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ORIGINAL

Decision No. 84464

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 four gas turbine units, together with related facilities in San Francisco, California.	Application No. 53696 (Filed November 15, 1972)

Kathy Graham, Attorney at Law, for applicant.
Thomas M. O'Connor, City Attorney by Robert Laughead, for the City and County of San Francisco, interested party.
Walter H. Kessenick, Attorney at Law, and Kenneth Kinblad, for the Commission staff.

O P I N I O N

Pacific Gas and Electric Company (PG&E) seeks a certificate of public convenience and necessity to construct and operate four gas turbine electric[1] generating peaking units, together with related facilities, in the city and county of San Francisco, California. The gas turbines will each have a generating capacity of 52 megawatts, and are commonly known as Potrero Unit 4, Potrero Unit 5, Potrero Unit 6, and Hunters Point Unit 1.

The application was prepared in accordance with the requirements of our General Order No. 131. In addition, PG&E complied with the requirements of the California Environmental Quality Act of 1970 (CEQA) as amended, the Guidelines for Implementation of CEQA by the Secretary for Resources (Guidelines), and this Commission's Rule 17.1.

1 This refers to turbines where working fluid is the product of combustion of all suitable fuels; it does not signify natural gas as exclusive fuel.

The Commission staff prepared a draft Environmental Impact Report (EIR) pursuant to CEQA. On May 20, 1974 the Office of Planning and Research, State Clearinghouse, acknowledged receipt of the Draft EIR and assigned State Clearinghouse No. 74052099 (SCH) to the project.

On July 29 and 30, 1974 public hearings on all issues involved in the application were held before Examiner Charles E. Mattson in San Francisco, California.

On February 28, 1975 the Examiner filed a Final EIR. Pursuant to Rule 17.1, all parties were advised that exceptions to the Final EIR should be filed not later than March 21, 1975 and replies to such exceptions should be filed within 15 days after service of the exceptions. Exceptions were filed by the applicant on March 21, 1975. The examiner's Final EIR erroneously states (pages 9 and 18, paragraph 3) that existing units two and three at Potrero presently operate at approximately a 30 percent capacity factor. The Final EIR should state that units two and three at Hunters Point operate at approximately a 30 percent capacity factor (see Exhibit 2, page 35). Responses by PG&E to the examiner's conclusions regarding noise problems are discussed below.

Necessity for the Proposed Gas Turbines

PG&E is obligated to furnish and maintain adequate facilities as are necessary to promote the health and safety of its customers. California Public Utilities Code, Section 451. The evidence establishes that PG&E requires the requested additional generating capacity to meet the anticipated peak demands of its system and to provide adequate capacity margins for service within the city and county of San Francisco. In order to assure reliable service the PG&E system must meet anticipated demands and also provide for the shutdown of generating equipment (for routine inspection and maintenance) and unscheduled outages of generation equipment or transmission lines.

The applicant and staff estimated peak load resources and margins available for the city of San Francisco. The sources of power supply available within San Francisco are from the Hunters Point and Potrero power plants. Additional system power is made available to San Francisco by transmission lines from San Mateo Substation. This transmission is by six overhead 115 kv lines and one underground 230 kv cable all in a north-south corridor which lies west of San Francisco International Airport.

The staff concurs in PG&E's conclusion that additional peaking capacity will be required in 1975. Although the staff estimated lower peak demands than the applicant, it recognized that the potential for loss of the overhead transmission lines serving the city of San Francisco established a need for emergency capacity at a time of peak load or at a time one of the large units at Potrero or Hunters Point was undergoing an overhaul. Moreover, the staff concluded that completion of the four proposed units was justified in 1975 in order to strengthen capacity margin on the company's system to allow for delay in the completion of new large generating units planned for the system.

Location and Description of Proposed Facilities

Three of the proposed gas turbines and related facilities will be located at the existing Potrero power plant and the fourth gas turbine and related facilities will be located at the existing Hunters Point power plant. The proposed gas turbine at Hunters Point will be installed in an existing building which contained the former Hunters Point Unit 1 (no longer in service).

The proposed sites and facilities to be installed are set forth in maps, photos, illustrations, zoning maps, and proposed land use maps in PG&E's environmental data statement (EDS). The EDS has been incorporated in the Draft EIR and the Final EIR.

The proposed gas turbines are Turbo Power and Marine Systems TP 4 Twin Pac Units each capable of generating an average of 52 megawatts at 13.8 kilovolts at full rated load. The proposed facilities at the Potrero power plant include three gas turbine units, a 126,000 barrel capacity oil storage tank, and an oil pipeline. The proposed facilities at Hunters Point consist of one gas turbine unit and a 25,000 barrel capacity oil storage tank. Residual fuel oil is delivered by barge to Potrero for the existing steam turbo-generator units. Diesel fuel for the proposed gas turbine units will be delivered to Potrero by barge, and tank trucks will deliver fuel to the Hunters Point tank from Potrero.

