such public-utility district not exceeding two mills in any one year, exclusive of interest and redemption for general obligation bonds. The Commission shall prepare a proposed budget of the contemplated financial transactions for the ensuing year and file the same in the records of the Commission on or before the first Monday in September. Notice of the filing of said proposed budget and the date and place of hearing on the same shall be published for at least two consecutive weeks in a newspaper printed and of general circulation in said county. On the first Monday in October the Commission shall hold a public hearing on said proposed budget at which any taxpayer may appear and be heard against the whole or any part of the proposed budget. Upon the conclusion of said hearing, the Commission shall, by resolution, adopt the budget as finally determined, and fix the final amount of expenditures for the ensuing year. Taxes levied by the Commission shall be certified to and collected by the proper county officer of the county in which such public-utility district is located in the same manner as is or may be provided by law for the certification and collection of Port District taxes. The Commission is authorized, prior to the receipt of taxes raised by levy, to borrow money or issue warrants of the district in anticipation of the revenue to be derived by such district from the levy of taxes for the purpose of such district, and such warrants shall be redeemed from the first money available from such taxes when collected, and such warrants shall not exceed the anticipated revenue of one year and shall bear interest at a rate of not to exceed six percent per annum.

(h) To enter into any contract with the United States Government, or any state, municipality, or other utility district, or any department of those governing bodies, for carrying out any of the powers authorized by this act.

(i) To acquire by gift, devise, bequest, lease, or purchase, real and personal property necessary or convenient for the purposes of the district or any local district therein.

(j) To make contract, employ engineers, attorneys, and other technical or professional assistance; to print and publish information or literature and to do all other things necessary to carry out the provisions of this act.

The public utility district commission shall appoint a manager, who shall be appointed for an indefinite time and be removable at the will of the commission. Appointments and removals shall be by resolutions, introduced at a regular meeting and adopted at a subsequent regular meeting by a majority vote. He shall receive such salary as the Commission shall fix by resolution.

The manager shall be the chief administrative officer of the public utility district, and shall have control of administrative functions of the district, and shall be responsible to the Commission for the efficient administration of all the affairs of the district placed in his charge. He shall be an experienced executive with administrative ability. In case of the absence or temporary

disability of the manager he shall with the approval of the president of the Commission, designate some competent person as acting manager.

The manager shall be entitled to attend all meetings of the Commission and its committees, and to take part in the discussion of any matters pertaining to the duties of his department, but shall have no vote.

The Public Utility District Manager shall have power, and it shall be his duty—

To carry out the orders of the Commission, and to see that all the laws of the state pertaining to matters within the functions of his department are duly enforced.

To keep the Commission fully advised as to the financial condition and needs of the district. To prepare, each year, an estimate for the ensuing fiscal year of the probable expenses of his department, and to recommend to the Commission what development work should be undertaken, and what extensions and additions, if any, should be made, during the ensuing fiscal year, with an estimate of the costs of such development work, extensions and additions. To certify to the Commission all bills, allowances, and pay rolls, including claims due contractors of public works. To recommend to the Commission salaries of the employes of his office, and a scale of salaries or wages to be paid for the different classes of service required by the district. To hire and discharge clerks, laborers, and other employes under his direction. To perform such other duties as may be imposed upon him by resolution of the Commission. It shall be unlawful for him to make any contribution of money in aid of or in opposition to the election of any candidate for public utility commissioner or to advocate or oppose any such election.

(k) To sue and be sued in any court of competent jurisdiction; provided, that all suits against the public utility district shall be brought in the county in which the public-utility district is located. No suit for damages shall be maintained against such public-utility district except on the basis of a claim therefor filed with the Commission of such district complying in all respects with the terms and requirements for claims for damage filed pursuant to general law against cities of the second class.

(l) By resolution to establish and define the boundaries of local assessment districts to be known as Local Utility District No. _____ for the distribution, under the general supervision and control of the Commission, of water for domestic use and (or) irrigation and (or) electric energy, and in like manner to provide for the purchasing, or otherwise acquiring, or constructing and equipping distribution systems for said purposes and for extensions and betterments thereof, and to levy and collect in accordance with the special benefits conferred thereon, special assessments and reassessments on property specially benefited thereby, for paying the cost and expense of the same, or any portions thereof, as herein provided, and to issue local improvement bonds and (or) warrants to be repaid wholly or in part by collection of local improvement assessments.

The Commission shall, by resolution, establish the method of procedure in all matters relating to local utility districts. Any public-utility district may determine by resolution what work shall be done or improvements made at the expense, in whole or in part, of the property specially benefited thereby; and to adopt and provide the manner, machinery, and proceedings in any way relating to the making and collecting assessments therefor in pursuance of this act. Except as herein otherwise provided, or as may hereafter be set forth by resolution, all matters and proceedings relating to the local utility district, the levying and collection of assessments, the issuance and redemption of local improvement warrants and bonds, and the enforcement of local assessment liens hereunder, shall be governed, as nearly as may be, by the laws relating to local improvements for cities of the first class: Provided that no protest against a local utility district improvement shall be received by the Commission after twelve o'clock noon of the day set for hearing.

Any improvement authorized by this act may be ordered only by resolution of the Commission either upon petition or resolution therefor. Whenever a petition, signed by ten percent of the owners of land in the district to be therein described, shall be filed with the Commission, asking that the plan or improvement therein set forth be adopted and ordered, and defining the boundaries of a local improvement district to be assessed in whole or in part to pay the cost thereof, it shall be the duty of the Commission to fix the date of hearing on such petition, and give not less than two weeks' notice thereof by publication. The Commission may, in its discretion, deny such petition or

order the improvement unless a majority of the owners of lands in said district shall file, prior to 12:00 o'clock noon of the day of said hearing, with Secretary thereof a petition protesting against said improvement; and if the Commission shall order the improvement, then it may alter the boundaries of such proposed district and prepare and adopt detail plans of any such local improvement, declare the estimated cost thereof, what proportion of such cost shall be borne by such local improvement district, and what proportion of the cost, if any, shall be borne by the entire public-utility district. Whenever such a petition signed by a majority of the landowners in such a proposed local improvement district shall be filed with the Commission, asking that the improvement therein described be ordered, the Commission shall forthwith fix a date for hearing on said petition, after which the Commission must, by resolution, order such improvement, and may alter the boundaries of such proposed districts, prepare and adopt such improvement, prepare and adopt detail plans thereof, declare the estimated cost thereof, what proportion of such cost shall be borne by such proposed local improvement district, and what proportion of the cost, if any, shall be borne by the entire public-utility district, and provide the general funds thereof to be applied thereto, if any, acquire all lands and other properties therefor, pay all damages caused thereby, and commence in the name of the public-utility district such eminent domain proceedings and supplemental assessments or reassessment proceedings to pay all eminent domain awards as may be necessary to entitle said district to proceed with such work, and shall thereafter proceed with such work, and shall make and file with the County Treasurer its roll levying special assessments in the amount to be paid by special assessment against the property situated within such local improvement district in proportion to the special benefits to be derived by the property in such local improvement district from such improvement. Before the approval of such roll, a notice shall be published ten (10) days stating that such roll is on file and open to inspection in the office of Secretary of the district, and fixing a time not less than fifteen (15) nor more than thirty (30) days from the date of the first publication of such notice, within which protests must be filed with Secretary of said district against any assessments shown thereon, and fixing a time when a hearing shall be held by said Commission on said protests. After such hearing the Commission may alter any and all assessments shown on such roll and may then, by resolution, approve the same, but if any assessment be raised, a new notice, similar to such first notice, shall be given, and a hearing had thereon, after which final approval of such roll may be made by the Commission. Any person feeling aggrieved by such assessments shall perfect an appeal to the Superior Court of such county within ten (10) days after such approval in the manner now provided by law for appeals from assessments levied by cities of the first class in this state. Engineering office and other expenses necessary or incident to said improvement shall be borne by the public-utility district: Provided, that where any municipal corporation included within such public-utility district already owns or operates a utility of like character for which such assessments are levied hereunder, then all such engineering and other expenses mentioned above shall be borne by the local assessment district.

Whenever any improvement shall be ordered hereunder, payment for which shall be made in part from assessments against property specially benefited, not more than fifty percent (50%) of the cost thereof shall ever be borne by the entire public-utility district, nor shall any sum be contributed by it to any improvement acquired or constructed with or by any other body, exceed such amount, unless a majority of the electors of such district shall consent to or ratify the making of such expenditure.

(m) It is, and shall be lawful for any public-utility district organized hereunder to sell and convey all the works, plants, systems, utilities, and properties authorized by this act and owned by it after proceedings had as required by Sections 9512, 9513, and 9514 of Remington's Compiled Statutes of Washington: Provided, that three-fifths ($\frac{3}{5}$) of the voters voting for such sale, in lieu of a majority, shall be necessary. Public-utility districts shall be held to be municipal corporations within the meaning of said sections and the Commission of such public-utility district shall be held to be the legislative body within the meaning of said sections, and the president and secretary of such district shall have the same powers and perform the same duties as the mayor and city clerk referred to in said sections, and the resolutions of the public-utility districts shall be held to mean ordinance within the meaning of said sections.

(n) The Commission of each public-utility district may adopt general resolutions to carry out the purposes, objects, and provisions of this act.

SEC. 7. Whenever the Commission shall deem it advisable that the public-utility district purchase, purchase and condemn, acquire, or construct any such public utility, or make any additions or betterments thereto, or extensions thereof, the Commission shall provide therefor by resolution, which shall specify and adopt the system or plan proposed, and declare the estimated cost thereof, as near as may be, and specify whether general or utility indebtedness is to be incurred, the amount of such indebtedness, the amount of interest and the time in which all general bonds (if any) shall be paid not to exceed thirty years. In the event the proposed general indebtedness to be incurred will bring the indebtedness of the public-utility district to an amount exceeding one and one-half percent (1½%) of the taxable property of the public-utility district, the proposition of incurring such indebtedness and the proposed plan or system shall be submitted to the qualified electors of said public-utility district for their assent at the next general election held in such public-utility district.

Whenever the Commission (or a majority of the qualified voters of such public-utility district, voting at said election, when it is necessary to submit the same to said voters) shall have adopted a system or plan for any such public utility, as aforesaid, and shall have authorized indebtedness therefor by a three-fifths vote of the qualified voters of such district, voting at said election, general- or public-utility bonds may be used as hereinafter provided. Said general bonds shall be serial in form and maturity and numbered from one upwards consecutively. The various annual maturities shall commence not later than the tenth year after the date of issue of such bonds. The resolution authorizing the issuance of the bonds shall fix the rate of interest the bonds shall bear, said interest not to exceed six percent (6%) and the place and date of the payment of both principal and interest. The bonds shall be signed by the President of the Commission, attested by the Secretary of the Commission, and the seal of the public-utility district shall be affixed to each bond but not to the coupon: Provided, however, that said coupon, in lieu of being so signed, may have printed thereon a facsimile of the signature of such officers. The principal and interest of such general bonds shall be paid from the revenue of such public-utility district after deducting costs of maintenance, operation, and expenses of the public-utility district, and any deficit in the payment of principal and interest of said general bonds shall be paid by levying each year a tax upon the taxable property within said district sufficient to pay said interest and principal of said bonds, which tax shall be due and collectible as any other tax. Said bonds shall be sold in such manner as the Commission shall deem for the best interest of the district. All bonds and warrants issued under the authority of this act shall be legal securities, which may be used by any bank or trust company for deposit with the State Treasurer, or any County or City Treasurer, as security for deposits, in lieu of a surety bond, under any law relating to deposits of public moneys. When the Commission shall not desire to incur a general indebtedness in the purchase, condemnation and purchase, acquisition, or construction of any such public utility, or addition or betterment thereto, or extension thereof, it shall have the power to create a special fund or funds for the sole purpose of defraying the cost of such public utility, or addition or betterment thereof, or extension thereof, into which special fund or funds it may obligate and bind the district to set aside and pay a fixed proportion of the gross revenues of such public utility, or any fixed amount out of, and not exceeding a fixed proportion of, such revenues, or a fixed amount without regard to any fixed proportion, and to issue and sell bonds or warrants bearing interest not exceeding six percent (6%) per annum, payable semiannually, executed in such manner, and payable at such times and places as the Commission shall determine, but such bonds or warrants and the interest thereon, shall be payable only out of such special fund or funds, the Commission shall have due regard to the cost of operation and maintenance of the plant or system as constructed or added to, and to any proportion or part of the revenues previously pledged as a fund for the payment of bonds or warrants, and shall not set aside into such special fund or funds a greater amount or proportion of the revenues and proceeds than, in its judgment, will be available over and above such cost of maintenance and operation and the amount or proportion, if any, of the revenues so previously pledged. Any such bond or warrants, and interest thereon, issued against any such fund, as herein provided, shall be a valid claim of the holder thereof only as against

the said special fund and its fixed proportion or amount of the revenue pledged to such fund, and shall not constitute an indebtedness of such district within the meaning of the constitutional provisions and limitations. Each such bond or warrant shall state on its face that it is payable from a special fund, naming such fund and the resolution creating it. Said bonds and warrants shall be sold in such manner as the Commission shall deem for the best interest of the district, and the Commission may provide in any contract for the construction and acquisition of a proposed improvement or utility that payment therefor shall be made only in such bonds or warrants at the par value thereof. In all other respects, the issuance of such utility bonds or warrants and payment thereof shall be governed by the public-utility laws for cities and towns.

SEC. 8. The Commissioners shall serve without compensation. No resolution shall be adopted without a majority vote of the whole Commission. The Commission shall organize by the election of its own members of a president and secretary, shall by resolution adopt rules governing the transaction of its business and shall adopt an official seal. All proceedings of the Commission shall be by motion or resolution recorded in a book or books kept for such purpose, which shall be public records. The county treasurer of the county in which such district is situated shall be the treasurer of the district, and all funds of the district shall be paid to him as such treasurer and shall only be disbursed by him on warrants drawn and signed by an auditor to be appointed by the Commission, upon order of or voucher approved by the Commission. The Commission shall have authority to create and fill such positions and fix salaries and bonds thereof as it may by resolution provide.

All materials purchased and work ordered, the estimated cost of which is in excess of Five Thousand Dollars (\$5,000.00) shall be by contract. Before awarding any such contract, the Commission shall cause to be published a notice at least thirty (30) days before the letting of said contract, inviting sealed proposals for such work, plans and specifications which must at the time of the publication of such notice be on file at the office of the public utility district, subject to public inspection: Provided, however, that the Commission may at the same time, and as part of the same notice, invite tenders for said work or materials upon plans and specifications to be submitted by bidders. Such notice shall state generally the work to be done, and shall call for proposals for doing the same, to be sealed and filed with the Commission on or before the day and hour named therein. Each bid shall be accompanied by a certified check, payable to the order of the Commission, for a sum not less than five percent (5%) of amount of the bid, and no bid shall be considered unless accompanied by such check. At the time and place named, such bids shall be publicly opened and read, and the Commission shall proceed to canvass the bids, and may let such contract to the lowest responsible bidder upon plans and specifications on file, or to the best bidder submitting his own plans and specifications: Provided, however, that no contract shall be let in excess of the estimated cost of said materials or work, or if, in the opinion of the Commission, all bids are unsatisfactory, they may reject all of them and re-advertise, and in such case all checks shall be returned to the bidders; but if such contract be let, then and in such case, all checks shall be returned to the bidders, except that of the successful bidder, which shall be retained until a contract shall be entered into for the purchase of such materials for doing such work, and a bond to perform such work furnished, with sureties satisfactory to the Commission, in an amount to be fixed by the Commission, not less than twenty-five (25%) percent of contract price in any case, between the bidder and Commission, in accordance with the bid. If such bidder fails to enter into said contract in accordance with said bid and furnish such bond within ten (10) days from the date at which he is notified that he is the successful bidder, the said check and the amount thereof shall be forfeited to the public utility district.

Every contractor and sub-contractor performing any work for said public utility districts or local utility districts within said public utility district shall pay or cause to be paid to its employees on such work or under such contract or subcontract not less than the minimum scale fixed by the resolution of the Commission prior to the notice and call for bids on such work. The Commission, in fixing such minimum scale of wages shall fix the same as nearly as possible to the current prevailing and going wages within the district for work of like character.

SEC. 9. The County Treasurer of the county in which is located any public utility district shall be ex-officio Treasurer of any public utility district in such

county, and he shall create a fund for any public utility district to be known as Public Utility District Fund, into which shall be paid all money received by him from the collection of taxes in behalf of such public utility district, and he shall also maintain such other special funds as may be created by the public utility commission, into which shall be placed such moneys as the public utility commission may by its resolution direct.

