

ORIGINAL

Decision No. 77918

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 con-
venience and necessity to construct,
install, operate, maintain and use
Units Nos. 7 and 8 at The Geysers
Power Plant.

Application No. 51892
(Filed May 11, 1970)

(Electric)

F. T. Searls, John C. Morrissey and Philip A. Crane, Jr., for applicant.

Martin McDonough, for Northern California Power Agency; Norman Ingraham, for NCPA; Gregory A. Harrison, for Thermal Power Company, and Magma Power Company; and Sam A. Snyder, for Union Oil Company of California, interested parties.

Melvin E. Mezek and Kenneth J. Kindblad, for the Commission staff.

O P I N I O N

Applicant's Request

Pacific Gas and Electric Company (PG&E) requests an order of this Commission issuing to it a certificate under Section 1001 of the Public Utilities Code declaring that the present and future public convenience and necessity require or will require the construction, installation, operation and maintenance of Units Nos. 7 and 8 at The Geysers Power Plant in Sonoma County.

Background

Pursuant to the authorization in Decision No. 58243 dated April 7, 1959, in Application No. 40641 PG&E constructed The Geysers Power Plant and installed electric generating Unit No. 1 having a normal operating capacity of 12,000 kw. To integrate this plant

with its main transmission system, PG&E constructed a 60-kv wood pole line to connect with its Fulton-Hopland 60-kv lines No. 1 and No. 2 at points southeast of Geyserville. Unit No. 1 was placed in commercial operation on September 25, 1960.

Subsequently, this Commission granted certificates to PG&E for the construction at The Geysers Power Plant of Units Nos. 2, 3, 4, 5 and 6.^{1/}

PG&E's Proposal

PG&E now proposes to install Units Nos. 7 and 8 at The Geysers Power Plant each to consist of one 55,000 kw (nominal) capacity turbine designed for steam at 100 pounds per square inch gauge and 355 degrees Fahrenheit, one 66,000 kva, 13,800 volt, hydrogen-cooled generator, one direct contact condenser with gas ejectors and circulating water pumps, and one cooling tower, together with related facilities. Transformation will consist of one 132.0 mva, 13.8 - 115/230 kv, 3 phase transformer. Each unit will be provided with a steam supply of not less than 1,000,000 pounds of steam per hour at a pressure of 100 pounds per square inch gauge and a temperature of approximately 355 degrees Fahrenheit.

The general location of Units Nos. 7 and 8 is expected to be about one mile north of the site of Units Nos. 5 and 6 on land to be provided by Union Oil Company of California (Union), Magma Power Company (Magma), and Thermal Power Company (Thermal). The

^{1/} Decision No. 58243, April 7, 1959, Application No. 40641;
Decision No. 62243, July 11, 1961, Application No. 43331;
Decision No. 67050, September 22, 1964, Application No. 46007;
Decision No. 70940, July 12, 1966, Application No. 48448;
Decision No. 73646, January 23, 1968, Application No. 49869;
Decision No. 74926, November 13, 1968, Application No. 50556.

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exact site will be selected by and be mutually agreeable to Union, Magma, Thermal and PG&E. A building permit to construct the units will be obtained from Sonoma County.

Transmission facilities, as originally proposed, would have consisted of about 5 miles of 230-kv double circuit tower line, with one circuit strung, from the plant site to a junction, at the future Geysers' substation site, with the 230-kv tower line to be constructed between the Geysers and Fulton substations in 1971. These circuits would have been operated initially at 115-kv.

However, PG&E has now determined to defer construction of the 230,000 volt line and initially transmit power generated by Units Nos. 7 and 8 using a temporary single circuit 115,000 volt line constructed between those units and Units Nos. 5 and 6. Construction of the 230,000 volt line would thus be deferred subsequent to July 1, 1971. Appropriate application under General Order 131 will be made for the 230,000 volt line when timely. PG&E requests permission to withdraw the 230,000 volt line from this application. Such request is hereby granted.

