

HYDROELECTRIC COMMISSION OF OREGON

LICENSE FOR PROJECT NO. 19

THE CALIFORNIA OREGON POWER COMPANY

A MAJOR PROJECT OF

68,728 THEORETICAL HORSEPOWER

WHEREAS, by act of the Legislature of the State of Oregon (Title 119, Chapter 1, O.C.L.A.) hereinafter called the Hydroelectric Act, the Hydroelectric Commission of Oregon, hereinafter called the Commission, is authorized and empowered, inter alia, to issue licenses to appropriate, initiate, perfect, acquire and hold the right to the use of the waters within the State, and to construct, operate and maintain dams, reservoirs, powerhouses, conduits, transmission lines, and all other works and structures necessary or convenient for the use of such waters in the generation and utilization of electricity, and to approve changes in maps, plans, and specifications, which changes when approved shall become a part of the license; and

WHEREAS, The California Oregon Power Company, hereinafter called the Licensee, a corporation organized under the laws of the State of California, and duly qualified to do business in Oregon with its principal place of business in Medford, Oregon, made application in due and proper form to the Commission for a license for a power project designated as Project No. 19 on the records of the Commission and by the Licensee as Clearwater Developments, and

for authority to construct, maintain, and operate in the County of Douglas, State of Oregon, certain project works necessary or convenient for the development, transmission and utilization of electric power, and for the use of the waters of Clearwater River, a tributary of North Umpqua River, for generation of such electric power and an access road; and

WHEREAS, the Licensee on August 13, 1930 filed with the State Engineer of Oregon an application for a permit to appropriate 150 cubic feet per second of water from Clearwater River, (designated by the State Engineer as Application No. 13644) which application was transferred to the Hydroelectric Commission of Oregon on April 22, 1931 pursuant to Section 36, Chapter 67, Oregon Laws 1931; and

WHEREAS, this project is a major project for the development of 68,728 theoretical horsepower in two units; and an access road approximately 9 miles long; is a part of the comprehensive development of the North Umpqua River above Soda Springs; the applicant has paid to the Commission all fees required previous to issuance of license in accordance with the provisions of the Hydroelectric Act and the Rules and Regulations of the Commission; and no application for said project or in conflict therewith has been filed by any municipality or public utility district; and

WHEREAS, the Licensee has filed maps, plans and specifications as required by Section 119-112, Oregon Compiled Laws Annotated, showing the project, and the Commission finds that the pro-

ject will be well adapted to the utilization of the water power involved and hereby approves the same; and

WHEREAS, the Licensee on the 26th day of October, 1951 accepted in writing all the terms and conditions of this license for Project No. 19.

NOW, THEREFORE, the Commission hereby issues this license to The California Oregon Power Company for the purpose of constructing, operating, and maintaining the project works hereinafter described, necessary or convenient for the development, transmission, and utilization of hydroelectric power, and to appropriate, acquire, and hold the right to use the waters of Clearwater River, a tributary of North Umpqua River, to the extent hereinafter set forth. This license is issued on condition that said Licensee shall comply with all the terms and conditions of the Hydroelectric Act and Laws of Oregon relating thereto, and with the Rules and Regulations of the Commission pursuant thereto, as though fully set forth herein and shall be subject also to the following express conditions, limitations, and exceptions, to-wit:

ARTICLE 1. Definition of Project. The word "project", as used in this license means the complete units, improvements, and developments, including among other things, the powerhouses, waterwheels, conduits or pipes, dams and appurtenant works and structures, storage, diverting or forebay reservoirs connected therewith, and primary lines transmitting power to the point of junction with a distributing system, or with any interconnected primary systems, miscellaneous works and structures used in con-

nection with said units or any part thereof, rights of way, lands, flowage rights and all other properties, rights and structures necessary or appropriate in the use, operation, and maintenance of such unit.

ARTICLE 2. Description of Project. Project No. 19 will consist of two units referred to herein as Unit 1 and Unit 2.

Unit 1 will divert not to exceed 200 cubic feet per second of the waters of Clearwater River by means of a rock filled timber type dam located 3,644 feet south and 31,134 feet east of the southeast corner of Township 26 South, Range 3 East, W.M. The dam will have an overall length of 384 feet and a maximum height of 30 feet.

The conduit connecting the diversion dam intake with the open forebay at the head of the penstock, will consist of approximately 4,900 feet of concrete lined canal, and 4,140 feet of timber and concrete flumes. The capacity of the conduit will be 200 cubic feet per second.

