

31 F.P.C. 897, 1964 WL 4490

MERCED IRRIGATION DISTRICT,

PROJECT NO. 2179
ORDER ISSUING LICENSE (MAJOR)

April 8, 1964

****1 *897** Before Commissioners: Joseph C. Swidler, Chairman; L. J. O'Connor, Jr., Charles R. Ross, Harold C. Woodward, and David S. Black.

Application was filed on August 4, 1958, and amended on February 21, 1963, by Merced Irrigation District (Applicant) of Merced, California, for a license under Section 4(e) of the Federal Power Act (Act) for proposed Project No. 2179, to be known as the Exchequer Hydro-Electric Development, to be located on Merced River, County of Mariposa, California, and affecting public lands of the United States.

The proposed project, which would consist of an enlargement of Applicant's existing licensed Exchequer Project No. 88 and the Exchequer Afterbay Development, is to be used primarily for irrigation, flood control and power. Applicant proposes to finance Project No. 2179 with a contribution from the United States for flood control benefits to be provided and the issuance of revenue bonds based upon a proposed long-term power sales contract with Pacific Gas & Electric Company (Pacific) which has expressed its willingness to negotiate such a contract. Pacific is currently purchasing the power output from Applicant's Project No. 88.

As proposed in the amended application for license, the existing Exchequer concrete gravity arch dam will be raised 155 feet to a total height of 480 feet by placement of a rolled rock fill with a reinforced concrete facing abutting the downstream side of the existing dam. The total reservoir storage would be increased from 281,200 acre feet to 1,010,000 acre feet and the reservoir area would be increased from 2,600 acre feet to 6,900 acre feet at elevation 865 feet. A middle dyke and a gated spillway will be located on the right abutment about 0.7 miles from the dam. An 18-foot diversion and power tunnel about 1,200 feet long will be in the right abutment. The existing powerhouse of Project No. 88 with a capacity of 25,000 kilowatts will be abandoned and a new powerhouse will be constructed just downstream from the toe of the enlarged dam containing two generating units, each with a turbine capacity of 63,100 horsepower connected to a generator rated at 44,500 kva. The installed capacity will be 80,000 kilowatts. Provision is being made in the powerhouse for a third future unit.

The afterbay development, which will be located about 6 miles downstream from the Exchequer dam, will consist of a dam comprised of a 76-foot high concrete gravity gated spillway section, a power intake section and two rockfill abutment sections; a reservoir with a storage capacity of 8,750 acre feet at normal maximum water surface elevation 400 feet; and a powerhouse integral with the dam containing one generating unit with a turbine capacity of 11,050 horsepower connected to a generator rated at 7,800 kva at 0.9 power factor. The installed capacity will be 7,000 kilowatts.

The annual value of power from the project, both at-site and downstream at Pacific's Project No. 1355, is estimated by Commission staff at \$2,400,000 based on alternate steam with private financing. The annual cost of the project is ***898** estimated by the staff at \$1,953,000 based on 4 percent cost of money to Applicant.

****2** The original plan of development presented by Applicant in its application for license provided for the construction of Bagby development upstream from the Exchequer development the enlargement of the Exchequer development, and the construction of the Snelling development downstream from the Exchequer development. However, as recited above, Applicant now proposes an initial development to comprise the enlargement of the existing Exchequer development and an afterbay development as a temporary substitute for the Snelling development. Applicant advises that its estimate of power value and power output from Bagby and Snelling indicates that income from such power output would not presently support the required expenditure for that ultimate development. We are herein providing that at such time as a more complete development becomes

economically feasible, the afterbay development would not preclude a more comprehensive development of the reach of river involved.

The Secretary of the Army and the Chief of Engineers, in reporting on the application, have recommended for inclusion in any license for the project, a special condition in the interest of flood control.

The Department of the Interior, in reporting on the application, has recommended for inclusion in any license for the project certain conditions in the interests of the Department.

The Department of Fish and Game, State of California, in reporting on the application, advised it had entered into an agreement with Applicant for the protection of fish and wildlife.

