

Decision No. 79402

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 Units Nos.
 7 and 8 at The Geysers Power Plant.
 (Electric)

Application No. 51892
 (Filed May 11, 1970)

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Philip A. Crane, Jr., Attorneys at Law,
 for applicant.
Martin McDonough, Attorney at Law, for
 Northern California Power Agency;
Norman Ingraham, for NCPA; Gregory A.
Harrison, Attorney at Law, for Thermal
 Power Company and Magma Power Company;
 and Sam A. Snyder, Attorney at Law,
 for Union Oil Company of California,
 interested parties.
Kenneth J. Kindblad and Melvin E. Mezek,
 for the Commission staff.

O P I N I O NApplicant'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 Nos. 1 and 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 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.

¹ Decision No. 58243, April 7, 1959, Application No. 40641;
Decision No. 62243, July 11, 1961, Application No. 43331;
Decision No. 67858, September 22, 1964, Application No. 46807;
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.

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 No.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 200,000 kilowatts - Divided equally
- Third 200,000 kilowatts - Union
- Over 600,000 kilowatts - 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 14 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 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 entities 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.

By Decision No. 77918, dated November 10, 1970, in Application No. 51892, this Commission granted Pacific Gas and Electric Company a certificate of public convenience and necessity to construct Units Nos. 7 and 8 of The Geysers Power Plant. On July 13, 1971 the California Supreme Court annulled Decision No. 77918 and remanded the matter back to the Commission for determination of whether or not the Cartwright Act has been violated. By Decision No. 79020, dated August 10, 1971, Application No. 51892 was reopened for further hearing.

On September 2, 1971, PG&E and NCPA stipulated that it was their belief that further hearing was not necessary and requested that the matter be resubmitted on the existing record. The stipulating parties requested permission to submit their respective proposed findings of fact and conclusions of law. They suggested a schedule requiring proposed findings and conclusions be filed not later than September 15, 1971 and comments thereon be filed not later than September 30, 1971.

By Commission letter dated September 8, 1971, the above requests were granted.

Subsequently, proposed findings and conclusions were submitted by Thermal Power Company, Magma Power Company, PG&E and NCPA. Comments on the proposed findings and conclusions were submitted by PG&E, NCPA and the Commission staff.

The matter is now ready for decision.

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?

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."

Findings of Fact

Based upon a consideration of the record herein, the Commission finds as follows:

1. Undisputed evidence demonstrates the need for the new electric generation to be provided by Geysers' Units Nos. 7 and 8.
2. PG&E is a publicly regulated utility engaged, inter alia, in the generation, transmission and distribution of electric power in Northern and Central California. PG&E generates electric power in hydroelectric plants, nuclear plants, fossil fuel plants, and geothermal plants.
3. NCPA, a joint powers organization of 11 California cities owning and operating their own electric distribution system, desires to construct a geothermal generation plant in the same area as PG&E, using the same kind of steam, as a part of an overall program of providing additional power supplies for its members.
4. It is in the best interests of the State to develop available supplies of geothermal steam known to be of practical value for the generation of electric power and energy to meet the growing needs of such power and energy, in preference to fossil fuel and nuclear fired generation.

5. It is in the best interests of the State to permit competition, rather than allow monopoly, in the development of these geothermal sources of power; and it is in the public interest to permit cities having their own distribution systems to generate their own power, if they desire to do so, rather than to require them against their will to purchase such supplemental power from a public utility.

6. In 1958 PG&E entered into its first contract to purchase geothermal steam from Magma and from Thermal Power Company (Thermal).

7. In 1967 Magma and Thermal entered into a joint venture with Earth Energy, Inc., a subsidiary of Union Oil Company, whereby each assigned to the other an undivided one-half interest in its holdings within a specified area at The Geysers, and Earth Energy became the operator of those holdings. Earth Energy later merged into Union. When the 1970 steam sale contracts were negotiated, at Union's suggestion, the area of the joint venture was adopted by the parties as the area within which PG&E obtained initial exclusive rights to purchase geothermal steam produced by the joint venture. This area was referred to in the hearing as the "red line area." The 1970 steam sale contracts replaced the 1958 PG&E, Magma-Thermal steam sale contract as amended.