Environmental Considerations

The Final EIR filed February 28, 1975 incorporated the Draft EIR by reference. We have reviewed the Final EIR, and our findings are based upon the information set forth therein. However, several of the environmental problems require further consideration in this decision.

A-NO_x Emissions

The Bay Area Air Pollution Control District (BAAPCD) has not yet established regulations for NO_x emissions for gas turbines. However, the Environmental Protection Agency (EPA) has proposed regulations which will establish limitations when adopted. The evidence discloses that the proposed gas turbines will not meet the expected EPA standards for NO_x. The applicant has required the gas turbine manufacturer to guarantee that the gas turbines will meet the assumed EPA standard.

PG&E's specific plan is to retrofit the gas turbines in early 1976 with low NO_x dry combustion cans. The manufacturer does not have such low NO_x cans available at this time. PG&E states that the manufacturer is bound to provide water injection to meet the guarantee, if necessary.

By Decision No. 83948 dated December 30, 1974 in Application No. 53656 (Re San Diego Gas & Electric Co.), we ordered water injection equipment installed on Turbo Power and Marine Systems, Inc. gas turbine peaking units. In that case, SDG&E was required to install water injection equipment to meet air pollution control district regulations on plant emissions by SDAPCD. The Draft EIR in the San Diego case (incorporated into the Final EIR) sets forth a SDAPCD standard for oxides of nitrogen (liquid fired) of 225 ppm nitrogen oxide, calculated as NO_2 at 3 percent O_2. This is the anticipated EPA standard in this case.

Our order herein will place PG&E and its gas turbine manufacturer on notice that this Commission will require the proposed gas turbines to meet the contemplated EPA NO_x emission standards as well as all other applicable emission standards. The evidence establishes that the applicant intends to retrofit with low NO_x dry combustion cans or water injection equipment in early 1976. We will provide that PG&E will report to this Commission within six months after the commencement of operations of each proposed gas turbine unit on the progress of its retrofit program. Such report will present the construction schedule and expected emissions of NO_x, SO_x, and particulates before and after retrofit. Such report will include a schedule for low NO_x combustion cans and a schedule for retrofit with water injection. Installation and operation cost estimates will be provided. We note that the additional costs for water injection represented less than one percent of average unit production costs in the San Diego case (Decision No. 83948, page 12). We recognize that anticipated operating conditions in this case may differ, but we expect PG&E to achieve optimum reduction of pollutants to the extent incremental costs are reasonable. Water injection equipment may be the more appropriate equipment.

B-Noise Levels

Two additional environmental problems are not directly affected by the gas turbine project. It appeared that the noise levels in the area of Hunters Point approached (and may have exceeded) the noise ordinance limits of the city and county of San Francisco (City). Moreover, a noise study and report on Hunters Point (late filed Exhibit 10) found that the telephone signal horn at Hunters Point exceeded steady nighttime noise levels by 16 dba. These noise problems should be resolved by PG&E and the city and county of San Francisco (a party to this proceeding).

PG&E advised the City by letter dated March 18, 1975 that a noise abatement program is unnecessary at the Hunters Point power plant. The position of PG&E is that the noise levels comply with the city's noise ordinance limits. PG&E's letter to the city stated that the signal horn system at Hunters Point will be modified at a cost of approximately $11,000. Both noise matters involve pre-existing conditions unaffected by the gas turbine project. Under the circumstances, any possible dispute which may arise between PG&E and the City regarding noise is a matter which may be resolved by a court or an exercise of the City's police power.

Findings

1. PG&E seeks authority to construct and operate four gas turbine generating units and related facilities in the city and county of San Francisco.

2. Three gas turbine units are proposed at the Potrero Power Plant and are designated as Units 4, 5, and 6. The project at Potrero includes a 126,000 barrel capacity oil storage tank and an oil pipeline.

3. One gas turbine unit is proposed at the Hunters Point Power Plant and is designated as Hunters Point Unit 1. The project at Hunters Point includes a 25,000 barrel capacity oil storage tank. The gas turbine unit will be constructed within an existing building which once housed a generating unit (now out-of-service).

4. Each gas turbine unit will have an average generating capability of 52 megawatts at 13.8 kilovolts at full rated load. The units will operate at approximately a five percent load factor to meet the daily peak demand which occurs in the late afternoon and evening hours.