The Commission finds:

(1) Applicant is a 'municipality' as defined in the Federal Power Act, and has submitted satisfactory evidence of its compliance with the requirements of all applicable State laws insofar as necessary to effect the purposes of a license for the project.

(2) The proposed project will affect lands of the United States.

(3) Public notice of the filing of the application has been given as required by the Act. There are no protests or conflicting applications before the Commission.

(4) The proposed project will not affect a Government dam.

(5) The issuance of a license for the project will not interfere or be inconsistent with the purposes for which any reservation was created or acquired.

(6) The project is best adapted to a comprehensive plan for improving and developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes, upon compliance with the terms and conditions hereinafter imposed.

(7) The issuance of a license for the project will not affect the development of any water resources for public purposes which should be undertaken by the United States.

(8) The installed horsepower capacity of the proposed project for the purpose of computing the capacity component of the administrative annual charge is 116,000 horsepower, and the amount of annual charges, based on such capacity, to be paid under the license for the project, for the costs of administration of Part I of the Act is reasonable as hereinafter fixed and specified.

****3** (9) The amount of annual charges to be paid under the license for the use, occupancy and enjoyment of lands of the United States by the project shall be determined at a later date as hereinafter provided.

(10) The electrical facilities referred to in paragraph (B) below, which were included in the application for license, are parts of the project within ***899** the meaning of Section 3(11) of the Act and should be included in the license for the project.

(11) The exhibits designated and described in paragraph (B) below, which were filed as part of the application for license, conform to the Commission's rules and regulations, and should be approved as part of the license for the project.

The Commission orders:

(A) This license is hereby issued to Merced Irrigation District (Licensee) of Merced, California, under Section 4(e) of the Act for a period of 50 years, effective as of March 1, 1964, for the construction, operation and maintenance of Project No. 2179 on the Merced River, California, and affecting lands of the United States; subject to the terms and conditions of the Act which is incorporated by reference as a part of this license, and subject to such rules and regulations as the Commission has issued or prescribed under the provisions of the Act; provided, however, that the Licensee shall surrender its license for Project No. 88 within 30 days after such project becomes inoperative during the construction of Project No. 2179.

(B) Project No. 2179 consists of:

(i) All lands constituting the project area and enclosed by the project boundary or the limits of which are otherwise defined and/or interest in such lands necessary or appropriate for the purpose of the project, whether such lands or interest therein are owned or held by the applicant or by the United States; such project area and project boundary being more specifically shown and described by certain exhibits which formed part of the amended application for license, and which are designated and described as follows:

Exhibit FPC No. Showing

J 2179 24 General map.

K 2179 25 Project area.

2179 26 Do.

2179 27 Project area.

2179 28 Do.

2179 29 Do.

2179 30 Do.

(ii) All project works consisting principally of:

Exchequer Development, an enlargement of applicant's existing Exchequer development (FPC Project No. 88) would consist of: a 480 foot high rock fill dam with reinforced concrete facing abutting the downstream side of the existing concrete dam, with a crest length of 1,200 feet; an auxiliary rock fill dike with crest length of 1,200 feet at elevation 881 feet varying in height to 56 feet about 1/2 mile north of the dam; a gated spillway about 4,500 feet northwest of the right abutment; a reservoir with storage of 1,010,000 acrefeet and area of 6,900 acres at maximum water surface elevation 865 feet; two 10-foot steel penstocks leading to a powerhouse containing two 63,100-horsepower turbines connected to two 40,000-kilowatt generators with minimum provisions for a future unit; substation; and appurtenant mechanical facilities;

****4** *Exchequer Afterbay Development*, would be approximately 6 miles downstream from Exchequer, near the headwaters of Merced Falls reservoir owned by Pacific Gas & Electric Company (FPC Project No. 1335) and would be created by a 76 foot high concrete gravity dam with rock fill wing dams at each end; a gated spillway would be located in the concrete gravity section; a reservoir with storage of 8,750 acre-feet at maximum water surface elevation ***900** 400 feet; one 22-foot steel penstock leading to a powerhouse containing one 11,050-horsepower turbine connected to a 7,000-kilowatt generator; substation; and appurtenant mechanical and electrical facilities; the location, nature and character of which are more specifically shown and

described by the exhibits hereinbefore cited and by certain other exhibits which also formed part of the amended application and which are designated and described as follows:

Exhibit FPC No. Showing

L 2179 31 General Plan, Exchequer

Development.