The forebay at the lower end of the conduit will have a capacity of 120 acre feet with the water surface fluctuating between elevations 3,873 and 3,859. It will serve to store the conduit delivery from Clearwater River for peak operation of the power plant.

A steel penstock line 4,950 feet long, varying in diameter from 90 inches to 72 inches, will connect the forebay with the powerhouse. This line will be supported above the ground on concrete saddles and anchor blocks.

The powerhouse will contain a 21,000 h.p. impulse turbine operating under an effective head of 634 feet and developing 22,500 horsepower under a full load with a discharge of 342 cubic feet per second. The turbine will be direct connected to a 15,000 kw outdoor type generator. The plant will discharge directly into the diversion pond of Unit 2 with a normal elevation of 3,212. An outdoor substation containing a bank of three 6,900 kva, single phase, 7.2 kv to 132 kv transformers will be located adjacent to the powerhouse.

The capacity of the turbine for Unit 1 will be 342 cubic feet per second under a full load. With a static head of 661 feet this discharge will develop 25,689 theoretical horsepower.

A 132 kv transmission line about 8 miles long will connect the substation with the Toketee Unit of Project No. 23.

Unit 2 will divert not to exceed 440 cubic feet per second of the waters of Clearwater River by means of a rock-filled, timber crib type dam located 1,931 feet south and 16,419 feet east of the southeast corner of Township 26 South, Range 3 East, W. M.

The dam will have an overall length of 157 feet and a maximum height of 26 feet.

The conduit connecting the intake at the diversion dam with the open forebay at the head of the penstock will consist of 17,290 feet of concrete lined canal, 10,160 feet of timber and concrete flumes and 1,500 feet of tunnel. The capacity of the conduit would be 440 cubic feet per second.

The forebay will be constructed in excavation at the lower end of the conduit and will have a capacity of 60 acre feet of water

with water surface fluctuating between elevations 3,178.5 and 3,167. It will serve to store water for peak operation of the power plant.

A steel penstock line 1,300 feet long will lead from the forebay to the powerhouse. The pipe will be above ground on concrete supports and will vary in diameter from 96 to 78 inches.

A concrete powerhouse will contain a 36,000 h.p. vertical Francis turbine operating under an effective head of 742 feet and developing 39,350 horsepower under a full load with a discharge of 506 cubic feet per second. The turbine will be direct connected to a 26,000 kw outdoor type generator. An outdoor substation containing a bank of three 11,500 kva, single phase, 11.5 kv to 132 kv transformers will be located adjacent to the powerhouse.

The theoretical horsepower developed at Unit 2 with a discharge of 506 cubic feet per second under a static head of 748.5 feet will be 43,039.

A short transmission tie will connect the plant to the line between Clearwater Unit 1 and the Toketee plant.

The access road would leave the Roseburg-Diamond Lake Highway near the diversion dam for Unit 1 and would extend from that point about 9 miles to the existing road at the Toketee reservoir at the lower end of Unit 2. It would follow the conduit throughout the greater part of its length.

The location and character of the foregoing are more specifically shown and described in the following designated exhibits filed with the Commission, which are made a part of this license:

Exhibit I Sheets numbered 1 to 4, General Maps  
of Clearwater Developments

Exhibit J Sheets numbered 1 to 6, Topographic  
Maps and Sections of Various Structures

Exhibit K Sheets numbered 1 to 4, Details  
of Diversion Dams and Powerhouses.

ARTICLE 3. Special Conditions.

(a) The Licensee shall furnish such facilities as may prove necessary for the protection of fish and wild life in connection with the operation of the units of the project when required by the Commission.

(b) The conduits shall be screened in a manner satisfactory to the Commission to prevent the entrance of fish.

(c) A minimum of five cubic feet per second shall be bypassed at the diversion dams for the protection of fish life.

(d) The Licensee, when required by the Commission, shall install and maintain automatic waterstage recorders at a location satisfactory to the Commission and shall furnish the Commission with such data therefrom as may be required.

(e) The Licensee shall submit detailed plans and specifications for the proposed dams, facilities for the protection of fish and wild life, and such data as may be required by the Commission bearing upon the size of the power installations, dimensions and design of water conduits, design and method of construction proposed for the penstock intakes and penstocks, the spillway and sluiceway structures, the thickness of steel in the penstocks and in general shall furnish such maps, plans, specifications and other complete information and data as may be required to enable the Commission, with the information and data already submitted, to pass

upon the safety of all structures proposed.

