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Decision No. 84977

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SAN DIEGO GAS & ELECTRIC COMPANY for a Certificate that Present and Future Public Convenience and Necessity require or will require the construction and operation by Applicant of steam electric generating Unit No. 5 at ENCINA POWER PLANT, together with a 230kv substation and other appurtenances; and a 230kv single circuit from Encina to the Escondido Substation; and a 230kv circuit from Encina to the Old Town Substation; and two 230kv circuits from Old Town to Mission Substation.	Application No. 53369 (Filed June 1, 1972)

Chickering & Gregory, C. Hayden Ames, Edward P. Nelsen, Allan J. Thompson, by Edward P. Nelsen, Attorney at Law, for applicant.
Vincent F. Biondo, Attorney at Law, for City of Carlsbad; Kingsley Macomber, Attorney at Law, for Air Resources Board; interested parties.
Mark A. Nelson, for Carlsbad Community Cause, protestant.
Vincent MacKenzie, Attorney at Law, and Kenneth J. Kindblad, for the Commission staff.

O P I N I O N

On June 1, 1972, San Diego Gas & Electric Company (SDG&E) filed this application, pursuant to Section 1001 of the Public Utilities Code and to Section 1 of General Order No. 131, for a certificate of public convenience and necessity to construct and operate an additional steam electric generating unit, known as Encina Unit No. 5 (Encina 5), at its Encina power plant in the city of Carlsbad and associated transmission facilities.

The transmission facilities proposed for this project include a 230kv substation, a 230kv circuit from Encina to the Escondido Substation, a 230kv circuit from Encina to the Old Town Substation, and two 230kv circuits from Old Town to the Mission Substation. The expected net generating capability of Encina 5 is 292 MW.

EIR Process and Public Hearings

In late 1972, about six-months after filing Application No. 53369, SDG&E submitted a three-volume environmental report on this project. In September 1973 the Commission staff issued the Draft EIR, and sent it to all public agencies having jurisdiction by law over the project, to state agencies having pertinent statutory authority or expertise according to the Resources Agency Guidelines, and to various interested local agencies. Some of these agencies commented on the Draft EIR. Their written comments were included in Appendix B to the Final EIR. The Final EIR was issued in November 1974.

Public hearings were held before Commissioner Moran and/or Examiner Main on April 17, 1973 in Escondido; on April 19 and May 21, 22, and 23, 1973 in San Diego; and on April 16 and 18, October 23, 24, and 25, and November 19, 20, and 21, 1973 in Carlsbad. The hearings held in October and November 1973 were devoted primarily to the Draft EIR and the comments received thereon.

By Decision No. 83331 dated August 20, 1974, the Commission assigned responsibility for preparation of the Final EIR to the staff Chief Environmental Engineer, Harold T. Sipe. The Final EIR was issued, as noted earlier, in November 1974. Exceptions and Replies to Exceptions to the Final EIR were filed in due course and closing briefs were received in January 1975. The matter was reopened, however, for further hearing, which was necessary because of substantial

changes in the estimates of electric energy consumption and peak demand. It was held on July 21, 1975, before Examiner Main in San Diego.

This matter now stands ready for decision.

Project Description

The Encina power plant is in the southwest sector of the city of Carlsbad, adjacent to Agua Hedionda Lagoon and the Pacific Ocean, and has a present net capability of 627 megawatts. The proposed Encina Unit No. 5 will increase that capability by 292 megawatts and be housed in a continuation of the existing plant building next to Unit No. 4 at the south end of the plant. The four existing 190-foot high stacks will be replaced by one stack which will serve Encina Units 1 through 4 and Unit No. 5. The single stack will top out at 400 feet above sea level.

Encina 5 will be a high efficiency unit, having an expected heat rate of 9,500 Btu per net kilowatt-hour on oil fuel and an expected net capability of 292 MW, using a nominal steam turbine cycle of 1,800 psig throttle pressure, at 1,000°F, with single reheat to 1,000°F. The boiler will be equipped to burn natural gas, low-sulfur fuel oil, or low-sulfur crude oil, with special features to limit the formation of oxides of nitrogen.

Combustion characteristics for Unit 5 will vary with the type of fuel used. Gas firing will require a maximum of 2,675,000 pounds of air per hour (pph), producing 2,955,000 pph of flue gases at 275°F. Fuel oil firing will require 2,569,000 pph of air and will produce 3,031,000 pph of flue gas at 301°F.

Circulating water for Unit 5 condenser cooling will be provided from Agua Hedionda Lagoon at a minimum rate of 196,000 gpm at full load. This water will be raised by a maximum of 18°F and then conveyed into the discharge tunnel serving all units, where it will mix with the circulating water from Units 1, 2, 3, and 4, and be returned by a conduit under Carlsbad Boulevard and an across-the-beach discharge to the ocean.

