

Decision No. 62043**ORIGINAL**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of
 PACIFIC GAS AND ELECTRIC COMPANY for
 a certificate of public convenience
 and necessity to construct, install,
 operate, maintain and use at its
 Morro Bay Power Plant Unit No. 4,
 together with transmission lines and
 related facilities.
 (Electric)

Application No. 42992

F. T. Searls, John C. Morrissey, Philip A. Crane, Jr.,
and Edward J. McGanney, for applicant.
J. M. Sanderson, Deputy Attorney General, for
California Department of Fish and Game;
Edward J. Terhaar, for William E. Warne, Director,
California Department of Water Resources;
William L. Knecht, for California Farm Bureau
Federation; interested parties.
Kenneth J. Kindblad, for the Commission staff.

O P I N I O NApplicant's Request

Pacific Gas and Electric Company filed this application on December 23, 1960, requesting that the Commission issue to it a certificate of public convenience and necessity for the construction, installation, operation and maintenance of a fourth unit and related equipment at its Morro Bay Power Plant.

Public hearing in this matter was held in San Francisco before Examiner James F. Haley on March 10, 1961.

Morro Bay Power Plant

Pursuant to the authorization contained in Decision No. 49666 as amended, in the original and First Supplemental Application No. 34924, applicant constructed the first two units of its Morro Bay Power Plant consisting of two tandem compound, reheat

type turbine generator units, each having a name-plate capacity rating of 156,250 kilowatts, giving a total gross normal operating capacity of 330,000 kilowatts. Unit No. 2 was placed in commercial operation October 1, 1955, and Unit No. 1 on July 1, 1956.

On July 26, 1960, applicant filed Application No. 42505 for authority to construct Unit No. 3 at its Morro Bay Power Plant. On December 20, 1960, the Commission issued Decision No. 61215, which granted applicant a certificate of public convenience and necessity to install an additional steam turbine generator unit which has not yet been constructed and which will consist of one cross-compound, reheat, turbine generator with a name-plate rating of 300,000 kilowatts and an expected normal operating capacity of 330,000 kilowatts.

Proposed Additions to Morro Bay Power Plant

Unit No. 4 will consist of one cross-compound, reheat, turbine generator, with a name-plate rating of 300,000 kilowatts and an expected normal operating capacity of 330,000 kilowatts. Its one boiler will have a capacity of 2,160,000 pounds of steam per hour at a throttle pressure of 2,400 pounds per square inch gage and 1050 degrees Fahrenheit with reheat to 1000 degrees. The unit will be complete with auxiliaries and related supporting steam plant equipment, including essential high voltage transforming and switching equipment. The new unit will utilize certain existing site facilities such as portions of the circulating water system, shops, warehouse, fuel oil handling system, natural gas facilities, switchyard, office, and crane.

In order to make the output of Unit No. 4 available to applicant's interconnected system, applicant proposes to install and place in operation the following steel tower transmission lines:

(1) a single 220 kilovolt circuit strung on existing towers extending 68.7 miles from Morro Bay Power Plant to its existing Gates Substation; and (2) a double circuit 220 kilovolt line extending 24 miles from Henrietta Substation to Raisin City Junction.

Cost of Proposed Additions

On the basis of September 1960 wage rates and material prices, applicant estimates that the cost to install Unit No. 4 including step-up substation facilities will be \$40,000,000, and that the cost of the related transmission and terminal facilities will be \$2,565,000. Applicant points out that Unit No. 4 will be constructed more or less concurrently with the previously authorized Unit No. 3. Applicant represents that it will be very difficult, if at all possible, to segregate accurately in all respects the costs of the two units. It requests, therefore, that it be permitted to file a single statement of capital costs to include both Units Nos. 3 and 4, rather than separate statements for each unit. The order herein will so provide.