2179 32 Typical Details, Exchequer

Development.

2179 37 Dike & Spillway,

Exchequer Development.

2179 33 General Plan, Afterbay

Dam.

2179 34 Typical Details, Afterbay

Dam.

Exhibit M: Comprised of two (2) pages, signed January 29, 1963, describing mechanical and electrical equipment for: 'Works Covered by this Amended Application' and 'Proposed Ultimate Development on Merced River'.

(iii) All other structures, fixtures, equipment or facilities used or useful in the maintenance and operation of the project and located on the project area, including such portable property as may be used or useful in connection with the project or any part thereof, whether located on or off the project area, if and to the extent that the inclusion of such property as part of the project is approved or acquiesced in by the Commission; also, all riparian or other rights, the use or possession of which is necessary or appropriate in the maintenance or operation of the project.

(C) This license is also subject to the terms and conditions set forth in Form L-2 (Revised February 1, 1964) entitled 'Terms and Conditions for Unconstructed Major Project Affecting Lands of the United States' (31 FPC 528), which terms and conditions, designated as Articles 1 through 33, are attached hereto and made a part hereof except for Articles 6, 7, 18, 19 and 20 thereof, and subject to the following special conditions set forth herein as additional articles:

Article 34. The Licensee shall commence construction of the project works within two years after the effective date of the license and shall thereafter in good faith and with due diligence prosecute such construction and shall complete construction of such works within three years thereafter.

****5 Article 35.** The Licensee shall, within one year following completion of the construction of the project file with the Commission revised Exhibits F and K showing final project boundary prepared in accordance with the Commission's rules and regulations.

Article 36. The Licensee shall submit in accordance with the Commission's rules and regulations, revised Exhibit L drawings for the project structures and Licensee shall not begin construction of the project works until the Commission approves the Exhibits.

Article 37. The right, power, and authority is reserved to the United States to construct or to the Commission to issue a license authorizing the construction, operation and maintenance of a hydroelectric project which will more completely utilize the water resources of the reach of the Merced River in which the afterbay development of Project No. 2179 is located.

Article 38. The acceptance of this license by the Licensee shall constitute its stipulation, consent and agreement made upon its own behalf and upon the ***901** behalf of its successors and assigns for the benefit of the United States, or the person or persons hereinafter constructing, operating and maintaining such more complete development or his or their successors and assigns that said Licensee, its successors or assigns shall amend its license to eliminate the afterbay development fo Project No. 2179 at such time as the afterbay development becomes inoperative by reason of inundation by such more complete development, that said Licensee, its successors of assigns shall not be entitled to any compensation for damages sustained by reason of inundation or destruction of the afterbay development; provided said Licensee, its successors or destruction of the entitled to receive from said more complete development for the unexpired term of the license for Project No. 2179, an amount of electric capacity and energy equal to that generated by the afterbay development with compensation to the downstream developer in an amount equal to the cost to the licensee if the capacity and energy had been received from the afterbay development. In the event the licensee for Project No. 2179 and the owner of such more complete development should be unable to agree, the amount of capacity and energy which the licensee is entitled to receive, and the amount equal to the cost if it had been generated at the afterbay development, shall be determined by the Commission.

Article 39. The Licensee shall enter into an agreement with the Department of the Army providing for the operation of the project for flood control in accordance with rules and regulations prescribed by the Secretary of the Army. A conformed copy of the agreement shall be filed with the Commission for its information and records prior to commencement of construction of project works.

Article 40. The Licensee shall provide minimum streamflow in the Merced River downstream from the project reservoirs in accordance with the following schedule:

****6** (a) Downstream from Exchequer Dam, a minimum flow of 25 cubic feet per second at all times.

(b) At Shaffer Bridge downstream from Exchequer Afterbay Dam, a minimum streamflow shall be maintained as follows:

Period Normal Dry year ²

year (c.f.s.)