(f) The Licensee shall not commence construction of the dams, powerhouses, conduits or appurtenant structures without approval by the Commission of the plans therefor prepared in conformity with the information and data called for in the preceding paragraph.

(g) To the extent any change in maps, plans, or specifications is hereafter approved by the Commission, the approval of such change shall be deemed to amend the description of the project.

ARTICLE 4. Period of License. This license is effective as of July 1, 1951, and shall terminate December 31, 2000, unless the whole net investment of the project under this license shall be amortized and repaid prior thereto.

ARTICLE 5. Jurisdiction. In consideration of this license and of the benefits and advantages accruing thereunder to the Licensee, it is expressly agreed by the Licensee that the entire project, project area, and project works as hereinafter designated and described whether or not upon lands of the United States, shall be subject to all provisions, terms, and conditions of this license. Should the Licensee be prevented from compliance with any provisions of this license or of the Hydroelectric Act by the operation of any valid Federal law or the lawful order, rule or regulation of any Federal governmental agency exercising exclusive jurisdiction in the premises, it shall not be deemed to be in default or under any liability to the State of Oregon for failure to perform the same during the period of such disability.



ARTICLE 6. Time for Completion of Work. The Licensee shall complete the construction of the project works, on or before July 1, 1953, unless for good cause shown, the Commission shall order and allow an extension of time for such completion.

ARTICLE 7. Water Right Granted. Subject to the provisions of ARTICLE 3, this license grants the Licensee the right to divert, store and use the water of Clearwater River for the development of hydroelectric power as follows:

Unit 1 To divert not to exceed 200 cubic feet per second of water from Clearwater River, a tributary of North Umpqua River, at a point approximately 3,644 feet south and 31,134 feet east of the southeast corner of Township 26 South, Range 3 East, W.M. and to store not to exceed 120 acre feet of water in any 24 hour period in Unit 1 forebay the lower end of which is located approximately 6 feet north and 21,034 feet east of the above described corner; provided, that the total quantity of water used from direct flow and storage to develop power shall not exceed 342 cubic feet per second, said waters to be used to develop 25,689 theoretical horsepower under a normal static head of 661 feet in a powerhouse located approximately 1,914 feet south and 16,730 feet east of the above described corner. The following dates of priority will apply to said diversion and storage for Unit 1:

August 13, 1930 for 150 cubic feet per second  
of direct flow

March 23, 1951 for 50 cubic feet per second of  
direct flow

March 23, 1951 for 120 acre feet of storage

Unit 2 To divert not to exceed 440 cubic feet per second of water from Clearwater River, a tributary of North Umpqua River, at a point approximately 1,931 feet south and 16,419 feet east of the southeast corner of Township 26 South, Range 3 East, W.M., and to store not to exceed 60 acre feet of water in any 24 hour period in Unit 2 forebay, the lower end of which is located approximately 2,946 feet north and 2,631 feet west of the above described corner; provided, that the total quantity of water used from direct flow and storage to develop power shall not exceed 506 cubic feet per second; said waters to be used to develop 43,039 theoretical horsepower under a normal static head of 748.5 feet in a powerhouse located approximately 3,900 feet north and 2,900 feet west of the above described corner. The date of priority which will apply to said diversion and storage for Unit 2 is March 23, 1951.

The right to the use of such waters for Units 1 and 2 shall be further limited to the amount which the plants, when installed, will use efficiently.

ARTICLE 8. Period of Water Right. The right to the use of the waters in connection with the development of this project shall be vested with the Licensee during the time this license or any lawful renewal or extension thereof is in force.

ARTICLE 9. Annual License Fee. An annual license fee of \$3,436.40 shall be paid by the Licensee on or before the first day of January of each year for the calendar years 1952 to 1956 inclusive, being 5 cents for each of the 68,728 theoretical horsepower authorized herein;

An annual fee of \$6,872.80 shall be paid by the Licensee for each of the calendar years 1957 to 1961 inclusive, being 10 cents for each of the 68,728 theoretical horsepower authorized herein;

An annual fee of \$10,309.20 shall be paid by the Licensee for each of the calendar years 1962 to 2000 inclusive, being 15 cents for each of the 68,728 theoretical horsepower authorized herein.

Should the terms and conditions of this license be extended at its expiration, the Licensee shall pay such annual fees as the Hydroelectric Commission of Oregon, or its successor having jurisdiction in the matter at the time, shall fix.