All such public utility district funds shall be deposited with the county depositories under the same restrictions, contracts, and security as is provided by statute for county depositories, and all interest collected on such public utility funds shall belong to such public utility district and be deposited to its credit in the proper public utility district funds.

SEC. 10. Two or more contiguous public utility districts may become consolidated into one public utility district after proceedings had as required by Sections 8909, 8910, and 8911, of Remington's Compiled Statutes of Washington, provided, that a ten (10%) percent petition shall be sufficient; and public utility districts shall be held to be municipal corporations within the meaning of said sections, and the Commission shall be held to be the legislative body of the public utility district as the term legislative body is used in said sections: Provided, that any such consolidation shall in no wise affect or impair the title to any property owned or held by any such public utility district, or in trust therefor, or any debts, demands, liabilities, or obligations existing in favor of or against either of the districts so consolidated, or any proceeding then pending: Provided, further, that no property within either of the former public utility districts shall ever be taxed to pay any of the indebtedness of either of the other such former districts.

The boundaries of any public utility district may be enlarged and new territory included therein, after proceedings had as required by Section 8894 of Remington's Compiled Statutes of Washington; provided, that a ten percent (10%) petition shall be sufficient; and public utility districts shall be held to be municipal corporations within the meaning of said sections, and the commission shall be held to be the legislative body of the public utility district: Provided, that no property within such territory so annexed shall ever be taxed to pay any portion of any indebtedness of such public utility district contracted prior to or existing at the date of such annexation.

In all cases wherein public utility districts of less area than an entire county desire to be consolidated with a public utility district including an entire county, and in all cases wherein it is desired, to enlarge a public utility district including an entire county, by annexing a lesser area than an entire county, no election shall be required to be held in the district including an entire county.

SEC. 11. Adjudication of invalidity of any section, clause, or part of a section of this act shall not impair or otherwise affect the validity of the act as a whole or any other part thereof.

The rule of strict construction shall have no application to this act, but the same shall be liberally construed, in order to carry out the purposes and objects for which this act is intended.

When this act comes in conflict with any provision, limitation, or restriction in any other law, this act shall govern and control.

SEC. 12. This act shall not be deemed or construed to repeal or affect any existing act, or any part thereof, relating to the construction, operation, and maintenance of public utilities by irrigation or water districts or other municipal corporations, but shall be supplemental thereto and concurrent therewith. No public utility district created hereunder shall include therein any municipal corporation, or any part thereof, where such municipal corporation already owns or operates all the utilities herein authorized; provided, that in case it does not own or operate all such utilities it may be included within such public utility district for the purpose of establishing or operating therein such utilities as it does not own or operate: Provided, further, that no property situated within any irrigation or water district or other municipal corporations shall ever be taxed or assessed to pay for any utility, or part thereof, of like character to any utility, owned or operated by such irrigation or water districts or other municipal corporations.

PEOPLES' UTILITY DISTRICT LAW, TITLE LVI, CHAPTER XXXIV, OREGON CODE 1935 SUPPLEMENT, AS AMENDED BY CHAPTER 387, OREGON LAWS, 1939

[NOTE 1.—This compilation uses the code numbers from the Oregon Code 1935 Supplement and the new numbers added by Chapter 387, Oregon Laws 1939. The law is printed, however, as it appears in the session laws of 1931, 1933,

and 1939 and without the addition of bracketed words and figures inserted by the codifiers, except where such bracketed data are necessary to identify other sections of the law to which references are made.]

[NOTE 2.—The only amendment to the Peoples' Utility District law made by the legislative assembly in 1937 was the addition to Section 56-3429, Oregon Code 1935 Supplement, of a new subsection designated as number 12. Chapter 387, Oregon Laws 1939, also amends said Section 56-3429 so the 1937 amendment is of no consequence. The 1939 act also amends Sections 56-3432, 56-3434, 56-3436, 56-3437, 56-3443, 56-3444, and 56-3448, Oregon Code 1935 Supplement, and adds seven new sections to Chapter XXXIV, Title LVI, Oregon Code 1935 Supplement, designated as Sections 56-3461 to 56-3467 inclusive.]

SHORT TITLE

§ 56-3401. This act shall be known as the "peoples' utility district law" (L. 1931, c. 279, § 1).

DEFINITIONS

§ 56-3402. When used in this act and unless otherwise required by the context—
1. "Peoples' utility district," "utility" or "district" means an incorporated peoples' utility district, created under the provisions of this act.

2. "Municipality" means an incorporated city or town with a council or legislative body.

3. "Board of directors," "directors" or "board" means the governing body of a peoples' utility district, elected and functioning under the provisions of this act.

4. "Hydroelectric commission" or "commission" means the state hydroelectric commission of Oregon.

5. "Parcel of territory" means a portion of unincorporated territory.

6. "Separate parcel of territory" means unincorporated territory that is not contiguous to other territory that is a part of a district or that is described in a petition filed with the state hydroelectric commission in pursuance of the provisions of this act; provided, that when a proposed district shall include territory in more than one county, the contiguous territory in each such county shall be considered as a separate parcel of territory.

7. "Utility" means a plant, works and/or other property used for the development and/or transmission of water for domestic and/or municipal purposes, waterpower and/or electric energy; provided, that transmission of water shall not include water for irrigation or reclamation purposes, except as secondary to and when used in conjunction with a hydroelectric plant.

8. In the terms used herein, the singular shall include the plural, and vice versa, as the context may determine.

9. "Voters' petition" means a petition signed by the required number of qualified voters.

10. "Voters' preliminary petition" means a petition addressed to the commission, containing the signatures of qualified voters equal to not less than 5 percent of the greatest number of votes any candidate received for justice of the supreme court at the last preceding biennial election within the boundaries of the parcel of territory or municipality described in such petition, and requesting the commission to make a preliminary investigation as to the advisability of creating the proposed district described therein, or the annexation of the parcel of territory or municipality, or the consolidation of two or more districts described in such petition.

11. "Voters' final petition" means a petition addressed to the commission, containing the signatures of qualified voters equal to the number required in a preliminary petition setting forth and particularly describing the boundaries of the said parcel of territory, municipality and/or district referred to therein, which description shall conform to that of the voters' preliminary petition, or to such modifications thereof as are recommended by the commission, and requiring the commission to call an election to be held within the boundaries of the parcel of territory, municipality and/or district for the formation of a district, the annexation of a parcel of territory or a municipality to a district, or the consolidation of two or more districts; provided, that said 5 percent may or may not include signatures contained in the voters' preliminary petition.

12. "Municipal petition" means a petition of a municipality, or of a district organized under the provisions of this act.

13. "Municipal preliminary petitions" means a petition of a municipality or of a district organized under the provisions of this act, addressed to the commis-

sion, requesting the commission to make a preliminary investigation as to the advisability of creating the district described therein, or the annexation of a parcel of territory or municipality to a district, or the consolidation of two or more districts.

14. "Municipal final petition" means a petition of a municipality, or of a district organized under the provisions of this act, requesting the commission to call an election to be held within the boundaries of the parcel of territory, municipality and/or district for the purpose of creating a district, the annexation of a parcel of territory or a municipality to a district, or the consolidation of two or more districts, as the case may be.

15. "Qualified voter" means a registered voter residing in the precinct where registered.

16. "Sponsors" means a committee, association, corporation or municipality, as the case may be.

17. When the boundaries described in any petition include a part of a precinct the vote of the entire precinct shall be used as a basis in computing the percent age of signatures required on voters' petitions (L. 1933, c. 272, § 1).

CREATION OF DISTRICTS—PETITION AND ELECTION

§ 56-3403. Peoples' utility districts may be created as herein provided and, when so created, may exercise all of the powers herein conferred. Such peoples' utility districts may consist of territory, contiguous or otherwise, within one or more counties, and may consist of a municipality or municipalities, with or without unincorporated territory. Petitions asking that an election be held to determine whether or not a district shall be created shall set forth and particularly describe the boundaries of the proposed peoples' utility district, and shall state that in the event the people within any one or more municipalities or parcels of territory within said proposed district shall vote against the formation of such district, then, and in that event, that portion of said district which voted in favor of the organization of a peoples' utility district, may, upon the recommendation of the commission, be organized into a peoples' utility district. No municipality shall be divided in the formation of any such district. The name of any municipality shall be a sufficient description of the boundaries thereof. When a majority of all votes cast at an election within the boundaries of any proposed district, to determine whether or not such district shall be formed, shall be in favor of forming such district, said district shall be created; provided, that when any municipality and/or separate parcel of territory voting at said election shall cast a majority vote against the formation of such district, said municipality and/or separate parcel of territory shall not be included in the formation of any district that may be formed as a result of said election; provided further, that if the commission shall so recommend, the municipalities and/or separate parcels of territory which voted in favor of the formation of the proposed district at said election may be formed into a district with reformed boundaries in agreement with the recommendation of the commission; and provided further, that no municipality that owns and/or operates a publicly owned utility for the development and/or distribution of electric energy or the territory it serves within or without the boundaries of such municipality at the time of a proposed formation of a peoples' utility district, shall be included in any election for the formation of a peoples' utility district unless such inclusion shall be agreed to at an election by the legal voters of such municipality; and provided further, that in any election to annex a municipality or separate parcel of territory to an existing district, or to consolidate two or more existing districts, an affirmative vote of a majority of the qualified voters of each municipality or separate parcel of territory or district voting to annex or consolidate, shall be required to authorize such annexation or consolidation. No entire township, except when needed for location or [of] plant and/or impounding purposes, shall be included in the formation of any district, unless such township shall contain not less than ten qualified voters, and no portion of any township in excess of six sections shall be included, unless said portion shall contain a proportionate number of said qualified voters. Any failure of preliminary petitions heretofore filed for the creation of a peoples' utility district to describe such district in conformity with the statute then in effect, shall not invalidate any proceeding hereunder; provided, the description was in conformity with provisions of this act (L. 1939, c. 387, § 1).

CONTENTS OF PETITIONS—VERIFICATION

§ 56-3404. All voters' preliminary petitions and voters' final petitions shall, at the top of said petitions, contain a statement of whether or not it is a voters' preliminary petition or a voters' final petition, and thereunder, substantially the following language, to wit:

"Warning.—It is a felony for anyone to sign this petition with any name other than his own, or knowingly to sign his name more than once to such petition, or to sign such petition when he is not a qualified voter."

After the foregoing shall follow a statement as to whether or not the petitioners are desirous of forming a utility district, or to annex territory to an existing utility district, or to consolidate two or more existing utility districts, and the description of the territory sought to be included therein, and the name by which such utility district is to be known and such other information not exceeding 500 words as may be required by the commission. The foregoing statement shall be printed on each and every page, and there shall be left underneath said statement sufficient space for 20 signatures, and opposite the name of each signer, a space for the residence address of the signer of the petition, and the number of their voting precinct. Each and every sheet of such petition containing signatures shall be verified in substantially the following form by the person who circulated such sheet, to wit:

STATE OF OREGON,

County of —, ss:

I, —, being duly sworn, say: That every person who signed this sheet of the foregoing petition signed his or her name thereto in my presence; that I believe that each of said signers has stated his or her name, residence, and postoffice address correctly, and that each signer is a qualified voter of the state of Oregon, of the county of —, and a resident of the territory hereinbefore in the petition described.

(Signature and post-office address of affiant.)

Subscribed and sworn to before me this — day of —, A. D., 19—. (The signature and title of the officer before whom the oath is made and his postoffice address.)

[L. 1931, c. 279, § 4.]

NOTICE OF HEARING ON PETITIONS

§ 56-3405. Upon the filing with the commission of any voters' preliminary petitions and any municipal preliminary petitions, the said commission forthwith shall examine such petition, and if it is found to comply with the provisions of this act, set a time and place for hearing said petitions, not less than 30 days nor more than 60 days after the filing thereof, and shall proceed to make a preliminary investigation as to the matters referred to in said petitions. The commission shall give notice of such hearing by publishing a notice giving the time and place of hearing, such notice to be published for not less than once a week for two successive weeks prior to the date fixed for hearing, in a newspaper of general circulation published in such territory. If there be no such newspaper published in said district, the commission shall cause notices to be posted for not less than 14 days in not less than 10 public places in each separate parcel of territory thereof. Said hearing on said preliminary petitions may be adjourned from time to time, but not longer than 30 days in the aggregate from the date fixed by the commission for the hearing of said petition (L. 1931, c. 279, § 5).

HEARING ON PETITIONS—FINAL PETITION AND ELECTION

§ 56-3406. At said hearing the said commission shall make a report of its preliminary investigation and shall hear evidence in favor of and against the formation of such district. Within 120 days after the close of said hearing, the commission shall make its final report to the sponsors on the advisability of creating the district, or the annexation of territory to an existing district, or the consolidation of two or more districts, and on any other matters contained in said petitions, which said report shall be made a public document. If, after such final report, the sponsors of such petition desire to proceed with the creation of the proposed district, or the annexation of territory to an existing district, or the consolidation of two or more districts, or with regard to any other matters

set forth in said petition, such sponsors may, within two years from date of said final report, file a voters' final petition with the commission, and thereupon said commission forthwith shall examine such petition, and if it is found to comply with the provisions of this act, call an election to be held not less than 50 days and not more than 60 days thereafter, within the boundaries of the parcel of territory or municipality described in said petition. At such election there shall be submitted to the qualified voters within the territory affected thereby the question of whether or not there shall be created a district as prayed for in said petition, or the annexation of territory as prayed for, or the consolidation of two or more districts, or any other matters contained in said petition; provided, that within two years after a majority of the qualified voters of a proposed peoples' utility district, voting at an election on the question whether or not such proposed district shall be created, have voted against such creation, the sponsors of such proposed district may, without the filing of preliminary and final petitions, request the hydroelectric commission to call an election to be held within the boundaries of the proposed district described in the final petition filed with said commission and which authorized the calling of the said election at which the majority of the qualified voters voted against such creation. In not less than 50 days and not more than 60 days after the filing of such request, an election shall be called by the hydroelectric commission as requested (L. 1933, c. 272, § 3).

VOTERS CREATING DISTRICT

§ 56-3407. When 5 percent or more of the qualified voters of a parcel of territory or municipality wish to create a district under the provisions of this act, they shall file a voters' preliminary petition with the commission. If final petitions are filed and an election held thereon, and a majority of the qualified voters of said district, voting at such election, vote in favor of the formation of said district, said district shall be duly and legally formed as a utility district and the proclamation shall issue as in the preceding section provided (L. 1931, c. 279, § 7).

VOTERS IN TWO OR MORE SEPARATE PARCELS CREATING DISTRICT

§ 56-3408. When 5 percent or more of the qualified voters of two or more separate parcels of territory desire to form a peoples' utility district, there shall be filed with the commission a voters' preliminary petition for each of said separate parcels of territory, and a hearing shall be held in each of said separate parcels of territory by said commission, in like manner as provided in section 5 (§ 56-3405, Code Supp. 1935), unless the sponsors of said petition and said commission shall agree upon a lesser number of hearings at places to be agreed upon by the said sponsors and said commission (L. 1931, c. 279, § 8).

VOTERS IN TWO OR MORE SEPARATE PARCELS—FINAL PETITIONS REQUIRED

§ 56-3409. After the final report of said commission, no election shall be called or held for the formation of a utility district consisting of two or more separate parcels of territory, unless a voters' final petition is filed with the commission from each of said separate parcels of territory (L. 1931, c. 279, § 9).

VOTERS ANNEXING TERRITORY TO DISTRICT

§ 56-3410. Where at least 5 percent of the qualified voters of a peoples' utility district desire to annex a parcel of territory to such a district, a voters' preliminary petition from said district, and also a voters' preliminary petition from said parcel of territory shall be filed with the commission, and before an election can be held for the annexation of said parcel of territory to such utility district, a voters' final petition from said utility district and from said parcel of territory shall first be filed with said commission; provided, however, that nothing herein contained shall prevent the annexation of said territory to said district by filing a municipal preliminary petition and a municipal final petition by said district, and a voters' preliminary petition and a voters' final petition for said parcel of territory (L. 1931, c. 279, § 10).