Associated with Encina 5 are proposed additions to the existing transmission system emanating from the plant. A 230kv transmission line circuit is proposed to run in existing rights-of-way to serve Escondido, Old Town, and Mission substations. A detailed description of the proposed transmission line additions is contained in the Draft EIR, Vol. II at Tab 2, Sections 1-3 and Appendix B, Figure B-1.

The original capital cost estimates for the project were $4.6 million for the transmission facilities and $62 million for Encina 5. The estimated cost has now increased to about $91 million, a substantial portion of which cannot be recovered if the project is abandoned. SDG&E is financing this project from available funds or funds to be obtained from the sale of securities.

The Need for Additional Generating Capacity

By periodically adding generating capacity to its electric system to keep pace with growing peak loads, SDG&E provides reliable service to its customers. Capacity additions, since the startup of the San Onofre Nuclear Plant (Unit No. 1) in 1967, have consisted of cycling steam units, gas turbines, and participation in the Pacific Intertie for the purpose of importing purchased power.

Additional capacity of this type was planned through 1974, after which the addition of some economical base-load energy generating capacity was needed. Encina 5 was planned, as a resource addition, for operation in 1975.

According to SDG&E, studies of alternative resource additions for 1975 indicated that the most desirable unit among those available would be an oil fired steam unit, but designed for cycling operation later as nuclear and coal-fired units are installed and assume much of the generation load. Optimum capacity of the steam unit was determined to be about 300 MW net output.

The studies evaluated gas turbines, cycling steam units, high-efficiency steam units, and combined cycle units. Factors considered included the decreasing availability of natural gas, rising fuel oil prices, rapidly inflating construction costs, air and water quality criteria, and combustion technology of gas turbines and steam boilers. The selection of Encina 5 by SDG&E resulted from those studies.

The earlier record in this proceeding showed a need to place Encina 5 in operation in 1975. However, a new load forecast prepared by SDG&E reflecting the impact of energy conservation was included in Appendix C to the Final EIR issued in November 1974. That forecast indicated that Encina 5 could be delayed two years to May 1977 without seriously reducing system reliability.

As a result of the new lower load forecast, several other planned generation additions were either delayed or eliminated. According to SDG&E Encina 5 was delayed instead of eliminated for the same reasons it was selected originally: efficient use of fuel, low environmental impact, and ability to fit in well with the other system additions planned by SDG&E. In addition, there was a substantial investment already in the project.

At the further hearing held July 21, 1975, SDG&E and the staff presented evidence on the need for Encina 5 in light of their respective current load forecasts. These new forecasts reflect the effects of conservation and price increases on energy sales and peak demands better than the updated forecast employed in the Final EIR. In so doing, they also necessarily include the effects of whatever other factors are responsible for the departures from earlier forecasts since the Arab oil embargo.

The forecasts of peak demands on SDG&E's system placed in evidence at the earlier hearings, the one used in the Final EIR, and the current forecasts are compared below.

Year	Earlier Forecast by: SDG&E	Staff	Final EIR	Current Forecast by: SDG&E	Staff
			Peak Demands in Megawatts		
1975	2,090	2,050	1,764	1,605	1,690
1978	2,690		2,253	1,970	2,160
1979	2,920		2,436	2,132	2,200
1980	3,170		2,633	2,268	2,350
1981	3,450		2,805	2,403	2,480
1982	3,740	3,550	2,988		
1984				2,856	2,840

SDG&E's current load forecast was developed from an econometric model developed during 1973 and first applied in early 1974. The sales forecast produced by that model was reduced on the basis of short range information by 16.2 percent in response to reductions in usage since the Arab oil embargo, however. In SDG&E's judgment, those reductions were attributable initially to a desire to conserve by its customers, but later, as utility rates were increased, to the higher rates.

In the first few months of 1975 recorded sales exceeded SDG&E's forecast but not, in SDG&E's opinion, by significant margins. Also, some preliminary work has been carried out to update the econometric model, which, because it was developed in 1973, did not reflect either conservation or a recession. According to SDG&E the results thus far appear to be confirming its current sales forecast. In addition, in contrast to the experience of most other utilities, SDG&E has experienced an increase in load factors along with conservation.

The higher load factors were used in computing the peak demands, by applying them to forecasted sales adjusted for system losses, on the expectation that they would not revert to the lower levels experienced in the early 1970's. Thus, SDG&E's current forecast of peak demands is lower than its prior forecasts not only by virtue of the lower projected energy sales but also by virtue of the higher load factors applied.

The staff's current forecast of energy requirements was developed by estimating use per customer and the number of customers. The staff's estimate of average number of customers by years was based on past experience and on a population forecast for San Diego County by the State Department of Finance. In estimating use per customer, the staff gave consideration to actual experience from 1971 through four months of 1975 and applied judgment as to the effects of conservation efforts being made. Peak demands were based on the energy forecast together with an analysis of SDG&E's load factors. The staff's estimates of peak demand are higher for most years than SDG&E's current forecast.