8. The geothermal steam field owned by Magma, Thermal and Union, with Union as the operator, is the subject of the contract, and is only one of various sources of hot water and steam, either separately or combined, available for use in the production of electric energy, the availability of which has already been demonstrated in some instances and in others are in the process of exploration and development.

9. Included in available sources of geothermal steam are fields which are not subject to the contract and include those leased and held by Signal Oil Company and GRI, with established production, in relatively close proximity to The Geysers to which the contract relates, and all of which are presently available for the production and sale of electric energy. In addition, there are other areas within the State with hot water and steam energy now

subject to exploration and development, including Lake County, Imperial County and Plumas County.

10. The development of geothermal steam resources in the area subject to the contract is made feasible by the contract between Magma, Thermal, Union and PG&E.

11. The geothermal steam resources at The Geysers are themselves relatively small and unimportant compared to the total available sources for generating electricity in the relevant market, which includes nuclear and fossil fuels, hydro, and geothermal steam, available in the geographical area lying north of the Tehachapi Mountains.

12. Geothermal steam has some advantages as a power source for electric generation over other forms of energy:

- a. Its use produces a minimal adverse effect on the environment, as no combustion exists by which combustion by-products may be released into the atmosphere.
- b. The power plants are proving to be highly reliable since need for a boiler system is eliminated.
- c. Its use conserves other forms of natural resource energy.

13. Geothermal steam has some disadvantages as a power source for electric generation in comparison with other forms of energy:

- a. The technology for use of the steam and for estimation of steam reserves is still in the pioneering stage, and thus risks associated with making large capital expenditures in order to use the steam are greater than those associated with constructing more conventional power plants.
- b. Shutting down steam wells can damage the wells, thus it is best not to use geothermal plants for peaking (low load factor) operation, and such plants are better used for base load (high load factor) operations.
- c. Since geothermal steam can only be transmitted economically for a maximum of about one to one and one-half miles, and the generating plants have no boilers which can be converted to other energy fuels, the plants are especially vulnerable in the event a local steam supply fails.

14. The Geysers' steam field was discovered as early as 1847. Since the early 1920s it has been known that steam could be produced from a well drilled a few hundred feet below the earth's surface.

15. Magma drilled its first steam well at The Geysers in 1955.

16. Production of geothermal steam is still a developing technology. After years of actual production at The Geysers, it is still not known whether such production is from one field or more than one field. There are conflicting data on this point.

17. The red line area shown on Exhibit A, attached to Exhibits 8 and 9, encompasses approximately 113,000 acres.

18. As of the time of the hearing, Union and Magma-Thermal held leases to about 15,000 acres within that area.

19. Union and Magma-Thermal are under no obligation to PG&E to obtain additional leases to lands within the red line area.

20. Union, the operator at The Geysers' steam field for the Union-Magma-Thermal joint venture, does not contemplate, under the PG&E steam sale contracts, acquiring any additional lands.

21. The presently known geothermal steam field at The Geysers includes about 19,100 acres within which steam may reasonably be expected to be found. About 54 percent of this area is not subject to the Union and Magma-Thermal contracts with PG&E.

22. Most of the existing wells at The Geysers have been drilled expressly for PG&E under the contracts with it. The effect of these wells on the capacity and productivity of The Geysers' field is unknown, although geothermal steam is believed to be a depletable resource.

23. Signal Oil Company and Geothermal Resources International each has drilled several active steam wells in the vicinity of The Geysers. The present steam sale contracts do not apply to those wells.

24. Union has drilled at least one productive steam well in the Clear Lake vicinity but at a location which is outside of the red line area. The 1970 steam sale contracts do not apply to steam from that well.