MUNICIPALITY CREATING DISTRICT

§ 56-3411. Whenever the governing body of a municipality desires to create a utility district within such municipality, under the provisions of this act, the

legislative body of such municipality shall pass a resolution which shall set forth a desire of such municipality to proceed for the formation of such a district. Such resolution shall be embodied in a municipal preliminary petition and filed with the commission. Upon the receipt of said municipal preliminary petition, the same procedure shall be followed by said commission as in the case of the filing of a voters' preliminary petition, both regarding the preliminary investigation to be made by said commission, and the hearing to be held by it, and the issuance of a final report to be made by it. If, after the receipt of said final report, the municipality desires to proceed with the creation of the proposed district, it shall file a municipal final petition with the commission, and thereupon the same procedure shall be followed by said commission as is herein prescribed upon the filing of a voters' final petition. Nothing in this section shall be so construed as to prevent the qualified voters of such municipality from filing a voters' preliminary petition and a voters' final petition, and creating a utility district within the boundaries of said municipality, in accordance with the provisions of this act, relative to the formation of a utility district by voters of a parcel of territory (L. 1933, c. 272, § 4).

VOTERS OR GOVERNING BODY OF MUNICIPALITY UNITING WITH VOTERS OF TERRITORY TO
CREATE DISTRICT

§ 56-3412. Whenever the voters of a municipality or the governing body of such municipality and the voters of a parcel of territory desire to unite to form a utility district under the provisions of this act, there shall be filed with the commission either a voters' preliminary petition for said municipality or a municipal preliminary petition, and a voters' preliminary petition for said parcel of territory, and substantially the same procedure shall thereafter be followed as in the formation of a utility district consisting of two or more separate parcels of territory (L. 1933, c. 272, § 5).

TWO OR MORE MUNICIPALITIES OR VOTERS THEREOF UNITING TO CREATE DISTRICT

§ 56-3413. Whenever the voters of two or more municipalities, or the governing bodies thereof, wish to unite to form a utility district, there shall be filed with the commission either a voters' preliminary petition or a municipal petition from each of said municipalities, and thereafter, substantially the same procedure shall be had in the formation of said district as in the formation of a district consisting of two or more separate parcels of territory (L. 1931, c. 279 § 13).

TWO OR MORE MUNICIPALITIES—PETITIONS

§ 56-3414. In the formation of two or more municipalities into a utility district, there may be a voters' preliminary petition for one of such municipalities, and a municipal preliminary petition for the other, or said petitions from both of said municipalities may be voters' preliminary petitions or municipal preliminary petitions, and similar final petitions may be filed (L. 1931, c. 279, § 14).

PRELIMINARY AND FINAL PETITIONS TO BE OF SAME KIND

§ 56-3415. Whenever the formation of a utility district is instituted by the filing of a voters' preliminary petition, the proceedings for the formation of said district must thereafter be by voters' final petitions, and there cannot be substituted for said voters' final petition a municipal final petition, or vice versa (L. 1931, c. 279 § 15).

ANNEXATION OF MUNICIPALITY TO DISTRICT

§ 56-3416. Any municipality not included in a utility district may be annexed to and become consolidated therewith in substantially the same manner as herein is provided for the annexation of a parcel of territory to an existing utility district, providing that said annexation may be instituted and consummated through the filing of municipal preliminary petitions and municipal final petitions by said municipality and said district, or by the filing of voters' preliminary petitions and voters' final petitions by the voters of said municipalities and district, or by the filing of voters' preliminary petitions and voters' final petitions by the voters of said municipalities or said district, and the filing of a municipal

preliminary petition and municipal final petition by the said district or municipality, in which said voters' preliminary petition and voters' final petition are not filed (L. 1931, c. 279, § 16).

CONSOLIDATION OF DISTRICTS

§ 56-3417. Where the governing body of two or more utility districts, or the voters of two or more utility districts, or the governing body of one utility district and the voters of another utility district or districts, desire to unite and consolidate as one utility district, the procedure shall be substantially the same as the procedure described in the preceding section for the annexation of a municipality to an existing utility district (L. 1931, c. 279, § 17).

ANNEXATION OR CONSOLIDATION—EFFECT ON PROPERTY AND INDEBTEDNESS

§ 56-3418. Where a parcel of territory or municipality is annexed to an existing district, or two or more districts are consolidated, such annexation or consolidation shall in no wise affect or impair the title to any property owned or held by any such district, or districts, or of a municipality annexed, or in trust therefor, or any debts, demands, liabilities or obligations existing in favor of or against either the district or municipality so annexed, provided that the acceptance of any indebtedness at the election to determine the question of annexation shall not include any indebtedness except such as has been incurred or assumed on account of the development or purchase of a utility, as hereinbefore defined (L. 1931, c. 279, § 18).

CHANGES IN BOUNDARIES—RECOMMENDATIONS OF COMMISSION

§ 56-3419. If, after such hearing, the commission shall find that any portion of territory has been included in a proposed district that should not have been, or that any territory has been omitted therefrom that should, in the interests of the public welfare, have been included, the commission shall recommend such changes in the boundaries of such proposed district as the commission deems just, and conducive to the public welfare. Such recommendations shall be included in its final report (L. 1931, c. 279, § 19).

CHANGES IN BOUNDARIES—FINAL PETITION AND ELECTION

§ 56-3420. If the commission, in its final report, shall recommend changes in the boundaries of the proposed district described in the preliminary petition, the sponsors of said preliminary petition may, in their final petition, change the boundaries of the proposed district to conform to such recommendation and, upon the filing of the final petition so modified, an election shall be called to determine whether such utility district shall be formed of the territory described in said final petition. The same number of qualified voters, and no more, shall be required on such final petition as upon any other final petition (L. 1931, c. 279, § 20).

NOTICES OF ELECTIONS

§ 56-3421. Forty-five days before any election hereinbefore provided for, the commission shall notify the county clerk of the county or the county clerks of the counties, in which an election is to be held, and supply such county clerk or county clerks with official notice of such election, which notice shall state the time of such election and shall contain a clear, concise statement of the question to be voted upon, and any recommendation or statement relative to that question that the commission may deem expedient, such recommendation not to exceed 1,000 words. The county court of each county in which any part of a proposed district is located shall publish and/or post a notice of such election in the same manner and for the same length of time as hereinbefore provided for publishing and/or posting notices of hearings on voters' preliminary petitions. Such notice by the county court shall contain a designation of the polling places in such election. The county court shall, in its discretion, designate the number and location of the polling places in such election; provided, that all such designated polling places shall be located within the boundaries of the proposed district (L. 1933, c. 272, § 6).

ELECTION OF FIRST DIRECTORS

§ 56-3422. At all elections where the creation of a district is authorized, five directors shall be elected to manage and transact the business of such district. Candidates for the office of said directors at such election must be qualified voters of the state of Oregon, and must have resided in the proposed district continuously for not less than two years next preceding the date of the election, and must continue to reside in such district during his term of office. Such candidates shall be nominated by petition signed by not less than five qualified voters, which said petition shall be filed with the commission not less than 50 days nor more than 60 days before the date of the election, and the commission forthwith shall, upon the expiration of the time for filing candidates' nomination petition, notify the county clerk or clerks of the county or counties in which such proposed district is located of the names of the candidates for directors and said names shall be by the county clerk or clerks placed upon the official ballot for the formation of the district. All qualified voters of the proposed district shall have the right to vote for five candidates at such election. The five candidates receiving the highest vote shall be elected to serve until the first Monday in January after the biennial election following the election to create the district and until their successors are elected and qualified (L. 1933, c. 272, § 7).

SEPARATE BALLOTS

§ 56-3423. The ballot for any election to determine whether or not a district shall be created under this act, whether a parcel or territory or municipality shall be annexed to an existing district, or whether two or more districts shall be consolidated, shall be a separate ballot, and so prepared by the county clerk or county clerks that the question submitted may be decided by a "yes" or "no" vote. The county court shall appoint one judge and two clerks for each polling place designated, and only qualified voters shall be authorized to vote at such election (L. 1933, c. 272 § 8).

CANVASS OF ELECTION—PROCLAMATION OF RESULT

§ 56-3424. The judges and clerks forthwith shall canvass and return the vote for the organization of the district and for directors thereof, or for annexation or consolidation, as the case may be, together with the ballots to the county clerk of the county in which the election is held, whereupon the said county clerk shall proceed to canvass the vote and certify to the commission the number of votes cast at such election in favor of and against the formation of such district and the election of directors thereof, or such other matters voted upon. If a majority of the votes cast at such election shall be in favor of the formation of the district, the annexation of a parcel of territory or a municipality to an existing district, or the consolidation of two or more districts, as the case may be, and in conformity with provisions of section 3 of this act [§ 56-3403, Code Supp. 1935], the commission shall issue a proclamation accordingly and file a certified copy with the county clerk of the county or counties where the district or any portion thereof is located. The proclamation for the formation of a district shall be in substantially the following form:

Whereas at an election duly and regularly held on the _____ day of _____, A. D. 19—, within _____ county (or _____ counties), state of Oregon, and within the boundaries of a proposed district as herein described, there was submitted to the qualified voters thereof the question whether or not a peoples' utility district should be incorporated as the (here insert name of district) under and pursuant to the provisions of Chapter 279, Oregon Laws, 1931; and

Whereas at such election so held _____ votes were cast in favor of such incorporation, and _____ votes were cast against such incorporation; and

Whereas the incorporation of the (here insert name of district) received the affirmative vote of the majority of the votes cast at such election;

Now, therefore, the undersigned commission hereby does proclaim and declare that all of that part of the state of Oregon, described as (here insert description) has been duly and legally incorporated as the _____ peoples' utility district under and pursuant to the constitution and laws of the state of Oregon.

HYDROELECTRIC COMMISSION OF OREGON,

By _____, Chairman.

The proclamation for the annexing of a parcel of territory or a municipality to an existing district and/or the consolidation of two or more existing districts shall be adaptations of the above proclamation (L. 1933, c. 272, § 9).

CERTIFICATE OF ELECTION OF DIRECTORS

§ 56-3425. In the event of the formation of said district the commission shall issue a certificate of election, as directors of said district, to the five candidates receiving the highest number of votes cast at said election (L. 1931, c. 279, § 25).

CORPORATE NATURE OF DISTRICT

§ 56-3426. From the date of the proclamation relative to the formation of a district such territory shall be a separate district to be known as the district named and specified in such proclamation, and the inhabitants thereof shall be a corporation by the name and style of the utility district specified in such proclamation, and as such shall have perpetual succession, and by the said name shall exercise and carry out the corporate powers and objects herein conferred and declared (L. 1931, c. 279, § 26).

EXPENSES OF SPECIAL ELECTIONS

§ 56-3427. All expenses in any county of any special election held under the provisions of this act for the formation of a district and the election of a board of directors shall be paid from the general fund of the county in the same manner that other claims against the county are paid, and the county court shall, when preparing the county budget for the following fiscal year, include an item therein to reimburse the general fund for such disbursement, the said item to be assessed to and be paid by the assessable property of the territory in which such election shall be held in the same manner that other taxes are assessed and paid (L. 1933, c. 272, § 10).

MANDAMUS AGAINST COMMISSION

§ 56-3428. If the commission shall refuse to accept and file any petition herein provided for, or refuse to call a special election as herein provided, or refuse to declare the results of any election or issue the required proclamation, any qualified voter may apply within 10 days after such refusal to the circuit court for the county in which the proposed district, or the greater portion thereof, is located for a writ of mandamus to compel such commission to perform the duty herein imposed upon it (L. 1931, c. 279, § 28).

CORPORATE AND GENERAL POWERS OF DISTRICT

§ 56-3429. The peoples' utility districts herein provided for shall have power:

1. To have perpetual succession.
2. To adopt a seal and alter it at pleasure.
3. To sue and be sued, to plead and be impleaded.
4. To acquire and hold real and other property necessary or incident to the business of such districts, within or without, or partly within or partly without, the district, and to sell or dispose of such property; to acquire, develop and/or otherwise provide for a supply of water for domestic and/or municipal purposes, waterpower and electric energy; to distribute, sell and/or otherwise dispose of water, waterpower and electric energy, within or without the territory of such districts.
5. To exercise the power of eminent domain for the purpose of acquiring any property, within or without the district, necessary for the carrying out of the provisions of this act. In any action or proceeding in eminent domain brought by any district under the provisions of this act, such action or procedure shall be the procedure provided for by the laws of this state for the condemnation of real property, water, water rights and other property for the use of the public by the state or any subdivision thereof; provided, that in any such action or proceeding in eminent domain, such district may, except as to the property of any other public or private utility, take immediate possession of any property, or the use of any property required by such district, by depositing with the court such sum of money as the court, on ten days' notice to the adverse party, may deem reasonably adequate to secure the owner of the property sought to be taken.

6. To borrow money and incur indebtedness, subject to the conditions hereinafter provided, to issue, sell and assume evidence of indebtedness, and to refund and retire any indebtedness that may exist against or be assumed by the district or that may exist against the revenues of such district; provided, that no indebtedness shall be incurred by the board of directors exceeding the ordinary annual income and revenue of the district without the approval of the qualified voters, as hereinafter provided for; to pledge any part of its revenues; provided that no indebtedness shall be incurred or assumed, except such as shall be incurred or assumed on account of the development, purchase and/or operation of a utility as defined in this act.

7. To levy and collect, or cause to be levied and collected, subject to constitutional limitations, taxes for the purpose of carrying on the operations and paying the obligations of the district as hereinafter provided.

8. To make contracts, to employ labor, and to do all things necessary and/or convenient for the full exercise of the powers herein granted.

9. To enter into contracts with the United States government, with the state of Oregon, or with any other state, municipality or utility district, and/or with any department of any of these, for the carrying out of any of the provisions of this act.

10. To fix, maintain, and collect rates and charges for any water, waterpower, electric energy or other commodity or service furnished, developed or sold by the district.

11. To construct works across or along any street or public highway, or over any of the lands which now are or hereafter may be the property of this state, or any subdivision thereof, and to have the same rights and privileges appertaining thereto as have been or may be granted to municipalities within the state, and to construct its works across and/or along any stream of water or watercourse; provided, that any works across or along any state highway shall be constructed only with the permission of the state highway commission of the state of Oregon, and that any works across or along any county highway shall be constructed only with the permission of the county court of said county, and that any works across or along any city street shall be constructed only with the permission of the city council or other governing body of said city. The district shall restore any such street or highway to its former state as near as may be, and shall not use the same in a manner unnecessarily to impair its usefulness.

12. To elect a board of five directors to manage its affairs.

13. Any existing irrigation, drainage or other municipal district in good standing and duly organized under and by virtue of the laws of the state of Oregon shall be eligible to qualify and do any and all things necessary or incident to the purchase, generation and distribution of electric power under the terms of this act without the necessity of reorganizing and complying with the organization procedure prescribed herein, provided said qualification is approved by the hydroelectric commission herein provided and by a majority of the duly qualified voters of such district; provided further, that drainage districts qualifying under the provisions of this act may elect additional directors to make a board of five directors (L. 1939, c. 387, § 2).

BOARD OF DIRECTORS—SUBDIVISION OF DISTRICT

§ 56-3430. The management of peoples' utility districts shall be vested in boards of five directors. Upon the formation of a district, the board of directors shall by ordinance divide the said district into five subdivisions, and fix the boundaries thereof, and thereafter one director shall be elected from each of the said five subdivisions. Said directors shall be qualified voters, and reside in the subdivision from which they are respectively nominated and elected, and shall have resided in the district continuously for two years immediately preceding the date of their election as directors. Such subdivisions shall be as nearly equal in property values as possible (L. 1931, c. 279, § 30).

ELECTION OF DIRECTORS—VACANCIES, HOW FILLED

§ 56-3431. Except as otherwise herein provided, directors shall be nominated and elected by the qualified voters of the subdivision such director represents at time of holding the biennial election. Nominating petitions must be furnished by the district and be in such form and size as the county clerk shall prescribe. Such nominating petitions for director shall be signed by at least five qualified voters and filed with the secretary of the district not less than 50 days

before date of election. The said secretary shall file such nominations with the county clerk, or county clerks, not less than 45 days before the date of the election. The said county clerk shall thereupon proceed in the same manner as in the election of county officers. Vacancies in the office of director occurring between elections shall be filled by the remaining members of the board; provided, however, that when a vacancy shall exist for 30 days, the governor may fill such vacancy. Any person appointed to fill such vacancy by the board or the governor shall hold office until the next biennial election and until his successor is elected and qualified. The said clerk shall canvass the vote cast for director, and shall certify the result thereof to the secretary of the district, who shall thereupon immediately issue certificate of election to the candidates elected to the office of director (L. 1931, c. 279, § 31).