Need for Proposed Additions

Applicant represents that there will be a demand within its service area for the additional power to be generated by Unit No. 4. Applicant states that the average annual growth of peak load within its service area has exceeded 300,000 kilowatts for the period from 1953 through 1960 and was nearly 350,000 kilowatts for the period 1955 through 1960. The evidence of record shows that, in order for applicant to meet future load growth and maintain reasonable reserve capacity, it will be necessary to provide additional capacity in the spring of 1963.

Effect on Marine Life

Sea water is used for cooling the condensers of the Morro Bay Power Plant. A large volume is continuously taken from Morro Bay, passed through the plant's condensers and discharged into Estero Bay. Under full load conditions the sea water is warmed by the condensers to the extent that an intake-to-discharge temperature differential of 18 degrees Fahrenheit exists. This full load temperature differential will be unchanged by the addition of the third and fourth units. The volume of cooling water, however, will be increased from the present total of 460 cubic feet per second for Units Nos. 1 and 2 to a total of 1100 cubic feet per second for all four units.

At the request of the Commission staff, applicant undertook an extensive investigation of the temperature effects of the Morro Bay Steam Plant on the ocean and surf in the vicinity of the plant. Applicant presented the results of its investigation in Exhibits 7, 8 and 9 and produced as an expert witness the marine fisheries biologist who had conducted the investigation in collaboration with an oceanographer. The biologist testified that the discharge of cooling water from Units Nos. 1 and 2 has negligible effect on ocean temperature in the broad vicinity of the discharge point and that such discharge does not adversely affect marine life or upset the biological balance. The biologist's studies indicate that the addition to the discharge of cooling water from Units Nos. 3 and 4 will not change this situation.

As to the destruction of fish by their being drawn in at the cooling water intake and passed through the plant, the evidence indicates that the mesh of the intake screen is sufficiently small to prevent this from occurring. An engineering witness for applicant

testified that the screens operate so efficiently that no dead fish have been observed in the water near the intake or discharge points.

A marine research biologist presented testimony for the California Department of Fish and Game. His testimony confirmed that of applicant's witness, the effect of his testimony being that the operation of the Morro Bay Power Plant does not adversely affect marine life.

The California Department of Fish and Game went on record as not opposing the granting of this application.

In future applications involving steam-electric or hydro-electric plants, the utility should inform the Commission that notice of the filing has been given to the California Department of Fish and Game.

Findings and Conclusions

The Commission concludes that, in view of the continuing growth in electric demand and load that applicant is experiencing, the capacity addition proposed herein will be needed to meet the requirements of the public. The Commission finds, therefore, that the public convenience and necessity require the construction, installation, operation, maintenance and use of Morro Bay Power Plant Unit No. 4, together with transmission lines and related facilities, all as described in the application.

The certificate hereinafter granted shall be subject to the following provision of law:

That the Commission shall have no power to authorize the capitalization of this certificate of public convenience and necessity or the right to own, operate, or enjoy such certificate of public convenience and necessity in excess of the amount (exclusive of any tax or annual charge) actually paid to the State as the consideration for the issuance of such certificate of public convenience and necessity or right.

O R D E R

The above-entitled application having been considered, public hearing having been held, the matter having been submitted and now being ready for decision,

IT IS ORDERED that:

1. A certificate of public convenience and necessity be and it hereby is granted to Pacific Gas and Electric Company to construct, install, operate, maintain and use Morro Bay Power Plant Unit No. 4, together with transmission lines and related facilities

as set forth in the application.

2. Applicant shall file with this Commission a detailed statement of the capital cost of Morro Bay Power Plant Units Nos. 3 and 4 and the transmission lines and facilities related thereto within one year following the date that the second of the two units is placed in commercial operation.

3. The authorization granted shall expire if not exercised within three years from the effective date hereof.

4. If the authorization herein granted is exercised, compliance with paragraph No. 2 of this order will satisfy the requirements of paragraphs Nos. 2 and 3 of the order in Decision No. 61215.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 31st day of May, 1961.

Robert W. Pease

President

L. J. Fox

George H. Hoover

Fredrick B. Hallock

Commissioner Peter E. Mitchell, being necessarily absent, did not participate in the disposition of this proceeding.

Commissioners