June 1 through Oct. 15 25 15

Oct. 16 through Oct. 31 75 60

Nov. 1 through Dec. 31 ¹ 100 75

Jan. 1 through May 31 75 60

Article 41. The Licensee shall, insofar as possible during the period November 1 through December 31, regulate the Merced River streamflow downstream from the Exchequer afterbay development between 100 and 200 cubic feet per second except during dry years when the streamflow shall be maintained between 75 and 150 cubic feet per second. Streamflow shall be measured at Shaffer Bridge.

Article 42. The Licensee shall operate the power plants so as to avoid rapid fluctuation of the Merced River. At Crocker-Huffman diversion, the Licensee shall, insofar as possible, restrict the rate of change of release *902 during any one-hour period to not more than double nor less than one-half the amount of release at the start of the change. The Licensee shall, during emergency periods, endeavor to make releases in a manner which will not be detrimental to fish.

Article 43. The Licensee shall make all releases at Exchequer Dam during the period, October 16 through December 31, from the outlets at or below elevation 485 feet insofar as physically possible.

Article 44. The Licensee shall maintain the water surface elevation of Exchequer Reservoir as high as possible from April through October and maintain a minimum pool of not less than 115,000 acre-feet in Exchequer Reservoir except for a drawdown as necessary to maintain previously recommended minimum streamflow.

Article 45. The Licensee shall cooperate with the Bureau of Sport Fisheries and Wildlife of the U.S. Fish and Wildlife Service to determine means of providing up to 15,000 acre-feet of project water and return flow waters to the Merced National Wildlife Refuge.

Article 46. The Licensee shall, prior to impounding water, dispose of all temporary structures, unused timber, brush, refuse, or other inflammable material resulting from the clearing of the land or from the construction and maintenance of the project works, and shall clear all lands in the reservoir areas up to normal water levels; except that all lands in the reservoir areas shall be cleared according to a plan to be prescribed by the Commission upon the recommendation of the California Department of Fish and Game and the Bureau of Sport Fisheries and Wildlife. The clearing of the lands and the disposal of the material shall be done with due diligence by Licensee and to the satisfaction of the authorized representative of the Commission.

**7 *Article 47.* The Licensee shall, within one year from the effective date of this license, file with the Commission for approval its proposed recreational use plan for the project. The plan shall be prepared after consultation with appropriate Federal, State and local agencies, and shall include recreational improvements which may be provided by others in addition to the improvements the Licensee plans to provide.

Article 48. The Licensee shall cooperate with the Central California Archeological Foundation, P.O. Box 5595, Sacramento, California, in the possible archeological survey and salvage and shall compensate for the expenses incurred but not to exceed a total of \$6,000.

Article 49. The Licensee shall pay to the United States the following annual charges:

(i) For the purpose of reimbursing the United States for the costs of administration of Part I of the Act, a reasonable annual charge in accordance with the provisions of Part 11 of the Commission's regulations, in effect from time to time. The authorized installed capacity for such purposes is 116,000 horsepower.

(ii) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of its lands, an amount to be determined hereafter by the Commission.

(D) The exhibits designated and described in paragraph (B) above are hereby approved as part of the license for the project.

(E) This order shall become final 30 days from the date of its issuance unless application for rehearing shall be filed as provided in Section 313(a) of the Act. and failure to file such an application shall constitute acceptance of this license. In acknowledgement of the acceptance of this license, it shall be signed for the licensee and returned to the Commission within 60 days from the date of issuance of this order.

FEDERAL POWER COMMISSION

Footnotes

- 1 If the average streamflow maintained at Shaffer Bridge from November 1 through December 31 is greater than 150 cubic feet per second exclusive of flood spills and emergency releases, then the streamflows from January 1 through March 31 shall be maintained at 100 cubic feet per second or more.
(An emergency is defined as an occurrence usually of short duration, such as flood, mechanical, or operational failure which is beyond the control of the Licensee, and during which the Licensee shall not be required to observe the release schedules contained in the license stipulations.)
- 2 A dry year is defined as a year when the forecasted April 1 through July 31 unimpaired runoff, as published in the May 1 bulletin of the California Department of Water Resources for the station, 'inflow to Exchequer' is less than 450,000 acre-feet.

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