DIRECTORS—TERM OF OFFICE—OFFICERS—QUORUM—RULES GOVERNING MEETINGS

§ 56-3432. (a) Of the board of directors elected at the next biennial election following the creation of the district, three shall hold office for four years, and two shall hold office for two years, and until their successors are elected and qualified, the length of the respective terms to be determined by lot. Thereafter, at each biennial election, a number of directors corresponding to the number whose term of office expires, shall be elected for the term of four years. The terms of such directors shall commence on the first Monday in January next following their election.

(b) The board shall choose one of its members president, one vice president, and one treasurer; also, the board shall choose a secretary of the district, who may or may not be a member of the board. In the absence or disability of the president, the vice president shall act as president. The treasurer shall be the custodian of all funds of the district, and pay out same only on order of the board. He shall give a good and sufficient bond by a corporate surety company authorized to do business in this state in such sum as the board shall order, conditioned for the faithful performance of the duties of his office, which bond must be approved by the board and, as to form, by the attorney general and filed with the secretary of state, the premium for such bond to be paid by the district, and the provisions of chapter XXXVI, title XXVII, Oregon Code 1935 Supplement, and its amendments, shall apply to such treasurer.

(c) A majority of the members of the board of directors shall constitute a quorum for the transaction of official business, and the decision of a majority of the board shall be deemed to be the act or decision of the board. No vacancy of less than a majority of the members of the board shall impair the right of the remaining members of the board to exercise all of the powers of said board.

(d) The board of directors shall adopt rules to govern its meetings, and all legislative sessions of the board of directors, whether regular or special, shall be open to the public (L. 1939, c. 387, § 3).

LEGISLATIVE POWERS OF DIRECTORS—RESOLUTIONS AND ORDINANCES—EMERGENCY ORDINANCES

§ 56-3433. The board of directors shall constitute the legislative body of the district, and shall determine all questions of policy. All legislative acts of the board shall be expressed in written resolutions or ordinances, and every ordinance enacted by the board of directors of a district shall be preceded by an enacting clause substantially as follows: "Be It Enacted by the _____ Peoples' Utility District"; and all such ordinances, except as hereinafter provided, shall require the affirmative votes of a majority of the board of such district at a regular meeting, or an adjourned regular meeting. All ordinances, except emergency ordinances, shall be subject to the referendum and shall become effective 30 days after the date of their passage, unless a later date is fixed in the ordinance itself, in which event they shall take effect at such later date. Emergency ordinances shall contain the statement that an emergency exists and specify with distinctness the facts and reasons constituting such emergency. The unanimous vote of all members of the board present shall be necessary to pass any emergency ordinance and no such ordinance shall be passed with less than four directors present. All ordinances shall be voted upon by an "aye" and "nay" vote (L. 1931, c. 279, § 33).

TAXES—LEVY AND COLLECTION AUTHORIZED

§ 56-3434. Subject to the limitations contained in section 11, article XI of the state constitution, the board may levy and collect, or cause to be levied and collected, taxes for a period of ten years, but not to exceed two mills in any one year nor more than ten mills in said ten-year period, for the purpose of paying the obligations of the district; provided, that no part of said taxes shall be so levied and collected for the purpose of paying either principal or interest, or both, on any revenue bonds issued by the district as herein provided, and provided further that in the event of inadequacy of the revenues of the district to pay the costs of operation and maintenance thereof and the principal of and interest on the bonds of the district promptly as the said bond principal and interest obligations respectively become due and payable, neither this limitation nor any other limitation in this act contained shall restrict or impair the right of the district to levy ad valorem taxes against all property within the district taxable for its purposes in order to provide the funds with which to pay the said general obligation bond principal and interest when due. Any utility district created prior to the effective date of this act may levy taxes as in this section provided for the same term and under the same conditions as would be applicable to districts organized after the effective date of this act (L. 1939, c. 387, § 4).

BONDS OF OFFICERS AND EMPLOYEES

§ 56-3435. All officers and employes of the district shall give to the district such bonds and in such form and amounts as the board of directors may require (L. 1931, c. 279, § 35).

SUPERVISION AND REGULATION OF UTILITIES OWNED BY DISTRICT

§ 56-3436. The board of directors shall supervise and regulate every utility owned and/or operated by such district, including the fixing and adjusting of rates, rentals, charges and classifications, contracts, practices, and schedules, for or in connection with any service, product, or commodity owned or controlled by such district; provided, however, that in fixing rates, such rates shall be sufficient to provide the funds necessary for the payment of the principal and interest of any revenue bonds outstanding, after paying from said revenues all expenses of operation and maintenance, including taxes. Such rates so fixed shall be sufficient to accomplish the following purposes: (a) For the proper operation and maintenance of the property or facilities owned by the district; (b) to pay all taxes which may be levied upon property owned by the district or which it may be required to pay out of its gross revenues; (c) for the payment of the principal and interest of all bonds, warrants, or obligations of any character in accordance with the terms and provisions thereof respecting the time, manner, and amount of payment; (d) for the payment of any other indebtedness or obligations which the district may be obligated to pay; (e) to establish and maintain such special fund or funds which the district has obligated itself to create for the purpose of paying bond issues or other obligations (L. 1939, c. 387, § 5).

SYSTEM OF ACCOUNTING—ANNUAL AUDIT

§ 56-3437. The board shall adopt the effective uniform system of accounts prescribed by the federal power commission and require that the accounting for receipts and disbursements for the district be accomplished in accordance with said system of accounts, and file with the hydroelectric commission and with the county clerk of each county included within the boundaries of the district an annual report in the form required by the federal power commission. There shall be an annual audit to be made by the secretary of state. A copy of such audit shall be filed with each county clerk of the county in which such district or any portion of the boundaries of the district is located, and in the office of the secretary of state and in the office of the commission, where it shall remain a public record (L. 1939, c. 387, § 6).

SPECIAL ELECTIONS—RESOLUTIONS CALLING

§ 56-3438. When any district, organized under the provisions of this act, shall desire to hold an election for the purpose of submitting to the electors of such

district any question that may lawfully be submitted to the voters of such district, such board may, at any regular or special meeting called in accordance with the rules of such board or the statutes governing the same, adopt a resolution calling a special election to be held at such time as it may select, not less than 50 days after the passage of such resolution, and may in the same resolution designate and describe in general terms the question which is to be submitted at such special election (L. 1931, c. 279, § 38).

SPECIAL ELECTIONS—NOTICE—JUDGES AND CLERKS

§ 56-3439. Notice shall be given of all such special elections by the board, when not held concurrently with a general election, by posting the same for a period of not less than 30 days immediately preceding the date of election in five public places in each subdivision of the district and by publication thereof in one or more newspapers of general circulation within the boundaries of the district. Such notice shall be published not less than once each week for the two successive weeks prior to said election and shall state the date of holding the election, and give the general description of the question or questions which are to be submitted; the notice of such election shall contain a designation of the polling places at such election. Where the election is to be held concurrently with a general election in the county, said notice shall be given by the county clerk in the same manner as the notice for the said general election and shall be posted and published as a part of said notice for said general election. When the election is not held at the same time as a general election there shall be one judge and two clerks at each precinct appointed by the board of directors who shall be paid such compensation as the board shall provide. The secretary of the board or other person designated by the board shall, not less than 45 days before such general election, furnish said notices of election to the county clerk or county clerks (L. 1931, c. 279, § 39).

GENERAL ELECTIONS—PLACING OF QUESTIONS ON BALLOT—MAP FOR ELECTION JUDGES

§ 56-3440. When the election shall be concurrent with a general election held within the county or counties in which a district or part thereof is located, the board shall, at least 45 days before such election, cause to be certified to the county clerk or county clerks of such county or counties the questions which are so to be voted upon, with the form of ballot title, and the county clerk shall thereupon cause such questions to be placed upon the ballot. In case the district is not coterminous with the county in which such general election is held, the board shall cause to be prepared and furnished to the county clerk, for distribution to the election judges of any precincts which are not wholly contained within the boundaries of the district holding such election, a map showing the part of such precincts within and without the district, and shall furnish such other means as may, in their judgment, be requisite to enable the election judges to determine which of such electors shall have the right to vote (L. 1931, c. 279, § 40).

SPECIAL ELECTION HELD CONCURRENTLY WITH MUNICIPAL OR COUNTY ELECTION—
SAME OFFICIALS SERVE

§ 56-3441. In case any election hereunder, whether called by the commission or by the board, is held concurrently with an election in a municipality or county containing in whole or in part the same territory as the district, the judges and clerks of such election shall serve as election officials of the district election (L. 1931, c. 279, § 41).

ELECTION PROVISIONS CUMULATIVE

§ 56-3442. The provisions of this act are additional and cumulative to the provisions of any other law now or hereafter existing for the holding of elections in districts (L. 1931, c. 279, § 42).

BONDS—ISSUANCE AND SALE

§ 56-3443. 1. For the purpose of carrying into effect the powers herein granted, any district, when authorized by a majority of the qualified voters of such district, voting at any general primary or general election or at a special elec-

tion, at which special election not less than twenty-five percent of the registered voters within the district shall have voted on the question, may issue and sell revenue bonds so conditioned as to be paid solely from that portion of the revenues derived from the district by the sale of water, waterpower, and electric energy, or any of them, or any other service, commodity or facility which may be produced, used, or furnished in connection therewith, remaining after paying from said revenues all expenses of operation and maintenance, including taxes; and with like authorization any district may issue and sell general obligation bonds so conditioned that such district shall therein and thereby unconditionally undertake, promise, and agree to pay the same in whole or in part from revenue or from taxes or both; provided, however, that the general obligation bonds of the district outstanding at any time shall not exceed ten percent of the assessed valuation for state and county taxation of all property within the limits of said district. Within and not in excess of the total amount of revenue bonds authorized, as in this act provided, to be issued, a part of said bonds may be issued by the board for betterments and extensions; provided, however, that the amount of such revenue bonds so issued shall be limited to the reasonable value of such betterments and extensions, plus an amount not to exceed ten percent thereof for administrative purposes, and the amount of the bonds for such purposes so issued shall be limited in an amount that the revenues to be derived from such betterments and extensions will be in an amount sufficient to amortize such revenue bonds over a period not to exceed thirty years.

Any district issuing revenue bonds hereby is specifically empowered and authorized to pledge that part of the revenue which the district may derive from its operations as security for the payment of the principal and interest thereon remaining after payment from said revenues of all expenses of operation and maintenance, including taxes, and consistent with the other provisions of this act.

All revenue bonds issued under the provisions of this act shall contain a clause that the same are payable solely from revenues derived by the district from its operations, remaining after paying from said revenues all expenses of operation and maintenance, including taxes. Such bonds may be issued from time to time as the board of directors of said district may determine, and shall be of such denominations, and shall run for such period of years not exceeding thirty years as such board of directors may determine. Every issue of bonds shall be in serial form, with definite maturities, and shall mature in annual or semiannual instalments. The first instalment of principal shall fall due and be payable not later than five years, and the last instalment not later than thirty years, after the date of issue, and the combined instalments of principal and interest due each year during such period shall be equal or substantially equal in amount; but all such bonds, at the discretion of the board of directors, shall contain provisions for the call and redemption by the district of such bonds, or any part of such issue, at the option of the district, on any interest-paying date three years or more after the date of issuance thereof, upon the payment of the principal of the bonds and accrued interest to the date of call. All bonds shall be sold at such price that the effective interest rate upon such bonds shall not exceed six percent per annum. They shall be signed on behalf of said district by its president or chairman and be countersigned by its secretary, and the seal of the district shall be affixed to each bond, but not to the coupon; provided, that said coupon, in lieu of being signed, may have printed thereon the facsimile signature of such officers. Such bonds shall be payable at a place therein named to the bearer or registered holder thereof in the principal amount named therein, at the maturity thereof, in lawful money of the United States, at the rate per annum therein named, payable semiannually on the first days of January and July in each year, in accordance with the tenor and terms of interest coupons thereto attached.

2. All legally authorized general obligation bonds or revenue bonds, hereinafter designated as "obligations" of districts, hereafter issued shall be advertised for sale at least once each week for not less than three successive weeks in a newspaper printed in the English language and of general circulation within the district, or, if there be no such newspaper, then in a newspaper or newspapers printed and published in each of the counties in which the district is located. Said obligations also shall be advertised for sale by one publication of a notice thereof given at least thirty days prior to sale date, in a newspaper of general circulation carrying financial notices printed and published in the city of Portland, Oregon. All bids for such obligations shall be in writing, shall

be accompanied by a certified check on a bank doing business in this state for not less than 3 percent of the par value of the obligations offered for sale, and shall be publicly opened at the time and place specified in the advertisement thereof, and the district shall not accept bids for said sale after such time nor permit any changes, corrections, additions, or qualifications to be made in bids previously submitted prior to such time. The obligations shall be sold to the highest responsible bidder for not less than 98 percent of their face value and their accrued interest. In determining the highest bid received, the district shall take into consideration such premiums, if any, as are offered. Any costs incurred by the district in advertising, printing, or engraving and selling the bonds shall be taken into consideration and deemed as interest in determining whether the rate of interest to be paid throughout the life of the obligations exceeds the maximum rate allowed under this act. It shall be unlawful for any officer or employe of a district prior to the public opening of said bids to disclose to any bidder or other person what bids, if any, have been received or that the district has failed to receive any bids for said obligations. Any officer or employe violating this provision shall be deemed guilty of a misdemeanor. If the bids for such obligations are not satisfactory to the district, it may reject any and all of such bids and readvertise the obligations in the manner and under the conditions hereinabove provided. For the purpose of this act the obligations advertised for sale shall be considered to be "obligations" within the meaning of such, as defined in section 68-505, Oregon Code 1935 Supplement (L. 1939, c. 387, § 7).

BONDS—SUBMISSION TO VOTERS

§ 56-3444. Before any district shall issue any general obligation or any revenue bonds, the question whether such bonds of said district shall be issued shall be submitted to the qualified voters of the district, either at any general, state, or county election or at a special election called for that purpose by the board of said district. Notice of such election shall be given as herein provided. At such election the ballots shall contain a statement of the amount of bonds to be voted on and the purpose for which such bonds are to be used. If a majority of those voting on the question vote "yes," provided the voters have voted on the question as in this act provided, the board of directors of said district shall be authorized and empowered to issue bonds of the character and in the amount designated by such ballot at said election, otherwise not (L. 1939, c. 387, § 8).

VALIDATION AND CONTEST PROCEEDINGS

§ 56-3445. (a) The board of any district created under the provisions of this act may by petition commence proceedings in the circuit court of the county in which said district, or the greater portion thereof, is located for the purpose of having a judicial examination and judgment of the court as to the regularity and legality of the proceedings in connection with the creation of such district, including any action or proceeding of the hydroelectric commission proclaiming the creation of such district, or declaring the result of any election, general or special therein, and the proceedings of said board and of said district, providing for and authorizing the issue and sale of bonds of the district, whether said bonds or any of them have or have not been sold or disposed of, and any order of such board levying a tax, and the legality of the authorization of any contract with the United States and as to the validity of such contract, whether or not the same shall have been executed. All proceedings of such district may be judicially examined and determined in one special proceeding, or any part thereof may be separately examined and determined by the court. No bond issue or any part thereof shall be sold or offered for sale unless the same shall have been confirmed under the provisions of this section.

(b) Said proceedings shall be in the nature of a proceeding in rem, and the practice and procedure therein shall follow the practice and procedure of suits in equity, so far as the same shall be consistent with the determination sought to be obtained, except as herein provided. The jurisdiction of said district of qualified voters therein shall be obtained by the publication of notice directed to said district, and to the said qualified voters individually. Such notice shall be served on all parties in interest by publication thereof for at least once a week for three successive weeks in some newspaper of general circulation published in the county where said proceeding is pending and jurisdiction shall be complete within ten (10) days after the full publication of said notice as herein

provided. Any person interested may at any time before the expiration of said ten (10) days appear and contest the validity of such proceeding, or of any of the acts or things therein enumerated; such proceedings shall be speedily tried and judgment rendered declaring the matter so contested to be either valid or invalid; and any order or judgment in the course of such proceeding, or any final decree therein may be made and rendered by the judge of such court in vacation, and for the purpose of any such order, judgment, or decree the said court shall be deemed at all times to be in session and the act of the judge in making such order, judgment, or decree shall be the act of the court. Either party may have the right to appeal to the supreme court at any time within thirty (30) days after the rendering of the final judgment or decree, which appeal must be heard and determined within three (3) months from the time of taking such appeal. The court, in inquiring into the regularity, legality, or correctness of any of said proceedings, must disregard any error, irregularity, or omission which does not affect the substantial rights of the parties to said special proceedings, and may approve the proceedings in part and disapprove and declare illegal or invalid other or subsequent proceedings in part, and the court may approve the proceedings in part and disapprove the remainder thereof. The costs of the special proceedings may be allowed and apportioned between the parties in the discretion of the court.