Inherent in both forecasts, we believe, is a reflection of certain conservation measures not having a significant effect on growth in peak demand before the 1980's. Such longer term measures include home insulation programs, incentives for the use of solar energy, and the like. Similarly, price elasticity and peak load pricing, if the latter is eventually rendered feasible for broad use from, for example, a cost of metering standpoint, may turn out to be much more effective in inhibiting growth in energy sales and daily typical peak hour demand, respectively, than in reducing the rate of growth in the annual peak demand placed on the system in response to extreme weather conditions.

Accordingly, reliance on estimated peak demands through 1980 no lower than those forecast by SDG&E appears prudent in testing the need for the additional generating capacity represented by Encina 5; the peak demands estimated for 1978 and the years thereafter until the capacity of the San Onofre nuclear plant expansion and the Kaiparowits coal-fired power plant project starts becoming available, now expected in the early 1980's, are crucial for that purpose.

At the further hearing held July 21, 1975, SDG&E presented a revised resources additions program as part of its evidence on need for Encina 5. SDG&E has significantly reduced its plan for new generating capacity, and it has done so not only because of the revised load forecast reflecting new lower customer usage patterns but also because of much higher costs of new generating capacity. Those higher costs led to SDG&E's lowering its minimum reliability index criterion from 90 percent to 50 percent, which has the effect of lowering the generating capability required for a given load level. SDG&E's revised generation resource additions program is:

Planned Commercial Operating Date	Station and Unit	Type	Capability (Mw-Net)
Scheduled Units (1)			
May 1975	Naval Station GT 1	Gas Turbine	32
Mar 1978	Encina 5	Steam	292
Jun 1979	South Bay GT 2	Gas Turbine	64
Jun 1979	South Bay GT 3	Gas Turbine	64
Jul 1980	San Onofre 2 (Initial)	Nuclear	46
Jul 1981	San Onofre 2	Nuclear	175
Oct 1981	San Onofre 3 (Initial)	Nuclear	46
Oct 1982	San Onofre 3	Nuclear	175
Planned Units (1)			
Jun 1981	Kaiparowits 1	Steam-Coal	176
Jun 1982	Kaiparowits 2	Steam-Coal	175
Mar 1983	Kaiparowits 3	Steam-Coal	176
Dec 1983	Kaiparowits 4	Steam-Coal	175
Apr 1985	Sundesert 1	Nuclear	475

(1) Scheduled units are those for which application has been submitted to this Commission for a certificate of public convenience and necessity. Planned units are all others.

According to SDG&E's evidence presented at the further hearing, the reliability index will drop if Encina 5 is not available to 31 percent in 1978 and to 0.16 percent in 1980, thereby significantly reducing system reliability to the point where service interruptions caused by inadequate generating capacity would be almost certain if loads approach or exceed those forecasted.

The staff, in Exhibit 3(FH), presented at the further hearing, computed reserve margins, showed the effect on SDG&E's resources of various generation contingencies (multiple forced outages), and listed the forced outages experienced during the 1970-1974 period. In 1978, without Encina 5, SDG&E's total resources of 2,419 MW would, according to that exhibit, exceed the peak load of

2,160 MW estimated by the staff by 259 MW, which represents a 12.0 percent reserve margin. If the 287 MW Encina Unit No. 4 was lost through a forced outage at the time of 1978 estimated peak load, SDG&E would have a deficiency of 28 MW. An overlapping forced outage of a second major unit, either South Bay Unit No. 3 or No. 4, would result in an overall deficiency of more than 200 MW which is about 10 percent of peak demand.

If the two 64 MW gas turbines planned for commercial operation in 1979 were installed prior to the 1978 peak load, it would reduce the deficiencies by 128 megawatts. However, in the event of the above described double contingency, there would still be a deficiency of up to 120 MW or about six percent.

Multiple forced outages occur on SDG&E's system. For example, in December 1972, Encina Unit No. 1 was out for 34 hours, South Bay Unit No. 4 was out for 54 hours, and the unavailable capacity was 320 MW during an overlapping period of six hours. In June 1973, South Bay Unit No. 3 was out for 56 hours, Encina Unit No. 4 was out for 10 hours, and during the ten-hour overlapping period the total forced outage was 485 MW. In August 1973, there was an overlapping period of 16 hours of forced outage of Encina Units Nos. 1 and 4 representing 373 MW. In November 1973 Encina Unit No. 4 was out for 13 hours during a time San Onofre Unit No. 1 was out for about three months; the total forced outage was 373 MW for the overlapping period of 13 hours. Numerous other multiple contingencies, but involving smaller generation units, have occurred during the last five years.