Commercial operation of Units Nos. 7 and 8 is scheduled for August 1, 1972 and November 1, 1972, respectively.

With the completion of Units Nos. 7 and 8, the total gross normal operating capacity of The Geysers Power Plant will be 302,000 kw.

The estimated cost to install Units Nos. 7 and 8 is \$11,914,000. A detailed estimate of the cost is shown in Exhibit 3.

The development of annual cost of power for Units Nos. 7 and 8 is shown in Exhibit 4. The average delivered cost of power for operation at various capacity factors is as follows:

<u>Capacity Factor %</u>	<u>Cost-Mills/kwhr</u>
60	5.92
70	5.45
80	5.09
90	4.81

For the operation of The Geysers Power Plant, PG&E until recently purchased geothermal steam produced from wells located in Sonoma County pursuant to the terms and conditions of an agreement with Magma and Thermal dated October 30, 1958, as amended.

By an agreement dated June 7, 1967, Magma and Thermal assigned to Union an undivided one-half interest in their lands covered by the agreement dated October 30, 1958, and Union in turn assigned an undivided one-half interest in its lands in the area to Magma and Thermal. Union is designated as the operator of the field. Between themselves the parties have divided the revenues from electric energy generated by the steam to be produced by their holdings as follows:

First 200,000 kilowatts	- Magma-Thermal
Second " "	- Divided Equally
Third " "	- Union
Over 600,000 "	- Divided Equally

PG&E has entered into a steam sale agreement (Exhibit 9) with Union to cover Union's interest in the steam produced from the lands covered by the agreement dated June 7, 1967. PG&E has also entered into a parallel agreement (Exhibit 8) with Magma-Thermal which supersedes the agreement dated October 30, 1958.

PG&E states that its operating experience of Units Nos. 1, 2, 3 and 4 at The Geysers Power Plant has been, and is, satisfactory. Tests on the geothermal steam wells developed on land from which steam is available to Magma and Thermal in Sonoma County indicate that steam can be produced in sufficient quantities to

supply Units Nos. 5 and 6, as heretofore authorized. Exploratory wells have been drilled in the area in which it is planned to install Units Nos. 7 and 8. Additional wells to supply steam to the units will be completed fourteen months prior to their commercial operating dates.

PG&E desires to proceed with the installation of Units Nos. 7 and 8 to comply with the terms of the geothermal steam sale agreements; to provide an additional economic source of power for its Ukiah district and to promote the conservation of fossil fuels through utilization of geothermal steam.

Exhibit 5 entitled "Area Loads" shows PG&E's actual loads and resources for 1965 through 1969 and estimated loads and resources for both adverse and average years for 1970 through 1974.

Rates to be charged for service to be rendered by means of the requested construction will be PG&E's system electric rates now in effect or as may be authorized by the Commission in the future.

Northern California Power Agency (NCPA)

Northern California Power Agency is a public agency created by agreement under the statute authorizing such action as an exercise of joint powers, under Section 6500 et seq. of the Government Code. The members of the Agency are the cities of Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Redding, Roseville, Santa Clara and Ukiah, each of which owns and operates a municipal electric distribution system. The purposes of the agreement are stated in it, as follows:

"...acquiring and disposing of ownership and use of revenue producing facilities, including electric generating and transmitting facilities, and making more efficient use of the

common powers of individual member public agencies comprising the NCPA to acquire, purchase, generate, transmit, distribute, sell, interchange, and pool electric energy and capacity..."

NCPA's powers include:

"...any and all powers authorized by law to all of the parties hereto, and separately to the agency herein created, relating to the acquisition, construction, disposition, use, operation and maintenance of works for the generation and transmission of electric power and energy to such area by contract with owners of such facilities including federal and state agencies and public utilities."