(c) Any qualified voter of the district within thirty (30) days after the entry of any order, or the performance of any of the acts mentioned in subsection (a), and for which a contest is by said section provided, may bring a like proceeding in the circuit court of the county where the district, or the greater portion thereof, is located, to determine the validity of any of the acts, orders, or things enumerated in this act, and concerning which the right of contest is by said act given. In such proceedings the board of directors shall be made parties defendant and service of summons shall be made on the members of the board personally if within the county where said district or any part thereof is situated, but as to any directors not within such county, service may be had by publication of summons for a like time and in like manner as is provided by this act, and service shall be deemed complete within ten (10) days from the date of personal service thereof within the county and within ten (10) days from the date of the completion of the publication thereof as the case may be. Such proceedings shall be tried and determined in the same manner as proceedings brought by the district itself. No contest of any proceedings, matter, or thing by this act provided to be had or done by the board of directors or by said district or by the hydroelectric commission, qualified voter within the district, shall be had or maintained at any time or in any manner except as herein provided (L. 1931, c. 279, § 45).

TAXES—LEVY AND COLLECTION

§ 56-3446. All taxes as herein provided shall be levied upon all property, real and personal, situated within the boundaries of the district, and which is by law taxable, for state and county purposes, and such taxes shall be levied and collected at the time and in the manner provided for the levy and collection of state and county taxes, and shall be by the county officers collecting the same paid to the treasurer of said district (L. 1931, c. 279, § 46).

PURCHASE OF SUPPLIES AND MATERIALS

§ 56-3447. In the purchase of supplies and materials, when the expenditure required for same shall exceed the sum of \$1,000, such purchase shall be made by contract to be let to the lowest responsible bidder, after notice by publication not less than once at least 10 days before the date fixed for opening of bids in a newspaper of general circulation. The board may reject any and all bids and readvertise for further bids (L. 1931, c. 279, § 47).

COMPENSATION OF DIRECTORS

§ 56-3448. The board of directors may provide by ordinance or resolution the compensation of its members while engaged in the performance of their duties as such directors of the district, not to exceed one hundred dollars (\$100) per year and necessary expenses. They shall receive no other compensation (L. 1939, c. 387, § 9).

RENTING OR LEASING OF UNUSED FACILITIES

§ 56-3449. Whenever any of the facilities, works, or utilities of the district, or any part thereof, is not used or employed to its fullest capacity for the benefits or requirements of the district or its inhabitants, such district shall have power to enter into an agreement or agreements, with counties, cities, municipalities, publicly owned utility companies, or other public corporations or agencies, upon such terms and conditions as may be satisfactory to the board, for the renting, leasing, or otherwise using the available portion or parts of such facilities, works, or utilities. In connection with any such agreement, renting or leasing the district may undertake or perform any services incidental thereto (L. 1931, c. 279, § 49).

EMPLOYMENT OF LABOR—MINIMUM WAGE SCALE—WAGE AGREEMENTS

§ 56-3450. (a) All labor employed by a district directly or indirectly, shall be employed under and in pursuance of the provisions of section 49-704, Oregon Code 1930.

(b) The minimum scale of wages to be paid by such peoples' utility district and/or by any contractor or subcontractor for such district, or for any local utility district within the territory of the peoples' utility district, shall be not less than the prevailing wage for the character of work in the same trade in the locality where each district is located. This minimum scale shall be fixed by the board of directors prior to the notice and call for bids on work to be contracted.

(c) The board of any such district and its employes may make and maintain agreements concerning rates of pay and working conditions. Notice of any intended change in rates of pay and/or working conditions shall be given in writing and such proposed changes shall be referred to a conference between the board and representatives of the said employes. If the board and said representatives do not reach an amicable agreement, the question at issue may be referred to the state board of conciliation on request of the board of directors or the representatives of said employes (L. 1931, c. 279, § 50).

CONTROL OF EXISTING UTILITIES

§ 56-3451. Nothing herein contained shall authorize or be deemed to authorize or empower the board of directors of any district to interfere with or exercise any control over any existing utility owned and operated by any municipality in said district unless by consent of the city council of such municipality or the governing body of such municipally owned plant, when the control of said municipally owned plant is vested in a governing body other than the city council or governing body of such municipality (L. 1931, c. 279, § 51).

CHARTER PROVISIONS NOT MODIFIED—MUNICIPALITY NOT PROHIBITED FROM OPERATING OWN PLANT

§ 56-3452. Nothing in this act shall be so construed as to modify in any manner any charter provisions of any incorporated city or town, or to prohibit any municipality from acquiring and operating its own plant (L. 1931, c. 279, § 52).

RECALL OF ELECTED OFFICIALS

§ 56-3453. Every elected official of any peoples' utility district existing under the provisions of this act shall be subject to recall by the qualified voters of such district in accordance with the provisions of the general laws of the state for the recall of the officers of municipalities (L. 1931, c. 279, § 53).

WITHDRAWAL OF NAMES FROM PETITION PROHIBITED

§ 56-3454. After a petition has been filed with the commission, no person may withdraw his name therefrom (L. 1931, c. 279, § 55).

UNAPPROPRIATED WATERS OF STATE—RIGHT OF DISTRICT TO ACQUIRE

§ 56-3455. Any utility district created under the provisions of this act hereby is authorized to acquire in its own name the right to use the unappropriated waters of the state of Oregon in accordance with the laws of the state of Oregon in force

on January 1, 1931, and for the purposes of this act such laws in existence and in force in the state of Oregon on said date shall be considered to be in full force and effect; provided, that the time within which any such utility district shall be required to make application for a federal permit or license shall be 10 years from date of filing application for the appropriation of water in the office of the state engineer (L. 1931, c. 279, § 56).

UNAPPROPRIATED WATERS OF STATE—EFFECT OF FILING UPON

§ 56-3456. Any filing made by any utility district upon the unappropriated waters of this state for use in the future development of a hydroelectric plant by such utility district shall be reserved to such utility district and shall not be subject to appropriation by any other person, municipality or corporation unless it shall be judicially determined that such filing exceeds the reasonable present and future requirements of such utility district, in which event the surplus or excess may be by decree of a court of competent jurisdiction released and discharged from such filing. Proceedings in court for the determination of whether or not the filing by any utility district exceeds its reasonable present and future requirements may be instituted by the state of Oregon, or by any other applicant for the right to the use of the waters involved (L. 1931, c. 279, § 57).

INTEREST OF OFFICERS AND EMPLOYEES PROHIBITED—PENALTY

§ 56-3457. No officer or other employe of any peoples' utility district shall have any pecuniary interest, directly or indirectly, in any contract awarded or to be awarded by the district or its officers, or in the profits to be derived therefrom. The violation of this section shall be a misdemeanor and any such officer or other employe, when convicted of such violation, shall cease to be an officer or employe of such district, and shall be punished by a fine of not exceeding \$500, or by imprisonment in the county jail not exceeding six months, or by both such fine and imprisonment (L. 1931, c. 279, § 58).

LIMITATION ON CONTRACTS PRIOR TO PURCHASE OR CONSTRUCTION OF UTILITY

§ 56-3458. Prior to the completion of the purchase or construction of a utility, as herein defined, no contract, either expressed or implied, involving an obligation on the part of the district in excess of five thousand dollars (\$5,000) shall become binding until approved by the commission, and it shall be unlawful for the board to make any payment under any such contract until same has been approved (L. 1931, c. 279, § 59).

PROCEDURE NOT SPECIFICALLY PROVIDED FOR

§ 56-3459. Where the procedure for the formation of a district, or for the annexation of territory to a district, or for the consolidation of two or more districts, or for the issuance of bonds and the levying and collection of taxes, or the holding of elections, or any other matter in connection with the organization or operation of utility districts, is not herein specifically provided for, any suitable method and/or proceeding may be adopted which may appear most conformable to the spirit of this act and the provisions of section 12 of article XI of the constitution of the state of Oregon (L. 1931, c. 279, § 60).

PROVISIONS OF ACT SEVERABLE

§ 56-3460. If any section, subsection, clause, or phrase of this act shall, for any reason, be adjudged by any court of competent jurisdiction to be invalid, such decision shall not affect or impair any part of the remainder of this act (L. 1931, c. 279, § 61).

TAXATION OF DISTRICT PROPERTY

§ 56-3461. All property, real and personal, owned, used, operated, or controlled by any peoples' utility district, in or for the production, transmission, distribution or furnishing of electric power or energy or electric service for or to the public, shall be assessed and taxed in the same manner and for the same purposes, and such district and the directors and officers thereof shall be

subject to the same requirements, as may now or hereafter be provided by law in respect to the assessment and taxation of similar property owned, used, operated, or controlled by private corporations or individuals for the purpose of furnishing electric power or energy or electric service to the public (L. 1939, c. 387, § 10).

DISTRICT MAY BE DISSOLVED

§ 56-3462. Any peoples' utility district now existing in this state or which may hereafter be formed or organized and which for a continuous period of 10 years from the date of its formation or organization has remained inactive and has not progressed further or done more than its formation and organization may be dissolved whenever a majority of the qualified voters of the district voting at an election for such purpose shall vote in favor of the dissolution of the district as hereinafter provided (L. 1939, c. 387, § 11).

PETITION FOR DISSOLUTION AND ELECTION

§ 56-3463. Such election may be called by the board of directors on their own motion or by a petition filed with the directors of the district, signed by qualified voters of the district equal in number to not less than 5 percent of the greatest number of votes any candidate received for justice of the supreme court at the last preceding general election held in such district, requesting the directors of the district to submit to the voters thereof the proposition of dissolving the district and settling its affairs. Such petition forthwith shall be referred to the county clerk of each county wherein such district or any part thereof is located. The county clerk of each of such counties shall proceed to examine the purported signatures on such petition of voters within the county and shall certify as to the regularity and sufficiency thereof; but where such district shall be located in more than one county, the certificate of the county clerk of each county as to the regularity of the signatures on such petition shall be filed with the secretary of state, who shall accept the certificates by the county clerks as to the regularity of said signatures, and based thereon, shall certify as to the sufficiency of all of the signatures on such petition. Whenever a dissolution petition has been so certified as sufficient, the certificate of sufficiency with copy of such petition forthwith shall be transmitted to the directors of the district, and the latter immediately shall call an election to be held concurrently with any primary or general election, provided that notice thereof shall be given not less than 50 nor more than 60 days prior to such primary or general election.

If a majority of the qualified voters of the district, voting at such election, shall vote in favor of the dissolution of the district, the directors thereof forthwith shall issue their proclamation dissolving the district and shall file such proclamation in the office of the county clerk of the county wherein the district shall be located; and thereafter the district shall continue to exist solely for the purpose of settling its affairs as hereinafter provided (L. 1939, c. 387, § 12).

DIRECTORS BECOME TRUSTEES UPON DISSOLUTION

§ 56-3464. Upon such dissolution of the district, the directors thereof then in office shall be deemed to be, and thereafter be referred to as, the trustees of the district, with power and authority in the name and in behalf of the district to sell, transfer, and dispose of any and all of the property and assets of the district and to do each and every thing necessary and needful or requisite for the settlement and liquidation of the affairs of the district as hereinafter provided (L. 1939, c. 387, § 13).

INVENTORY AND SALE OF PROPERTY BY TRUSTEES

§ 56-3465. The trustees shall proceed at once to take, or cause to be taken, an inventory of all property of the district, its assets and liabilities, and shall sell the same as a whole or any part thereof upon such terms and conditions as the trustees shall deem advisable, and the proceeds derived therefrom shall be used to pay the indebtedness, if any, of such dissolved district (L. 1939, c. 387, § 14.)

DISPOSAL OF SURPLUS FUNDS, BOOKS, RECORDS

§ 56-3466. If, after the payment of all debts of the district, there shall remain any surplus funds to the credit of the district, such funds shall be turned over-

to the county treasurer of each county in which the district may be located, to become a part of the general fund of the county in the proportion that the assessed value of the property within the boundaries of the district in such county bears to the total assessed value of all property within the boundaries of the district as determined by the last assessment rolls.

After the affairs of the district have fully been settled, all of the books and records of the district shall be deposited by the trustees in the office of the county clerk of the county wherein such district or its principal part in area thereof is located, and the corporate existence of the district without further action is dissolved and terminated for all purposes (L. 1939, c. 387, § 15).

INVALIDITY OF ANY PART OF ACT—SAVINGS CLAUSE

§ 56-3467. If any clause, sentence, paragraph, or part of this act shall, for any reason, be adjudged by any court of competent jurisdiction, to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph or part thereof directly involved in the controversy in which such judgment shall have been rendered (L. 1939, c. 387, § 16.)

APPENDIX F

IN THE SUPREME COURT OF THE STATE OF WASHINGTON

JOHN A. BAYHA, RESPONDENT, *v.* PUBLIC UTILITY DISTRICT No. 1 OF GRAYS HARBOR COUNTY, A MUNICIPAL CORPORATION, AND C. B. SHERWOOD, H. E. BAILEY, AND OLIVER MORRIS, AS THE COMMISSIONERS OF SAID DISTRICT, RELATORS. CITY OF ABERDEEN, WASHINGTON, A MUNICIPAL CORPORATION, INTERVENER. No. 27739
EN BANC

(Filed Dec. 27, 1939)

This is an action instituted June 19, 1939, by John A. Bayha, on behalf of himself and all other taxpayers of the city of Aberdeen similarly situated, against Public Utility District No. 1 of Grays Harbor County, a municipal corporation, and C. B. Sherwood, H. E. Bailey, and Oliver Morris, as commissioners of such district, defendants, whereby plaintiff sought to enjoin and restrain the defendants from purchasing or entering into any contract or commitment for the purchase of any of the electric utilities of the Grays Harbor Railway & Light Company, without first submitting the question of such purchase to the voters of the district for their approval. Injunctive relief was also sought by plaintiff relative to a contract entered into between the district and one Guy C. Meyers; to the inclusion in the district of the city of Aberdeen, for the purpose of supplying the inhabitants thereof with electricity; and to the rate of interest which the district had agreed to pay on bonds to be issued to finance the purchase of such utilities.

On June 22, 1939, a temporary restraining order and order to show cause were issued, returnable June 26th. The city of Aberdeen was permitted to intervene in the action, the city contending that it had spent over \$125,000 on its own electric utility project, and is at present making expenditures upon such project; that to allow the utility district to operate in the city of Aberdeen would be to permit and authorize two municipal corporations to exercise the same powers within the same district, at the same time; and that the statute does not permit such competition.

Defendants filed a return to the show cause order, a motion to quash the temporary restraining order, and demurrers to the plaintiff's complaint and the complaint of intervener. Defendants also filed an answer to both the complaint of plaintiff and intervener.

While it does not appear what action was taken by the court on the motion to quash or the demurrers, the trial court continued the restraining order in force up to and during the trial, and then granted a permanent injunction. Defendants did not stand on their demurrers, but proceeded to trial, and no error is claimed herein, based upon the failure of the court to sustain such demurrers.

The entire matter came on for hearing on July 10, before Honorable Charles W. Hall, and all parties being present, the case was heard on the merits.

On September 8, 1939, the trial court entered its decree, wherein it permanently enjoined defendants from executing the contract in question for the purchase

of the Grays Harbor Railway & Light Company's properties, for the reason that defendants had failed to adopt a plan and system resolution, as provided by Laws of 1931, chapter 1, § 7, and for the further reason that the question of such purchase had not been submitted to and approved by the voters of the district. The trial court decided in favor of defendants the other questions raised by plaintiff and intervener, holding that defendant district may exercise its statutory powers within the limits of the city of Aberdeen; that the contract between defendants and Guy C. Meyers, employing Meyers as fiscal agent of the district, is a valid and binding contract, and not contrary to public policy; that the utility bonds proposed to be issued and sold by defendants, taken together with the Meyers contract, do not constitute a proposed issuance and sale below par and above the rate permitted by law; that neither the proposed purchase price to be paid for the utility properties nor the interest rate on the proposed bonds, when considered separately or when considered in relation to the Meyers contract, are constructively fraudulent.

Defendants have appealed from that part of the judgment adverse to them; plaintiff has cross-appealed from that part of the judgment adverse to him; and intervener has cross-appealed from that part of the judgment which holds that defendant district may exercise its statutory powers within the limits of the city of Aberdeen.