5. PG&E and the Commission staff project a need for the proposed 208 MW additional generating capacity in San Francisco to meet the anticipated 1975 peak loads and to provide an adequate margin of excess capacity. The loss of the overhead transmission lines into San Francisco which are in a corridor near San Francisco International Airport could result in insufficient generating capacity to meet anticipated demand in 1975 at a time of peak load or at the time one of the large generating units at Hunters Point or Potrero is undergoing overhaul. Moreover, the PG&E system capacity margins will need the additional capacity available from the proposed four gas turbine units in 1975 if there are delays in completion schedules of new generating units.

6. PG&E requires additional generating capacity in the near-term to meet the anticipated demands of its customers. The gas turbines proposed are the only feasible near-term project available which can meet the peaking requirements on the system and will have sufficient generating capacity to provide reliable and economic electric service.

7. Our finding on environmental factors are as follows:

   a. The gas turbines will produce emissions which could have a significant environmental impact.

   b. The effect of emissions from the gas turbines may have an adverse environmental impact on air quality. This adverse environmental impact may be reduced by retrofit of the gas turbines by low NO_x combustion cans or by installation of water injection equipment.

   c. The applicant PG&E proposes to retrofit the gas turbine units to comply with proposed EPA standards for NOx emissions in early 1976. This EPA standard for NOx is 225 ppm (liquid fired) corrected to three percent oxygen. The low NOx combustion cans are not available at this time and are planned to be available in early 1976. Water injection installations will be available in early 1976 and will be installed if the low NOx cans do not become commercially available.

   d. The objective of the project is to provide gas turbine generating capacity so that PG&E will have adequate reserve capacity margins in 1975 and subsequent years. The gas turbine units are expected to operate at an annual load factor of five percent. The turbines have quick-start capability. They will be located at existing power plant sites in San Francisco. The alternative of not providing additional generating capacity on the PG&E system could ultimately result in power failures which would adversely affect the public health and safety.

   e. The proposed construction of four gas turbine units at existing power plant sites in San Francisco does not involve any irreversible environmental changes. The project will not produce an unreasonable burden on material resources, aesthetics of the area, public health and safety, air and water quality, parks, recreational and scenic areas, historic sites and buildings, and archeological sites.

f. The project will not directly induce growth. It will enable PG&E to meet its statutory obligation under Public Utilities Code Section 451 to furnish adequate and reasonable service necessary to promote the safety of the public.

g. The Commission specifically adopts by reference as additional findings paragraphs 1 through 11 of Chapter 7 of the final EIR on file herein. Paragraph 3 at page 18 is corrected to read: Existing units two and three at Hunters Point...operate at a 30 percent capacity factor.

8. A certificate of public convenience and necessity should be granted to PG&E to construct, operate, and maintain four gas turbine units: Potrero Units 4, 5, and 6 and Hunters Point Unit 1, all in the city and county of San Francisco.

The certificate herein granted is subject to the following provision of law:

Applicant is placed on notice that operative rights, as such, do not constitute a class of property which may be capitalized or used as an element of value in rate fixing for any amount of money in excess of that originally paid to the State as the consideration for the grant of such rights. Aside from their purely permissive aspect, such rights extend to the holder a full or partial monopoly of a class of business. This monopoly feature may be modified or canceled at any time by the State, which is not in any respect limited as to the number of rights which may be given.

The action taken herein is not to be considered as indicative of amounts to be included in future proceedings for the purpose of determining just and reasonable rates.

Conclusion

Based on the foregoing findings the Commission concludes that PG&E should be authorized to construct, operate and maintain four gas turbine units: Potrero Units 4, 5, and 6 and Hunters Point Unit 1, all in the city and county of San Francisco.

O R D E R

IT IS ORDERED that:

1. A certificate of public convenience and necessity is granted to Pacific Gas and Electric Company to construct, operate, and maintain four gas turbine units: Potrero Units 4, 5, and 6 and Hunters Point Unit 1, all in the city and county of San Francisco, together with appurtenances, as described by Pacific Gas and Electric Company in this proceeding.

2. Not later than six months after the completion of construction and commencement of operations of each gas turbine unit PG&E shall file a written report regarding its construction schedule for retrofit of emission control equipment for each gas turbine unit. The report shall set forth the concentration and qualities of contaminants emitted by each unit and the emissions anticipated after retrofit with low NO_x combustion cans and, alternatively, water injection equipment. The report should set forth information regarding retrofit as described in our opinion.

3. The emission retrofit program adopted or proposed should achieve the optimum reduction of pollutants. PG&E will specifically request that the Commission authorize a particular method to achieve

emission reductions. The Commission may, by resolution, authorize such requested retrofit program.

The effective date of this order is the date hereof.

Dated at San Francisco, California, this 28th day of May, 1975.

President

Commissioners

Commissioner Vernon L. Sturgeon, being necessarily absent, did not participate in the disposition of this proceeding.

Commissioner Robert Batinovich, being necessarily absent, did not participate in the disposition of this proceeding.