25. Union and others are actively exploring for geothermal steam throughout California.

26. PG&E's installations at The Geysers have been and are expected to be as follows through 1973:

<u>Unit</u>	<u>Size</u>	<u>Year Installed or to be Installed</u>
1	12-1/2 MW	1960
2	12-1/2 MW	1963
3	27-1/2 MW	1968
4	27-1/2 MW	1968
5	55 MW	1971
6	55 MW	1971
7	55 MW	1972
8	55 MW	1972
9	55 MW	1973
10	55 MW	1973

27. Under the contracts with PG&E, The Geysers' field has been steadily developed at a pace set by the gradually developing technology of geothermal steam production.

28. The long-term and the exclusive dealing provisions of the steam sale contracts are reasonable and in the public interest. They are necessary to assure a reliable supply of steam for the full life of the generation and transmission equipment installed to utilize it, and thus give PG&E an opportunity to recover the investment made in pioneering the development and use of geothermal steam as a source of energy for electric power generation.

29. The provision of the steam sale contracts that, in the event PG&E does not exercise its right to purchase steam within a specified length of time, the steam supplier can sell the steam to others or use it itself for "process, chemical or manufacturing purposes", does not preclude sale or use of the steam for generating electricity.

30. Since geothermal steam appears to be a depletable resource, if there is but one pool of steam at the Geysers, use of that steam by anyone other than PG&E might affect availability of steam for PG&E's plants.

31. The long-term nature of the contracts is not unreasonable in view of the large investment required to construct the generating plants and necessary transmission lines and the continuing need of the public for electric power.

32. The provision of the steam sale contracts that the suppliers compensate PG&E, if they sell steam to others and thereafter steam supplies for PG&E plants are reduced, is not unreasonable in view of the large investment required to construct the generating plants and necessary transmission lines, the need of the public for a reliable, long-term source of electric power, and the newness of the technology of production of geothermal steam.

33. The steam sale contracts assure the continued long-term availability of geothermal steam at a reasonable price for generating electric power.

34. Development of the ability to use geothermal steam for electric power production at The Geysers might not have been possible if PG&E had not participated in the pioneering by constructing generating plants.

35. If PG&E had not entered into the present contracts with Union and Magma-Thermal, those developers would have had no market for their steam, and no funds with which to continue their development of the new resource, until some speculative time in the future.

36. PG&E's obligations under the steam sale contracts to construct generating plants and purchase steam are conditioned upon its obtaining certificates of public convenience and necessity from this Commission. This Commission has the jurisdiction and authority to consider any possible anticompetitive effects of these contracts each time a certificate is sought and can protect the public interest in free trade, as circumstances in the future may warrant.

37. The steam sale contracts commit PG&E to operate the geothermal steam plants at a high load factor (i.e., base load operation).

38. The cost of electric energy produced at The Geysers under the contracts is approximately equal to the cost of electric energy now produced by PG&E at its other modern generating plants.

39. PG&E load forecasts demonstrate that PG&E will have a retail and wholesale market for the electric power which will be produced at The Geysers' Units Nos. 7 and 8.

40. NCPA's plans for using geothermal steam are vague and speculative. It made no showing that it is capable of carrying out its plans to build geothermal electric generating plants.

41. PG&E's steam supplier, Union Oil Co., attempted unsuccessfully to contract with NCPA, but determined NCPA had no present or foreseeable ability to use steam thereafter "dedicated" by contract to PG&E.

42. NCPA could not utilize to capacity the steam from wells controlled by Union if it had purchased this steam, thus requiring the shutting down of wells with consequent stress and economic loss.

43. NCPA did not show that any party to the steam contract refused to sell steam to it.

44. Union and Magma-Thermal contracted with PG&E in 1970 only after Union, acting for the three suppliers, negotiated with NCPA and concluded that a timely sale contract with NCPA could not be obtained.