Defendants will hereinafter be referred to as relators, plaintiff and cross-appellant as respondent, and intervener and cross-appellant as intervener. The Grays Harbor Railway & Light Company will be referred to as the Grays Harbor Company.

On October 3, 1939, relators filed in this court their application for a writ of certiorari to review the decision of the trial court, and the matter is now before us on this application.

All of the records in the case are before us, and neither respondent nor intervener is making any particular objection to granting the writ, provided this court is of the opinion that it is a proper case for a review of the entire record.

In support of their application for the writ, relators show by way of affidavit, and it is not disputed, that the contract which the trial court enjoined relators from entering into will expire January 2, 1940, unless by that time relators can proceed to carry out the terms thereof; that an appeal cannot be perfected and heard in time to have the validity of this contract determined by this court before the expiration of the contract; and that relators will therefore have lost any benefit to be derived from such contract, even though they should prevail in their appeal.

Rem. Rev. Stat., § 1002, states the grounds for granting a writ of certiorari, and among others, it is stated the writ shall be granted when, in the judgment of the court, there is no plain and adequate remedy at law.

In the early case of *State ex rel. Smith v. Superior Court* (26 Wash. 278, 66 Pac. 385), we find the following rule announced, which we believe has been consistently followed by this court:

"This court has held in a long line of recent cases that the extraordinary writs of certiorari, prohibition, and mandamus will not issue to correct the action of the superior court when the court is acting erroneously, either with or without jurisdiction, but always with the provision that there is an adequate remedy by appeal. This adequate remedy has not been construed to be as speedy a remedy as the remedy by extraordinary writ might be, but a remedy which preserves the fruits of the appeal when won. In other words, the *status quo* of the parties litigant must be preserved, and, if by awaiting the result of an appeal the fruits of the litigation would be lost, the remedy has not been considered an adequate remedy."

See also, *State ex rel. Meredith v. Tallman* (24 Wash. 426, 64 Pac. 759); *State ex rel. Kent v. Superior Court* (109 Wash. 336, 186 Pac. 851); *State ex rel. Silver Basin Mining Co. v. Superior Court* (110 Wash. 559, 188 Pac. 384); *State ex rel. Bayless v. Superior Court* (116 Wash. 535, 199 Pac. 977); *State ex rel. Daigneault v. Superior Court* (124 Wash. 90, 213 Pac. 677); *State ex rel. Turner v. Paul* (182 Wash. 261, 46 P. (2d) 1060).

We think the writ should issue.

We shall now proceed to a consideration of the case on the merits.

While a more detailed statement of the testimony will be made in connection with the different questions raised, we desire at this point to make a general statement of the facts, which we believe to be substantiated by the testimony.

Public Utility District No. 1 of Grays Harbor County was created by an election held in the fall of 1938, with boundaries coextensive with the boundaries of the

county. At this election the relator commissioners were elected, and they, soon after their election, began to investigate the possibilities of acquiring electrical properties for the purpose of bringing about public ownership and distribution of electricity throughout the district. Apparently realizing the necessity of having a man familiar with financing projects of this character and who was in contact with banking interests capable of furnishing such finances, the commissioners, acting upon the advice of J. D. Ross, entered into a contract with one Guy C. Meyers. This contract, among other things, provided that Meyers was to find a purchaser for the bonds to be issued and was to act as financial agent of the district. The commissioners also procured the permission of Mr. Ross, who was then in charge of the Bonneville project, to allow a Mr. Beck to investigate and appraise the properties of the Grays Harbor Company. Mr. Beck, with his crew, made this investigation and appraisal, without cost to the district. This work by Mr. Beck and his crew continued up until about the middle of April 1939. Mr. Meyers succeeded in getting together a syndicate which agreed to take the bonds.

This investigation finally culminated in a contract being entered into between the district and the Grays Harbor Company, wherein the district agreed to purchase the properties of the company for the sum of \$2,842,000, which was the figure fixed by Mr. Beck as the fair value.

The first question to be considered under relators' assignments of error is whether or not Rem. Rev. Stat., § 11610, requires an election as a prerequisite to the purchase by a public utility district of the properties of a utility privately owned, where the purchase is to be financed by utility revenue bonds. This question particularly involves the construction of the proviso found in subdivision (b) of § 11610, *supra*. The entire act, of which § 11610 is a part, consists of Rem. Rev. Stat., §§ 11605 to 11616, both inclusive. We think it may be helpful in this matter to have in mind the purpose of this act, and we desire therefore to call attention to § 11605, which provides:

"Purpose of Act: The purpose of this act is to authorize the establishment of public utility districts to conserve the water and power resources of the state of Washington for the benefit of the people thereof, and to supply public utility service, including water and electricity for all uses."

Section 11610 provides:

"Powers of districts—Manager—Duties—Procedure—Boundaries—Sale of plants. All public utility districts organized under the provisions of this act shall have power:

"(a) To make a survey of hydroelectric power, irrigation, and domestic water-supply resources within or without the district, and to compile comprehensive maps and plans showing the territory that can be most economically served by the various resources and utilities, the natural order in which they should be developed, and how they may be joined and coordinated to make a complete and systematic whole;

"(b) To construct, condemn and purchase, purchase, acquire, lease, add to, maintain, operate, develop, and regulate all lands, property, property rights, water, water rights, dams, ditches, flumes, aqueducts, pipes and pipe lines, water power, leases, easements, rights-of-way, franchises, plants, plant facilities and systems for generating electric energy by water power, steam, or other methods, plant, plant facilities and systems for developing, conserving, and distributing water for domestic use and irrigation, buildings, structures, poles and pole lines, and cables and conduits and any and all other facilities, and to exercise the right of eminent domain to effectuate the foregoing purposes or for the acquisition and damaging of the same or property of any kind appurtenant thereto, and for the purpose of acquiring the right to make physical connection with plants and plant facilities of any and all persons, corporations, and municipalities, and such right of eminent domain shall be exercised and instituted pursuant to resolution of the commission * * *. It shall be no defense to a condemnation proceeding hereunder that a portion of the electric current generated or sold by such public utility district will be applied to private purposes provided the principal uses intended are public: *Provided, That no public utility owned by a city or town shall be condemned hereunder, and none shall be purchased without submission of the question to the voters of the utility district * * *.*" (Italics ours.)

Calling attention now to the proviso found in subdivision (b), § 11610, *supra*, we think it must be admitted that the second part of the proviso, beginning "none shall be purchased," means absolutely nothing when standing alone. The subject of the phrase is "none," and it must have an antecedent to give the phrase meaning. To what, then, does "none" refer? What is its antecedent?

Webster's New International Dictionary (2d ed.), 1935, defines "none" as a pronoun meaning "no one"; "not any"; "nobody."

Nesfield, in Outline of English Grammar (1927), classifies the word "none" as a demonstrative pronoun, and states: "A demonstrative pronoun points to some noun going before, and is used instead of it * * *."

Relators contend that "none" refers back to "public utility owned by a city or town"; respondent contends that it refers to any public utility, however owned, and is a limitation on the general grant of power to purchase, etc.

The first part of subdivision (b), of § 11610, contains a general grant of power to the district to construct, condemn and purchase, purchase, acquire, etc. We think subdivision (b) is concerned primarily with the power granted to a district. No limitation on the power to purchase is found in this section, until we come to the proviso; in fact, there is no provision anywhere in the act, other than in the proviso, which limits the power of the commissioners to purchase, condemn, etc., by requiring that such action first be submitted to the voters of the district, and their approval obtained, except in § 11611, which provides that where a *general indebtedness is to be incurred, which will bring the indebtedness of the district to an amount exceeding one and one-half per cent of its taxable property*, the proposition of incurring such indebtedness and the proposed plan shall be submitted to the electors. In no place in § 11610, prior to the proviso, is the term "public utility" used, except as used in the name "public utility district." Is it not logical, then, to say that, inasmuch as the only place the words "public utility" are used in the section is in the first part of the proviso, and as used, these words are qualified by the following words "owned by a city or town," the word "none" must refer to "public utility," as therein qualified, or, in other words, to a public utility owned by a city or town?

In 59 C. J., 1090, § 640, the rule relative to a proviso is stated as follows:

"The operation of a proviso is usually and properly confined to the clause or distinct portion of the enactment which immediately precedes it, and does not extend to or qualify other sections, unless the legislative intent that it shall so operate is clearly disclosed."

See *State v. Robinson* (67 Wash. 425, 121 Pac. 848); also *State v. Fabbri* (98 Wash. 207, 167 Pac. 133); 2 Lewis' Sutherland Statutory Construction (2d ed.), 673, 352.

In *Towson v. Denson* (74 Ark. 302, 86 S. W. 661), the rule is thus announced:

"When the enacting clause is general in its language and objects, and a proviso is afterwards introduced, that proviso is construed strictly, and takes no case out of the enacting clause, which does not fall fairly within its terms."

In *United States v. Bernays* (158 Fed. 792), we find the following statement:

"A proviso should be construed with reference to the subject-matter of the sentence of which it forms a part unless it clearly appears to be designed by the legislature for a broader or more independent operation."

See, Also, 2 Lewis' Sutherland Statutory Construction (2d ed.), 811, § 420; *State ex rel. Peck v. Anderson* (92 Mont. 298, 13 P. (2d) 231); *Hopkins v. Anderson* (218 Cal. 62, 21 P. (2d) 560).

It is contended by respondent that it would be a meaningless thing to require the question of the purchase of a municipally-owned public utility to be submitted to the voters, and not to require the purchase of a privately-owned utility to be so submitted, as the law now requires that a municipality must submit to the voters the question of a sale of its utilities before such sale can be made. It is further contended that, unless the purchase of a privately owned utility must be submitted to the voters, no safeguard will be thrown around the acts of the commissioners.

We think a sufficient answer to respondent's contention is found in a study of the entire act, and that from such examination the conclusion is inescapable that the legislature did not intend to limit the power of the commissioners of a public utility district in the purchase, etc., of utilities, as provided in the act, except as to those public utilities owned by a city or town, or where a general indebtedness is to be incurred, which will run the general indebtedness of the district above the one and one-half per cent limit. It might also be said that, even though the law requires a municipality to secure the approval of the voters before it can sell a public utility, the act in question requires the entire district to approve a purchase of a public utility owned by a city or town.

The legislature has seen fit to vest the commissioners of a public utility district with almost unlimited powers relative to the construction, purchase, etc., of utilities, and in the sale of utility revenue bonds to finance such operations. This the legislature had a right to do, and we cannot therefore limit the powers

granted, unless such limitation is plain, nor can we otherwise interfere with the exercise of the powers granted, unless such powers are exercised capriciously and arbitrarily, or fraudulently.

Rem. Rev. Stat., §§ 5422 to 5425, provide for arguments for and against a proposed initiative measure, and the distribution of pamphlets containing such arguments to the voters prior to the election. Relators introduced herein exhibit No. 14, which is a pamphlet containing arguments against the public utility act, and in such argument it was contended that the act gave the commission almost unlimited power to purchase, etc., the property of utility companies. We think it must be assumed, then, that the people, in voting on this initiative, did so believing that public utility districts had the broad powers claimed in such argument. We held in *Denny v. Wooster* (175 Wash. 272, 27 P. (2d) 328), that arguments made in pamphlets for and against an initiative measure might be considered by the court in determining the purpose and intent of the act. We do not think the cases of *Spokane v. State* (198 Wash. 682, 89 P. (2d) 826), and *United States v. Trans-Missouri Freight Assn.* (166 U. S. 290), cited by respondent, hold to the contrary.

Considering, then, the intent as indicated by an examination of the entire act, the ordinary meaning of the words used in the proviso, the generally accepted rules of grammatical construction, the location of the proviso in the section relative to the general grant of power, and other factors appearing herein, we are of the opinion the word "none," as used in the proviso, refers to "public utility owned by a city or town," and this being true, the proviso is not a general limitation on the powers of the commissioners to purchase, but is only a limitation on the powers of the commissioners to purchase a public utility owned by a city or town, and does not therefore require an election as a prerequisite to the purchase by the district of a privately owned utility, where the purchase is to be financed by utility revenue bonds.

It is next contended by relators that the court erred in holding that relators had failed to provide for a plan or system, as provided in Rem. Rev. Stat., § 11611. This section provides:

"Whenever the commission shall deem it advisable that the public utility district purchase, purchase and condemn, acquire, or construct any such public utility, or make any additions or betterments thereto, or extensions thereof, the commission shall provide therefor by resolution, which shall specify and adopt the system or plan proposed, and declare the estimated cost thereof, as near as may be, and specify whether general or utility indebtedness is to be incurred, the amount of such indebtedness, the amount of interest and the time in which all general bonds (if any) shall be paid, not to exceed thirty years. In the event the proposed general indebtedness to be incurred will bring the indebtedness of the public utility district to an amount exceeding one and one-half percent (1½%) of the taxable property of the public utility district, the proposition of incurring such indebtedness and the proposed plan or system shall be submitted to the qualified electors of said public utility district * * *.

"Whenever the commission (or a majority of the qualified voters of such public utility district, voting at said election, when it is necessary to submit the same to said voters) shall have adopted a system or plan for any such public utility, as aforesaid, and shall have authorized indebtedness therefor * * *, general or public utility bonds may be used as hereinafter provided."

It will be noticed that, unless a general obligation of the district is to be created, which will bring the general indebtedness of the district to more than the one and one-half percent debt limit, no particular time is specified when the plan or system resolution shall be passed, other than that it shall be passed "whenever the commission shall deem it advisable that the public utility district purchase, etc." It is evident that the legislature did not deem it necessary that any publicity be given to such plan or system resolution, as no provision is made for publishing same, or for any public hearing thereon, so the argument made by respondent, that the public are entitled to be advised of the plans of the commission would not seem to be of much weight.

We think a reasonable interpretation of this provision relative to the plan or system resolution would require that the commissioners pass a plan or system resolution, when they are possessed of the facts upon which to base a plan or system, and have determined on any such plan, but before the actual consummation of the purchase of any utility pursuant to such plan, and before general or public utility bonds are issued. We do not think, however, the provision of the statute relative to the time of passing the plan or system resolution is mandatory.

In the instant case it was not necessary to submit to the voters either the proposed plan or the question of the purchase.

On June 20, 1939, the commission passed a plan or system resolution, therein specifying, among other things, that it was the plan to purchase the properties of the Grays Harbor Company, and that the estimated cost of the plan or system was \$3,350,000; that, to defray the cost of the system, utility revenue bonds would be issued, bearing interest at the rate of four and one-quarter percent per annum. The resolution in other respects, insofar as its contents are concerned, complied with the statute.

It is apparent from the testimony herein that the commission was making an investigation of the possibilities of bringing electricity to residents of the district and, particularly was investigating the properties of the Grays Harbor Company, and we think it is true that in the latter part of April the commission had pretty definitely determined upon the plan of purchasing such properties. However, there were some things which remained to be settled, and, while we are of the opinion the statute does not contemplate that the plan or system must be exact in every detail, we are impressed with the fact that these commissioners were attempting to work out all the details before definitely committing themselves to such plan. Considerable is said about the secrecy with which the commission conducted the negotiations herein. While the commission might have followed a different policy in regard to the publicity to be given its actions relative to the purchase of the properties herein mentioned, yet, there being no provision requiring any such publicity, we do not feel that it is the function of this court to substitute its judgment for that of the commissioners, and say that the policy pursued by the commission was not for the best interests of the district.

While the contract involved herein was signed by the commissioners on June 15th, it does not appear that it was signed by the officer of the Grays Harbor Company in New York until June 23d. It appears from the testimony that a form of contract had been sent to the commission to be executed, but that the attorney for the commission recommended that some changes be made in the contract. Such changes were made and the contract was then signed and delivered to Mr. Meyer, to take to New York. A change having been made in the contract as prepared, it was not known whether the Grays Harbor Company would sign or not, and the commissioners were not advised until June 23d that it had been signed by the company and had become a binding contract.

We are of the opinion there has been a substantial compliance with the statute herein, and that the failure of the commissioners to pass a plan or system resolution prior to the signing of the proposed contract was, at most, only an irregularity which would not affect the validity of the contract.

Respondent cites the cases of *State ex rel. Matson v. Superior Court* (42 Wash. 491, 85 Pac. 264) and *Dunkin v. Blust* (83 Neb. 80, 119 N. W. 8). We do not think these cases are in point as sustaining respondent's contention. In the *Matson case* the court held that a petition to establish a drainage district was insufficient, because of a failure to set out therein certain statutory requirements relative to a proposed system. The *Blust case* decided that where an appropriation ordinance was passed prior to a publication thereof in a newspaper for four weeks, as provided by statute, a taxpayer was entitled to a restraining order enjoining the trustees from proceeding under the ordinance. This case does not pass upon the question of whether or not the failure to publish the estimate would invalidate contracts made or obligations entered into involving the expenditure of the funds so appropriated.