A hearing on the present application was requested by NCPA, and was held on August 11 and 12, 1970, in San Francisco before Examiner Gillanders. Testimony was offered in support of the application by the applicant, and by Union Oil Company, Magma Power Company, and Thermal Power Company, which would supply the geothermal steam for the applicant's geothermal plants. Testimony was offered in opposition to the application by NCPA. At the conclusion of the hearing the matter was submitted on September 21 with the filing of concurrent reply briefs.

Issues Raised in the Proceeding by NCPA

In the view of NCPA, the following issues are presented in this proceeding:

(1) Do the contracts for geothermal steam supply on which PG&E relies give PG&E exclusive control over the entire steam supply covered by the contracts?

(2) Do those contracts give PG&E the right to prevent geothermal steam supplies from being developed at all during the lifetime of those contracts?

(3) Are the steam supplies so controlled by PG&E a significant and important part of the steam supplies available to Northern California?

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(4) Is the effect of the contracts substantially to lessen competition in the development of geothermal steam, and to tend or attempt to create a monopoly, and to restrain trade in electric power generated from such steam, which electric power is a part of trade or commerce among the several states?

(5) Is the public interest, as represented by NCPA, adversely affected by those contracts?

Position of NCPA

NCPA contends in its brief that the answer to each of the above issues is affirmative, and that the Commission should refuse to issue the certificate requested herein until PG&E renegotiates the contracts to eliminate the objectionable exclusive features.

NCPA states that it will be happy to participate in the negotiations to revise the present contracts, in order that PG&E may be able to construct its units under a proper contract in the public interest at the earliest date.

Position of PG&E

PG&E, in its brief, declares that objection raised by NCPA is neither in the general interest of the public nor is it basically fair.

Position of Magma-Thermal

According to Magma-Thermal,

"If Pacific Gas and Electric Company be prevented from installing the facilities necessary to carry out the terms of said contract, it would result in the following:

- "(a) Magma-Thermal would suffer irreparable injury in the permanent and complete loss of geothermal steam sales and the proceeds therefrom, none of which could ever be recovered.

- "(b) Magma-Thermal would be deprived of its market for geothermal steam and still have the continuing obligation under the existing leases without a source of income for the sale of geothermal steam, to its irreparable loss and damage.
- "(c) The public would be forever deprived of the electric energy which would be produced from the current steam supplies produced on Magma-Thermal land.
- "(d) The property and contract rights of Magma-Thermal would be impaired immeasurably to its irreparable damage without due or any process of law and without any compensation."

The Only Pertinent Issue

The only issue in this proceeding upon which we must make a finding is:

Does Public Convenience and Necessity Require the Construction, Installation, Operation and Maintenance of Units Nos. 7 and 8?

In arriving at our findings shown below, although we have taken cognizance of the contracts between PG&E and its steam suppliers, we make no finding as to the validity thereof as between the parties thereto.

Findings of Fact

The Commission finds that:

1. Undisputed evidence demonstrates the need for the new electric generation to be provided by Geysers' Units Nos. 7 and 8.
2. There is no need to determine the issues raised by NCPA.
3. NCPA's concern re steam supplies is based upon vague and speculative proposals.

The Commission concludes that a certificate should be issued.

The certificate of public convenience and necessity which will issue herein is subject to the following provision of law:

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.

The action taken herein is for the issuance of a certificate of public convenience and necessity only and is not to be considered as indicative of amounts to be included in proceedings for the purpose of determining just and reasonable rates.

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, maintain and use geothermal steam-electric generating Units Nos. 7 and 8 of The Geysers Power Plant as described in the application and the evidence adduced thereon.

2. Pacific Gas and Electric Company shall file with this Commission a detailed statement of the capital cost of The Geysers Power Plant Units Nos. 7 and 8 and related facilities within one year following the date Unit No. 8 is placed in commercial operation.

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

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

Dated at San Francisco, California, this 10th day of NOVEMBER, 1970.

Chairman

Wooden
William J. ...
...
Vernon L. Stungen
Commissioners

Commissioner J. P. Vukasin, Jr., being necessarily absent, did not participate in the disposition of this proceeding.