ARTICLE 10. Expenses of Examination. The Licensee shall pay to the State of Oregon in accordance with the provisions of Section 119-111, O.C.L.A., the expenses incurred and to be incurred by the Commission in examining into the application for license, and maps, plans, specifications, cost estimates and other matters relating to the project, and the investigations from time to time of acts done and work carried forward under the license until December 31, 1951; provided, that the total of such shall not exceed \$2,500 during any one year.

ARTICLE 11. Depreciation. The amount of the annual charges for depreciation expenses to be included in the cost of operation shall be determined on a straight line basis computed by use of service lives as determined by the Public Utilities Commissioner of Oregon, subject to the approval of the Commission.

The service lives of the original units of property shall not exceed the unexpired period of the license. In determining the amount of the annual charges for depreciation expense to be included in the cost of operation prior to the time of final action of the Commission in fixing the actual legitimate cost of the original project as provided for in ARTICLE 12 of this license, the original legitimate cost of the items in each account number as set forth in the "Initial Cost Statement" to be filed by the Licensee, as provided for in said Article, shall be used.

ARTICLE 12. Determination of Cost of Project.

(a) Initial Cost Statements: The Licensee shall file within one year after the time the project is ready for service, an initial statement, under oath, with three additional conformed copies thereof showing the amount claimed by the Licensee as the actual legitimate cost of the project, as defined in Section 119-115, O.C.L.A., on forms as now prescribed by the Federal Power Commission for this purpose, otherwise on forms approved by the Commission. Similar statements with respect to net additions and betterments to the project shall be filed in the same manner before April 1 of each and every succeeding year during the term of this license or any lawful extension thereof, unless the Commission shall otherwise direct.

(b) Substance: Each statement so filed shall give full, adequate, and complete information with respect to the cost of the project or additions and betterments as the case may be. Any statement which does not contain sufficient information will be returned

to the Licensee for such additional information as the Commission may deem necessary.

(c) Report on Project: When a satisfactory statement shall have been filed with the Commission, the Commission will file one copy of such with the Public Utilities Commissioner of Oregon, and the Commission's representatives will make an audit of the accounts, will analyze the books, cost records, engineering reports, and other records supporting such statement or pertaining to the project, will inspect the project works, and will prepare a report setting forth their findings and recommendations with respect to the cost as claimed.

(d) Service of Report: Copies of such report and of the final report provided for in sub-section (g) of this ARTICLE 12, will be served by registered mail upon the Licensee at its principal place of business in Oregon and copies will be sent to the Public Utilities Commissioner of Oregon, the Federal Power Commission and such other parties as the Commission may prescribe.

(e) Time of Filing of Protest: Thirty days after service thereof will be allowed to the Licensee within which to file a protest to such report. If no protest is filed within the time allowed, the Commission will issue such orders as may be appropriate. If a protest is filed a hearing will be ordered, such hearing to be held within 90 days from the filing of the protest with the Commission.

(f) Burden of Proof: The burden of proof to sustain

each item of the statement of claimed cost as filed shall be upon the Licensee and only such items as are in the opinion of the Commission supported by satisfactory proof may be entered in the project accounts of the Licensee.

(g) Finding and Final Statement: Final action by the Commission will be in the form of a finding and order entered upon its minutes and served upon the Licensee, Public Utilities Commissioner of Oregon, the Federal Power Commission and such other parties as the Commission may prescribe. The Licensee shall thereafter file a final statement, under oath, in duplicate, with two additional copies thereof, showing the net investment revised in conformity with the order of the Commission, together with a statement showing that its records have been revised in conformity with such order.

ARTICLE 13. Reasonable Rate of Return. A reasonable rate of return on the net investment in the project shall be that established by the Public Utilities Commissioner of Oregon, subject to the approval of the Commission, but shall not exceed 6 per cent per annum. The surplus earned and accumulated in excess of the reasonable rate of return for this project will be in proportion to the total surplus earned and accumulated by the Licensee, as determined by the Public Utilities Commissioner of Oregon, and any surplus earnings shall be apportioned on the basis that the net investment in this project, as determined by the Commission, bears to the total net investment of Licensee in its electric utilities properties and such determination shall be subject to

the approval of the Commission.