We now come to the cross-appeals of respondent and intervener.

Respondent and intervener contend the trial court erred in refusing to restrain the relator district from entering into the light-and-power business in the city of Aberdeen. This contention is based on the proposition that the city has sufficiently begun construction of a hydroelectric plant of its own, so that it should be held to have a prior right to furnish electricity to its inhabitants.

The section of the statute under which the trial court held the relator district had the right to exercise its statutory powers within the city of Aberdeen is Rem. Rev. Stat., § 11616, which provides in part:

"No public utility district created hereunder shall include therein any municipal corporation, or any part thereof, where such municipal corporation already *owns or operates* all the utilities herein authorized; provided, that in case it does not *own or operate* all such utilities it may be included within such public utility district for the purpose of establishing or operating therein such utilities as it does not *own or operate*." [Italics ours.]

Both respondent and intervener argue that under this statute, and under a general well-established rule of law, two municipal corporations, having concurrent jurisdiction and having in part the same granted powers, cannot exercise such identical powers, at the same time, in the same territory. Many authorities are cited to support such contention, and we have no fault to find with such authorities, but we are of the opinion that they are not applicable to the facts herein, for the reason that the trial court held the city of Aberdeen did not *own* or *operate* any electric utility for the service of its people, and it would seem to follow that, unless the court was in error in so holding, the question of two municipal corporations covering the same territory and exercising the same powers, in the same territory, was not before the court. The statute in question seems to be plain, and authorizes a public utility district to include therein any municipal corporation for the purpose of establishing or operating therein such utilities as such municipal corporation does not *own* or *operate*.

It is evident, then, from the statute, that the question which must first be determined is whether or not intervener owns or operates a utility for the purpose of furnishing electricity to the people of such city.

Several ordinances were passed by the city of Aberdeen for the purpose of increasing its water supply and for the construction of a hydroelectric plant on the Wynooche river, to furnish electricity to the city. The first ordinance was passed in 1923, being ordinance No. 2307, and provided for both an additional water supply and the construction of a hydroelectric plant. The plan set out in this ordinance was approved by the voters, but this court, in the case of *Dole v. Aberdeen* (131 Wash. 516, 230 Pac. 401), restrained the issuance of bonds to finance such project.

Thereafter, ordinance No. 2833 was passed, to provide for the construction of a hydroelectric plant on the Wynooche river, and this ordinance was approved by the voters June 29, 1926. On May 3, 1927, the people of the city of Aberdeen approved a plan for making betterments and extensions to the municipal water system, as provided in ordinance No. 3018, at an estimated cost of \$1,600,000, to be financed by a bond issue.

A resolution was passed June 23, 1939, by intervener, instructing the city attorney to commence an action against relators, to determine whether the city of Aberdeen could be included within the district. The resolution further provided that, if it was determined that the city could not be so included, it was the intention of the city to continue with the construction of the hydroelectric plant, as provided in ordinance No. 2833.

S. E. Watkins, city engineer and water superintendent of intervener, who had been in the employ of the city since 1920, and who was the engineer in charge of the preliminary work on the Wynooche hydroelectric project, testified that preliminary surveys investigating the feasibility of the project were conducted from 1923 to 1925, at which latter date definite surveys were started; that the last survey was made in 1927; that reports were made to the city council, the last report being in 1927; that topographical and geological surveys were made in 1925, 1926, and 1927; that test pits were dug in 1925, 1926, 1927, and 1928; that tunnels and shafts were dug, diamond explorations were made, a temporary camp constructed, a road put in to the camp, and a gauging station set up to measure the flowage of the river; in short, that practically all the work which was ever done on the project was done between 1924 and 1928, with the exception that two men have been stationed at the camp for about six months each year to attend the river and rainfall gauges.

There is no concrete in place, nor does the city own any land at the proposed dam site. Intervener's exhibit No. 16 is a statement taken from the books of the city, showing expenditure by years for various items in connection with the project. All the items total \$125,796.62, and were paid from the water fund of the city. Very little has been spent on this project since 1929, and no plans have been made sufficient to commence construction.

Mr. Bailey, one of relators, who had been mayor of the city of Aberdeen for eight years, and had served on the council for six years, testified that he was the first official to propose to the council the development of the hydroelectric project, and that "there was really nothing done after the election" to carry out the provisions of ordinance No. 2833; that no bonds were ever sold; and that the city does not own or operate any generating or distributing system.

Pursuant to a local improvement district plan, a lamp post system, or street-lighting system, was erected, owned by the city, and apparently paid for by the property owners. This consists simply of ornamental iron lamp posts set in the sidewalks, and the purpose was for street lighting. The energy for this

system was all purchased from the Grays Harbor Company, which, at the present time, furnishes all the electrical energy used in the city.

It also appears that intervenor had at one time made application to the Federal power commission for permission to flood government lands. By letter of April 20, 1928, the commissioners closed out this application, without prejudice. No attempt has been made to reopen this application.

The city was granted a permit by the state to appropriate the water of Wynooche river. Three extensions of time for the beginning of construction have been granted. The last extension was granted in 1935, and extended to October 15, 1940, the time for the beginning of construction.

It appears from this testimony that intervenor neither owns nor operates a utility for the purpose of furnishing electricity to the inhabitants of the city. It follows, then, it seems to us, that the questions raised by respondent and intervenor, relative to the dual operation of utilities by two municipal corporations, having the same granted power, in the same territory, was not before the trial court and is not before this court.

We are in accord with the ruling of the trial court that intervenor neither owns nor operates a utility for the purpose of furnishing electricity to its inhabitants, and that the relator district is therefore authorized by § 11616, *supra*, to exercise the power therein granted, insofar as such right pertains to the establishing and operating of a utility within the limits of the city, for the purpose of furnishing electricity to the inhabitants thereof.

We express no opinion on the other questions raised by respondent and intervenor, relative to the rights of relator district or the rights of intervenor to establish and operate a utility within the limits of the city of Aberdeen, for the purpose of supplying its inhabitants with electricity.

It is next contended by respondent on his cross-appeal, that the purchase price of \$2,842,000 is so excessive as to be constructively fraudulent. This contention is based principally on the difference in valuation placed on the properties of the Grays Harbor Company by Robert W. Beck and James W. Carey. The former placed the market value at \$2,842,000, and the latter at \$2,321,528. The trial court held that the purchase price of \$2,842,000, being the value fixed by Mr. Beck, was not so excessive as to be constructively fraudulent.

There are many pages of testimony relative to the qualifications of these two men, and concerning the details of the methods used by them in arriving at the values reached. We think no good purpose would be served by attempting to go into these details. Suffice it to say that from the testimony it appears that both of these men were well qualified, by training and experience in dealing with electrical properties, to make the appraisal and fix a value. However, we think the trial court was justified in holding the value placed by Mr. Beck as not excessive.

It appears that Mr. Beck was chief electrical engineer on the Bonneville project, and was assigned by J. D. Ross, in charge of such project, to make this appraisal; and that Mr. Beck and a crew of men made a careful inspection, on the ground, of all the properties, and made a study of all the problems pertaining to these properties, and the problems confronting the district in taking over the properties. This study, among many other things, included revenues, betterments, extensions, reproduction new less depreciated value, and many other features, from which he finally fixed his value. This work consumed several months.

We desire not to be understood as being critical of the ability or qualifications of Mr. Carey, but we think the doubt which is cast upon the accuracy of his valuation is because of the time element, which he frankly admits all through his testimony compelled him to use methods which he did not consider as accurate as an investigation on the ground. Mr. Carey made no investigation of the properties on the ground but started with a valuation fixed by him for rate-making purposes when he was chief engineer for the department of public works in 1933 and 1934. The report made by Mr. Carey at that time contained an inventory of the Grays Harbor Company Properties as of June 30, 1933, reproduction cost as of March 5, 1934. The value fixed at that time by him was \$2,130,038. He made the valuation used herein in June or July 1939 for the purpose of use at this trial. Mr. Carey arrived at his valuation herein by taking as a base the figures he had used in his 1934 report and by the use of price level indices for the year 1938, which he obtained from the Engineering News Record; the various figures used in his 1934 report were brought up to date; that is, priced according to the average 1938 level, as shown by these indices. Mr. Carey several times stated that the best way to value property was to go into the field and appraise it, and that the use of the average price level for 1938 was not as

accurate as taking prices as of the present time. He further admitted that conscientious engineers might differ as much as twenty-five or thirty percent in estimating reproduction new. Mr. Carey admitted that the method used by him was not the best method but that from the available information, and without making a new appraisal, he had adopted a method which should result in a figure *somewhere around the figure which should be arrived at from the actual appraisal*. The trial court, in its memorandum opinion, had this to say of the Carey method:

"I am of the opinion that the general method underlying Mr. Carey's testimony is not the proper method to be adopted in reaching a purchase and sale price of the plant of the Grays Harbor Railway & Light Company."

Rem. Rev. Stat. § 11608, provides that "the powers of the public utility district shall be exercised through a commission consisting of three members. * * *" We have heretofore stated that, under the statute, the commission is given broad powers relative to the purchase of utilities and that we cannot interfere with the granted powers, unless it is clearly shown that such powers are used arbitrarily and capriciously, or fraudulently exercised. This general rule is announced in *Ponischil v. Hoquiam Sash & Door Co.* (41 Wash. 303, 83 Pac. 316). A case also much in point is *Columbia River Timber, etc., Co. v. Commissioners* (108 Wash. 148, 183 Pac. 134). The last-cited case has a marked similarity to the instant case, in that in the cited case an engineer testified that the contemplated improvement could be made for \$108,000. The commissioners were going to make the improvement at a cost of \$168,000, upon the recommendation of the engineer they had employed. This court held that, since the evidence did not show fraud or arbitrary or capricious action, the case involved nothing but a question of difference of opinion concerning matters which the commissioners were, by virtue of their position, called upon to decide, as administrative officers. See also, *In re Drainage District No. 10* (119 Wash. 8, 204 Pac. 1050); *Olise v. Seattle*, (153 Wash. 661, 280 Pac. 80); *Blade v. LaConner* (167 Wash. 403, 9 P. (2d) 381).

We think the trial court properly held that, under the testimony, it was not shown the purchase price to be paid for the Grays Harbor Company properties was so excessive as to be constructively fraudulent.

It is also contended by respondent that the court erred in holding that the contract entered into between the district and Guy C. Meyers was not contrary to public policy and that its execution was not an abuse of discretion on the part of relators, and in refusing to restrain relators from performing such contract.

Mr. Meyers was employed by the relators at their first regular meeting on December 7, 1933, and his contract was signed at that time. However, prior to December 7th, there had been informal meetings of the commissioners. They had discussed methods of procedure with the commissioners of other districts and with J. D. Ross, then in charge of the Bonneville project, and were advised by Mr. Ross that it would be necessary for them to have an agent who was familiar with the proposition of financing projects of this character and who was in contact with banking institutions capable of financing such a project. It is apparent that the commissioners realized, to some extent at least, the difficulties confronting them in the sale of bonds to finance this project.

Each of the relator commissioners testified that Mr. Meyers had nothing to do with determining the purchase price to be paid for the Grays Harbor Company properties, and that he merely acted as an intermediary between the commissioners and the owners of the Grays Harbor Company in New York.

Rem. Rev. Stat., § 11610, *supra*, in subdivision (J), provides that the district shall have power:

"To make contracts, employ engineers, attorneys, and other technical or professional assistance; to print and publish information or literature; and to do all other things necessary to carry out the provisions of this act."

It should also be kept in mind that § 11611 provides that "said bonds shall be sold in such manner as the commission shall deem for the best interest of the district."

There is no fixed procedure outlined by the statute for the commissioners of a district to follow in the acquisition of a utility. The method to be used is left to the discretion of the board, and this is also true in regard to the sale of its bonds or warrants. We think what we have heretofore said regarding the exercise of this discretion applies to the Meyers contract. We are of the opinion that § 11610, *supra*, expressly authorizes the commissioners to employ such assistance as they deem necessary to assist them in the acquisition of a utility and in the sale of bonds or warrants.

A case which seems much in point as sustaining the rights of the commissioners to make the Meyers contract is *Consolidated School District No. 20 ex rel. Thompson v. Union Trust Co.* (124 Wash. 501, 215 Pac. 28), as is also the case of *Kennedy v. McInturff* (217 Cal. 509, 20 P. (2d) 315).

It is urged by respondent that the Meyers contract was an abuse of discretion, because the district agreed to pay Meyers two and one-half percent of the purchase price of this utility and to give him an option to purchase the bonds or warrants. When we consider all the things Meyers was to do under this contract, which included the negotiations relative to the purchase of the property, the procuring of a purchaser for the bonds, which it was contemplated would necessitate the forming of a syndicate, and the fact that he was to pay all this expense out of his commission, we do not think there was any abuse of discretion on the part of the commissioners. It might be added that it was shown by testimony that it was necessary that Meyers have this option in order that he be in a position to guarantee to prospective purchasers of the bonds that he could deliver the bonds. It was not shown that this option was used for the personal advantage of Meyers, or that he was in any way interested in the syndicate formed to purchase the bonds, or that he had agreed to purchase any of the bonds, or that he was to receive anything from the syndicate for his services, or that he will receive anything for his services other than the commission, as provided in his contract.

We are also of the opinion that the validity of the Meyers contract cannot be determined in this action. Certainly the rights of Meyers cannot be determined, he not being a party to the action. We find this general rule stated in *1 Freeman on Judgments* (683, § 339):

"But it is equally fundamental that parties whose rights are to be affected must be before the court. Unless they are brought in by appropriate process or notice or voluntarily submit themselves to the jurisdiction of the court, it is powerless to bind them by any judicial determination."

To the same effect is 15 R. C. L. 844. Our own court has followed this general rule in *State ex rel. Reed v. Gormley* (40 Wash. 601, 82 Pac. 929), where the rule is stated that—

"It is a rule of law, as old as the law itself, that a court cannot adjudicate the rights of parties who are not actually or constructively before it, with an opportunity to defend or maintain their rights in the action."

It is next contended that the bond issue constitutes a sale below par. The bonds are to be sold to John Nuveen & Company, Chicago, and Hartly, Rogers & Company, Seattle, who are to take the bonds at par value. The bonds bear four and one-quarter percent interest. Under Rem. Rev. Stat., § 11610, subdivision (f), the district is authorized:

"* * * to issue general obligation or utility bonds therefor, bearing interest at a rate not exceeding six percent per annum, payable semi-annually, said bonds not to be sold for less than part and accrued interest."

Respondent's contention is based on the fact that Meyers, as fiscal agent, is in privity with the bidding syndicate, and that when his two and one-half percent commission is added to the first year's interest on the bonds, the interest rate will be greater than six percent, and in violation of the statute. We think this contention cannot be sustained. We have already stated that we are of the opinion it does not appear from the testimony that Meyers is in any way connected with the purchasers of the bonds, and it does not appear that he has agreed to purchase any of the bonds, or that the purchasers are to receive any part of the Meyers commission. Respondent's contention would find support if the commission, or any part of it, was to go to the purchasers of the bonds.

We have been cited to no authority in this state, to the effect that a municipality may not pay a commission to an agent for his services in procuring purchasers for a bond issue, such agent being independent of the purchasers, where the statute permits the bonds to be sold in any manner which may be deemed for the best interests of the district, or that such a commission shall be considered in determining whether or not the bonds were sold below par. The general rule is that a commission may be paid to a bona fide agent, where such services are necessary, and the value of the services are reasonably within the amount of the allowance. *McQuillin on Municipal Corporations* (2d ed.) Rev. Vol. 6, 217, § 2463. See note in 91 A. L. R., at page 16, for a discussion of the Washington cases; also pages 51 and 56. See, also, 2 *Dillon on Municipal Corporations* (5th ed.), 1399; *Park v. Rural Special School District*

No. 26 (173 Ark. 892, 293 S. W. 1035); *Manitou v. First Nat'l Bank* (37 Colo. 344, 86 Pac. 75).

As we have said, the bonds are to be sold to John Nuveen & Company, Chicago, and Hartly, Rogers & Company, of Seattle. Mr. Prescott, vice president of the Seattle company, testified that, while Meyers was responsible for interesting the companies in the bonds, all of his (Prescott's) dealings, so far as the purchase of the bonds was concerned, were with the commissioners of the district. Prescott further testified there never was any agreement between the banking syndicate and Meyers, and that Meyers was in no way interested in the bonds, and the banking group was in no way interested in the Meyers contract.