45. One of the major reasons NCPA's negotiations with Union failed was NCPA's unwillingness to accept risk involved with developing geothermal steam.

46. NCPA made no showing that it could use geothermal steam practicably. NCPA may be unable to use geothermal steam for generating electricity because prudent operation of the steam wells requires continuous, high load factor operation and a minimum of shutdowns, whereas NCPA's needs would be for peaking generation and thus would require low load factor operation.

47. NCPA failed to pursue other geothermal sources readily available to it. Its sole expert witness at the hearing did not even know that developers other than Union and Magma-Thermal had geothermal steam holdings at The Geysers prior to learning of them at the hearing in that proceeding.

48. Any impact of the steam sale contracts on freedom of trade is remote and speculative.

49. It is in the public interest to encourage the development of the technology for the use of geothermal steam for the production of electric power.

50. The 1970 steam sale contracts promote the development of the technology for such use of geothermal steam.

51. PG&E does not have the power to exclude other potential users of geothermal steam from obtaining such steam from wells at The Geysers which are not under contract to PG&E.

52. NCPA desires to be able to contract with Union and Magma-Thermal because Union and Magma-Thermal have special knowledge and experience with geothermal steam development.

53. PG&E is obligated to sell wholesale power to NCPA's member cities at reasonable rates which are subject to Federal Power Commission regulation.

54. PG&E is presently supplying all or part of the wholesale electric power needed by several of NCPA's member cities. The balance of the power needed by those cities is supplied by the Bureau of Reclamation.

55. NCPA has not contended that any of its member cities has experienced a power shortage or that PG&E will be unable to meet their future needs for wholesale electric power.

56. The purpose of the 1970 steam sale contracts is not anticompetitive. The restrictive provisions and lengthy term of contracts were and are necessitated by the unique characteristics of geothermal steam, the present state of knowledge of geothermal steam production, and the need of PG&E as a public utility to obtain reliable power sources for its generators.

57. The 1970 steam sale contracts have had no anticompetitive effect in the relevant market. The contracts do not foreclose competition in any measurable share of the relevant market. More than sufficient energy sources, including geothermal steam, remain available to NCPA and others to allow such entities to generate electricity if they choose to do so.

58. The 1970 steam sale contracts do not unreasonably foreclose competitors from The Geysers' steam field. PG&E presently has under contract about 46 percent of the land under which steam may reasonably be expected to be found. PG&E's contractual rights over this portion of The Geysers' field do not constitute monopoly power in the relevant market.

59. Considering all the evidence introduced concerning the 1970 steam sale contracts and their competitive effects, it is clear that they are consistent with the public convenience and necessity.

✓ 60. NCPA cities and all other wholesale and retail customers of PG&E will benefit from electric power generated by geothermal steam at The Geysers pursuant to PG&E's contracts with Union and Magma-Thermal and sold at reasonable, nondiscriminatory rates established by this Commission and by the Federal Power Commission.

Conclusions of Law

Based on the foregoing findings, the Commission concludes that:

1. The public safety, health, comfort, convenience and necessity require the installation, maintenance, operation, and use of Units Nos. 7 and 8, and associated transmission facilities, at The Geysers Power Plant, and that the requested certificate be issued.

2. The features of the contracts referred to in the findings of fact which give PG&E exclusive control over the areas described in those contracts are not against the public interest, necessity, convenience and welfare; in such respects such contracts are not in restraint of trade or commerce among the several states; they do not monopolize or attempt to monopolize a part of the trade among the several states; they do not

propose a combination of acts to create and carry out restrictions in trade or commerce within this state, and do not prevent competition in manufacturing, making, transportation, sale or purchase of electric energy in this state, and thus are not in violation of the Cartwright Act.

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. 2 is placed in commercial operation.

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 23rd day of NOVEMBER, 1971.

Chairman
William J. Vukasin, Jr.

John M. ...

Vernon L. ...

...
Commissioners

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