The formula to be used to determine the surplus earned and accumulated for this project as set out above will be as follows:

$$a = \frac{bx}{y}$$

in which

a = the surplus earned and accumulated in excess of a reasonable rate of return for this project.

b = total surplus earned and accumulated by the Licensee as determined by the Public Utilities Commissioner of Oregon.

x = total net investment of Licensee in this project as determined by the Commission.

y = total net investment of Licensee in his electric utilities properties as determined by the Public Utilities Commissioner.

The determination of the Public Utilities Commissioner with respect to "b" and "y" shall be subject to the approval of the Commission.

ARTICLE 14. Amortization Reserve. Any earnings in excess of said reasonable rate of return as determined by the Public Utilities Commissioner of Oregon and as approved by the Hydroelectric Commission, shall be set up in Account 258-2, Miscellaneous Reserve, as a credit to the Amortization Reserve, as

provided for in Section 119-1114, O.C.L.A., of the Hydroelectric Act, to be disposed of in accordance with order of the Commission.

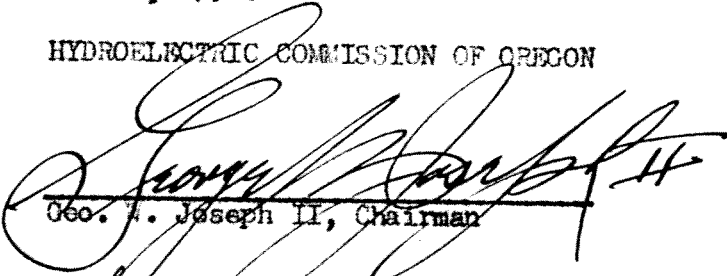
ARTICLE 15. Accounting. For the purpose of this license and the accounting to be followed by the licensee, the Commission adopts the Uniform System of Accounts prescribed by the Public Utilities Commissioner of Oregon for Class A and B Electric Utilities, effective January 1, 1937, and reserves the right to approve any revisions or modifications thereof.

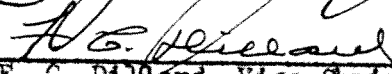
ARTICLE 16. Bond of Licensee to Protect Laborers and Materialmen.

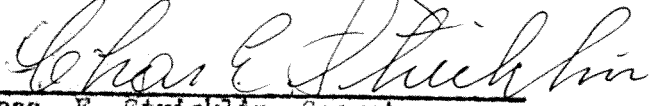
Before entering upon the construction of this project the Licensee shall execute a bond as required by Section 119-126, O.C.L.A., in an amount of \$10,000, the form of which is to be approved by the Attorney General of Oregon, which bond shall be in addition to and not in lieu of any other liability of the Licensee principal.

IN WITNESS WHEREOF, the Hydroelectric Commission of Oregon has caused its name to be signed hereto at Salem, Oregon, this 28th day of November , 1951.

HYDROELECTRIC COMMISSION OF OREGON

  
Geo. A. Joseph II, Chairman

  
F. C. Dillard, Vice Chairman

  
Chas. E. Stricklin, Secretary



IN TESTIMONY OF ACCEPTANCE of all the terms and conditions of the Hydroelectric Act, and of the further conditions imposed in the foregoing license, the Licensee, this 26th day of October, 1951, has caused its corporate name to be signed by A. S. Cummins, its President, and its corporate seal to be affixed hereto and attested by E. L. Lenox, its Secretary, pursuant to the resolution of its board of directors, duly adopted on the 26th day of October, 1951, a certified copy of the record of which is attached hereto.

By A. S. Cummins  
President

SEAL

Attest:

E. L. Lenox  
Secretary

THE CALIFORNIA OREGON POWER COMPANY  
CERTIFIED COPY OF RESOLUTION ADOPTED BY  
THE BOARD OF DIRECTORS

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RESOLVED, That the President, A. S. Cummins, and the Secretary, E. L. Lenox, of this Corporation be and they hereby are authorized, empowered and directed for and on behalf of this Corporation, and as its corporate act and deed, to execute an acceptance of license for Project No. 19, which said license provides for the construction, operation and maintenance of the Clearwater River Project and an access road in Douglas County, Oregon, and said officials are authorized to do and perform any and all acts necessary or desirable to effectuate the purpose of this resolution.

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I, E. L. Lenox, Secretary of The California Oregon Power Company, hereby certify the above and foregoing to be a full, true and correct copy of a resolution adopted by the Board of Directors of said Corporation at a meeting thereof held on October 26, 1951; that there was then and there present and voted thereon a quorum of said Board; and that said resolution is in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Corporation this 26th day of October, 1951.



Secretary

SEAL