We are therefore of the opinion that the payment of the commission to Meyers would not result in a sale of the bonds below par.

The last contention made by respondent on his cross-appeal is that the bonds in question could not be sold at private sale, and that the manner in which they were sold stifled competition. The district is authorized by Rem. Rev. Stat., § 11611, to sell bonds and warrants in such a manner as the commissioners shall deem for the best interest of the district.

Respondent first contends that chapter 30, Laws Ex. Ses., 1933, repealed the above proviso of the public-utility statute, and requires that all bond issues, whether revenue or general obligation bonds, must be sold at public sale, unless specifically otherwise permitted. We think only a reading of chapter 30, *supra*, is necessary to show the fallacy of respondent's contention (Chapter 30, Laws Ex. Ses. 1933, in Rem. Rev. Stat. (Sup.), § 5583-11, *et seq.*).

Rem. Rev. Stat., § 5583-3 (Laws 1923, ch. 151, § 3) provides that all bonds issued by any municipal corporation shall be sold at public auction, and a notice calling for bids shall be published, as prescribed by statute.

Rem. Rev. Stat., § 5583-6 (Laws 1923, ch. 151, § 6) provides: "This act shall not apply to public-utility bonds payable wholly from the earnings of such utility."

Rem. Rev. Stat. (Sup.), §§ 5583-11, *et seq.* (Laws Ex. Ses. 1933, ch. 30) was enacted in 1933, and relates only to the sale of bonds to the United States government. We are of the opinion it was not the intention of the legislature, by the enactment of Rem. Rev. Stat. (Sup.), § 5583-11, *et seq.*, to repeal the provisions of chapter 151, Laws of 1923, to deprive a public utility district of the right to sell its bonds or warrants at private sale; but that the only purpose of §§ 5583-11, *et seq.*, *supra*, was to broaden the powers of municipal corporations to sell their bonds to the United States government.

We do not think chapter 160, Laws of 1935, which is the flood control act, has any application to the questions raised herein, or in any way tends to show that the right to sell utility revenue bonds of a public-utility district at private sale has been repealed.

Did the option clause in the Meyers contract tend to stifle competition? Respondent contends this option clause prevented competitive bidding by rival investment bankers or groups of investment bankers.

Had the statute required that the bonds of this district be sold at public sale, or had the commissioners decided to sell the bonds at public sale, it is possible that this option clause might have had some effect on prospective bidders, but that situation is not before us. The commissioners had the right to sell these bonds in any manner they should deem for the best interest of the district. After investigation, they decided it would be for the best interest of the district to organize a syndicate and sell the bonds at private sale. Our investigation of this record leads us to the conclusion that this plan was for the best interest of the district, and we are further of the opinion that the option clause did not tend to stifle competition, under the plan followed. Of course, it might be contended that any private sale tends to eliminate open competition, and still the statutes, in many instances, provide that property may be sold at private sale.

For a general discussion of the authority of a municipality to sell bonds where no specific procedure is prescribed by statute, see *Washington-Oregon Corporation v. Chehalis* (76 Wash. 442, 136 Pac. 681).

The bonds in question are to be sold at par, and it does not appear that the interest rate of four and one-quarter percent is not a fair rate of interest.

Respondent cites *Owens v. Wright* (161 N. C. 127, 76 S. E. 735); *Virginia Bridge & Iron Co. v. Crafts* (2 Ga. App. 126, 58 S. E. 322); *Finley Method Co. v. Standard Asphalt Co.* (104 Fla. 126, 139 So. 795); *Terrilliger Land Co. v.*

Portland (62 Ore. 101, 123 Pac. 57); *Kuhn v. Buhl* (251 Pa. 348, 96 Atl. 977); *White v. McMath & Johnston* (127 Tenn. 713, 156 S. W. 470). We do not think any of the cited authorities are in point.

From the entire record in this case it appears that the commissioners acted in good faith; no abuse of discretion has been shown; a public sale of the bonds was not required by statute; and it follows that the trial court was right in holding that the sale should not be enjoined.

The judgment is reversed on relators' appeal, affirmed on the cross-appeal of respondent, and affirmed on the cross-appeal of intervener.

We concur:

JEFFERS, J.

BLAKE, C. J.
BEALS, J.
STEINERT, J.
ROBINSON, J.
MILLARD, J.
SIMPSON, J.
GERAGHTY, J.
MAIN, J.

APPENDIX G

MEMORANDUM OF UNDERSTANDING FOR A COOPERATIVE ECONOMIC-INDUSTRIAL SURVEY OF THE PACIFIC NORTHWEST

GENERAL OBJECTIVES

To obtain economic and other technical information pertaining to the economy of the Pacific Northwest, with particular reference to the most feasible ways and means for increasing employment opportunities through expansion and diversification of industrial activities and with special attention to the increased utilization of electrical energy.

THE INTERESTS OF SPONSORING AGENCIES

To assure success, not only in disposing of the Bonneville power available at lowest possible cost to all consumers, but also in opening up new power market possibilities which will absorb energy to be generated at Grand Coulee and other projects, it is necessary for the Bonneville Administration to know the location and extent of present and potential demands for electrical energy. This calls for detailed knowledge, area by area, of the physical and human resources now available; and of the trends, either upward or downward, in the economic activities of each community. Where decline is in prospect due to depletion of resources now being utilized, research and investigation should be carried out to determine whether the availability of low-cost power would make it possible economically to utilize resources hitherto unused. The Bonneville Administration desires to stimulate and to aid a concerted effort to find all potential opportunities for obtaining a better balance and stability for the economy of the Pacific Northwest.

The Pacific Northwest Regional Planning Commission and the National Resources Planning Board are immediately concerned with feasible ways and means for creating more adequate economic opportunity for a rather large number of people who have entered the Pacific Northwest in recent years. Information available shows that the possibilities for the expansion of economic opportunity in agriculture are decidedly limited and that new forms of economic activity, especially manufacturing industry, will have to be developed if these people are to be assimilated. It is, therefore, necessary to explore and appraise all possibilities for expansion of industrial activities, and to discover wherein public policy and programs can aid in fostering such developments.

The Northwest Regional Council has been established for the purpose of stimulating research (in both the natural and social sciences) which will have a direct bearing upon regional problems, and to facilitate the use of significant regional information in the educational system. The Council is also interested

in assisting educational institutions to undertake research projects which will aid in the development and conservation of Pacific Northwest resources.

For the achievement of these objectives within a reasonable time and with a minimum of duplicated effort, it is desirable to enlist the cooperation of other agencies, Federal, State, and civic, to correlate work under way and to undertake a number of new investigations.

INITIAL ORGANIZATION: A CORRELATING COMMITTEE

1. An advisory correlating (or general steering) committee is established, composed of representatives of the Bonneville project (U. S. Department of Interior), the Pacific Northwest Regional Planning Commission, and the Northwest Regional Council.

2. The correlating committee will act as a clearing house for the interchange of information obtained from all cooperating agencies, and for the dissemination of new information developed by the three sponsoring agencies.

3. The correlating committee will outline a general program of studies, arrange for the necessary cooperation of other agencies, and review periodically the progress of work being carried on.

INITIAL RESEARCH PROGRAM

1. It is suggested that, initially, emphasis in organization and in research be limited to selected work which will—

(a) Provide fields in which recognizable contributions can be made within a reasonable time;

(b) Serve to crystallize the required cooperative organizational structure and provide experience on methodology as a basis for work in more extensive fields;

(c) Indicate the more important contributions that might be made by the various cooperating agencies;

(d) Facilitate action in obtaining assistance of specific cooperating agencies and organizations in order to develop supplementary information. (Assistance to be solicited either by the correlating committee, by appropriate committees, or by the separate sponsoring agencies as may be deemed most effective in each case.)

(e) Provide for continuing assembly, review, and analysis of data as obtained.

2. It is suggested that the field of industrial development utilizing Bonneville power with available natural resources offers the most important immediate field.

SUGGESTED SUBJECTS FOR STUDY BY SPONSORING AGENCIES

(The following lists are merely illustrative of the type of investigations that each sponsoring agency will initiate in collaboration with others that may be concerned)

I. The Bonneville project:

1. Power: Studies of availability, dependability, and relationship to economic development in the region with particular reference to industry.

2. Raw materials; those needed for specific industries: Quantitative and qualitative prerequisites, availability, and cost. To be carried out through the Federal and state agencies concerned. The Bonneville project to delineate the specific type of information required, and to aid other agencies, as may be practicable, in this work.

3. Transportation: Economic and physical aspects of the intra-regional and inter-regional transportation problem.

4. Technology: Aspects of technology as they relate to industrial development in the Northwest.

5. Plant location: Information leading to the selection of favorable industrial location.

6. Economic size of plant: Basic data, analysis of markets and other factors.

7. Competitive situation and markets.

II. Pacific Northwest Regional Planning Commission:

1. Analysis of consumption and of the inward and outward flow of commodities from the Pacific Northwest states.
2. Analysis of trends of growth and decline of existing manufacturing industries.
3. Analysis of social and economic effects of various kinds of industries.
4. Analysis of national trends toward decentralization or concentration of industries.
5. Studies of relationship and of effects of navigation improvement on the Columbia River.
6. Studies of present employment fluctuations; secular, cyclical, and seasonal.
7. Analysis of population growth, in relation to markets, purchasing power, etc.

III. Northwest Regional Council:

1. Contact with research workers in educational institutions with a view to:
 - (a) Determining what individuals or institutions have investigated or are interested in investigating subjects that fit into the pattern of the study.
 - (b) Stimulating interest among educational research workers in conducting research on regional problems, the solution of which may have a direct and immediate bearing upon the regional economy.
 - (c) Discovering instances in which the Council can allocate grants-in-aid for research that will form integral parts of the survey or provide more intensive analysis of segments of the pattern.
2. Examples of special projects that might be carried on by educational institutions:
 - (a) Analysis of labor resources and employer-employee relationships as they may affect the industrial development of the region.
 - (b) Specific transportation studies (in close cooperation with the Bonneville project).
 - (c) Review and summary of data that has been procured by Temporary National Economic Committee and other agencies to determine what bearing monopoly and patent controls may have upon industrial development in the region.
 - (d) Economic size of industrial plants, particularly research relating to incremental costs.
 - (e) Competitive situation and markets. Research to determine zonal restrictions on markets and competitive situation throughout the nation as they may affect establishment of industries in the Northwest.

TENTATIVE ALLOCATIONS OF STAFF BY SPONSORING AGENCIES

- I. Bonneville project: Technical staff of marketing section and special consultants on raw materials, industrial technology, and economics.
- II. Pacific Northwest Regional Planning Commission: Assignment of part-time services of regional office and staff; services of a consultant and possibly of research technician in making special studies.
- III. Northwest Regional Council: One or more staff members to assist in analysis of data, outlining of subjects for investigation, editorial work, interpreting results of surveys, preparation of various materials for use in educational institutions, for stimulation of public interest in the survey.

APPENDIX H

Federal Power Commission Electric power statistics, 1938

	Washing- ton	Oregon	Total
Production (M kilowatt-hours):			
Hydro.....	3,231,412	1,001,112	4,232,524
Fuel.....	161,624	252,022	413,646
Total.....	3,393,036	1,253,134	4,646,170
Coal consumed (short tons).....	50		50
Oil consumed (barrels).....	115,976	245,896	361,872
Gas consumed (M cubic feet).....		59	59
Energy produced by wood fuel (M kilowatt-hours).....	119,893	147,269	267,162
Installed capacity (kilowatts):			
Publicly owned:			
Hydro.....	342,369	197,223	1,439,592
Steam.....	65,000	6,000	71,000
Internal combustion.....	430	3,966	4,396
Fuel.....	65,430	9,966	75,396
Total.....	407,799	1,107,189	1,514,988
Privately owned:			
Hydro.....	451,656	167,758	619,414
Steam.....	151,470	168,600	320,070
Internal combustion.....	1,183	2,247	3,430
Fuel.....	152,653	170,847	323,500
Total.....	604,309	338,605	1,042,914
All classes:			
Hydro.....	794,025	1,264,981	1,105,906
Steam.....	216,470	174,600	391,070
Internal combustion.....	1,613	6,213	7,826
Fuel.....	218,083	176,813	394,896
Total.....	1,012,108	1,445,794	1,457,902
Production (M kilowatt-hours):			
Public plants:			
Hydro.....	836,543	276,575	2,913,118
Steam.....	73	-2,397	-2,324
Internal combustion.....	94	7,542	7,636
Fuel.....	167	5,145	5,312
Total.....	836,710	2,81,720	2,918,430
Private plants:			
Hydro.....	2,402,422	925,018	3,327,440
Steam.....	160,800	245,213	405,613
Internal combustion.....	1,251	1,664	2,915
Fuel.....	161,551	246,877	408,428
Total.....	2,563,973	1,171,895	3,735,868
All plants:			
Hydro.....	3,238,965	2,100,159	4,240,558
Steam.....	160,373	242,816	403,189
Internal combustion.....	1,345	9,206	10,551
Fuel.....	161,718	252,022	413,740
Total.....	3,400,683	2,125,615	4,654,298

¹ Includes 83,400 kilowatts Bonneville capacity.

² Includes 21,996,000 thousands of kilowatt-hours by Bonneville.

Total production (M kilowatt-hours)

	Washing- ton	Oregon	Total	Percent of Total
January.....	308,242	105,579	413,821	8.9
February.....	266,347	84,004	340,351	7.3
March.....	288,159	97,642	385,801	8.3
April.....	258,880	88,689	347,569	7.5
May.....	267,315	94,260	361,575	7.8
June.....	263,378	103,903	367,281	7.9
July.....	269,250	111,511	380,761	8.2
August.....	275,706	117,375	394,081	8.5
September.....	279,684	110,846	390,530	8.4
October.....	301,734	109,055	410,789	8.9
November.....	300,792	113,038	413,830	8.9
December.....	313,549	117,232	430,881	9.3
Total.....	3,393,036	1,253,134	4,646,170	100.0

Total production (M kilowatt-hours) Washington and Oregon

	Hydro- electric	Fuel	Total	Percent of total
January.....	385,345	28,476	413,821	8.9
February.....	320,618	19,733	340,351	7.3
March.....	353,283	27,518	385,801	8.3
April.....	1 328,996	18,573	347,569	7.5
May.....	1 343,285	18,290	361,575	7.8
June.....	1 344,730	22,551	367,281	7.9
July.....	1 341,007	39,754	380,761	8.2
August.....	1 333,498	59,583	394,081	8.5
September.....	1 332,043	57,532	390,530	8.4
October.....	1 357,990	52,799	410,789	8.9
November.....	1 379,918	33,912	413,830	8.9
December.....	1 395,906	34,975	430,881	9.3
Total.....	4,232,524	413,646	4,646,170	100.0

1 Wet.

1 Dry.

Hydroelectric production (M kilowatt-hours)

	Washing- ton	Oregon	Total	Percent of Total
January.....	290,223	95,122	385,345	9.1
February.....	257,164	73,454	320,618	7.6
March.....	275,201	83,082	358,283	8.5
April.....	249,016	79,980	328,996	7.8
May.....	256,961	86,324	343,285	8.1
June.....	254,159	90,571	344,730	8.1
July.....	256,031	84,976	341,007	8.1
August.....	258,987	74,511	333,498	7.9
September.....	263,634	69,314	332,948	7.9
October.....	285,179	72,811	357,990	8.5
November.....	286,926	92,992	379,918	9.0
December.....	297,931	97,975	395,906	9.3
Total.....	3,231,412	1,001,112	4,232,524	100.0

Fuel production (M kilowatt-hours)

	Washing- ton	Oregon	Total	Percent of Total
January.....	18,019	10,457	28,476	6.9
February.....	9,183	10,550	19,733	4.8
March.....	12,958	14,560	27,518	6.6
April.....	1 9,864	8,709	18,573	4.5
May.....	1 10,354	7,936	18,290	4.4
June.....	1 9,219	13,332	22,551	5.4
July.....	1 13,219	26,535	39,754	9.6
August.....	1 16,719	42,864	59,583	14.4
September.....	1 16,050	41,532	57,582	14.0
October.....	1 16,555	36,244	52,799	12.8
November.....	1 13,866	20,046	33,912	8.2
December.....	1 15,618	19,257	34,975	8.4
Total.....	161,624	252,022	413,646	100.0

1 Wet.

1 Dry.