Based on the peak load forecast prepared by the staff and the foregoing assessments of SDG&E's exposure to various generation contingencies, the staff witness concluded that SDG&E must add 300 MW of generation capability in 1978 in order to provide reserve margins needed for reliable electric service.

A determination of need for additional generating capacity necessarily extends in some respects beyond fixing the time frame in which the addition is required. In this regard Encina 5 has some important advantages in that it would provide a cushion in the event of further delays in the San Onofre and Kaiparowits projects and make possible a fuel oil savings on the order of 600,000 barrels per year, equivalent to $9 million per year using $15 per barrel oil, while concomitantly reducing total stack emissions by SDG&E's power plants in the San Diego Air Basin. As would thus be expected, the Encina 5 project is supported by the Federal Energy Agency.

Finally, Encina 5, if built, would continue to be needed after the San Onofre and Kaiparowits units are placed in commercial operation. It would be used, as appropriate, to provide capacity to meet projected growth, to increase the efficiency of SDG&E's system so that fuel oil requirements can be reduced, and to permit the retirement of older, less efficient units in due course.

Need For Associated Transmission

There is a need to connect Encina 5 to the integrated transmission system so that its output can be transmitted to major bulk power supply substations within the SDG&E service area. The need to construct these lines to handle anticipated near term needs in the Encina-Escondido and Encina-Old Town transmission corridors is set forth in the EIR.

In addition to connecting Encina 5 to the transmission system, the new transmission circuits will reinforce the power supply to the Escondido, Mission, and Old Town Substations, limit to four the number of double circuit transmission structures leaving the Encina plant, and provide 230kv transmission that is compatible with the long range system expansion contemplated by SDG&E.

Encina will add approximately 290 megawatts of additional capacity to the Encina power plant. Except for maintenance periods, the unit will operate at a high load level. Without the proposed additional transmission lines, the existing transmission facilities will be unable to transmit this needed additional power. This is set forth in the Draft EIR, Vol. II, Tab 2, Sections 1.2, 1.3, and 1.4, and is included in the Final EIR by reference.

Alternative Types of Generation

The Final EIR contains the following discussion of alternatives to Encina 5. Pushing back the required operation of Encina 5 from 1977 to 1978, it should be noted, does not affect its conclusions as to the viability of alternatives.

> "1. Alternatives to Encina Unit No. 5 are discussed in the following paragraphs. The environmental impacts and the effects on the operation of the utility's system of these various alternatives are set forth in the Draft EIR in Vol. I, Tab 2, Sections 1.2.3, 7.3, 7.4.2, 7.4.3, 7.4.4, 7.4.5 and pages 7.4-5 through 7.4-13, Tab 13, pages 144-2 and 144-7.
>
> Alternative of a Combined Cycle Unit
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> 2. Combined cycle units involve a relatively new method for commercial generation of electricity - the combination of a gas turbine cycle and a steam cycle. Combined cycle units offer the possibilities of higher efficiencies, lower exhaust emissions, and reduced cooling water requirements compared to conventional steam units. For this reason the staff sent three data requests to SDG&E requesting supplemental information beyond that provided in the utility's EDS.
>
> Atmospheric Emissions
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> 3. A comparison of atmospheric emissions between Encina Unit 5 and a combined cycle unit assuming fuel for Encina 5 to be 0.5%S residual oil and for a combined cycle unit to be 0.3%S distillate oil is as follows:

	NO_x (ppm)	NO_x (lb/mw-hr)	SO_2 (lb/mw-hr)
Encina 5	225	2.85	5.06
Combined Cycle	225	2.60	2.70

Data are for full load operation. NO_x emissions are seen to be comparable for both types of generation. SO_2 emissions are higher for Encina Unit 5, but approximately in proportion to the sulfur content of the fuel. If distillate fuel were used in Encina Unit 5, the staff feels SO_2 emissions would be close to those of a combined cycle unit, differing only by the fuel consumption required per mw-hr of electricity generated.

Cooling Water

4. A combined cycle unit would require approximately half as much cooling water and discharge half as much heat to the ocean as Encina 5. The impact on marine life would be correspondingly reduced. This reduction is due to the fact that about half the power generated in combined cycle unit is generated by gas turbines requiring no cooling water.

Type of Fuel

5. Additional storage tanks for distillate fuel would be needed if a combined cycle unit were to be built. Combined cycle units cannot burn the residual oil currently used in the existing Encina power plant. Research is under way on equipment to treat residual oil to make it suitable for combined cycle use, but is not ready for commercial application. Combined cycle units are more restricted in their fuels than steam units. Distillate fuel is also more costly.

Aesthetic Impact

6. There would be little difference in aesthetic impact between Encina Unit No. 5 and a combined cycle unit. The plant building would be a little longer, but overall the building would look much the same. The 400-foot MSL stack would still have to be built to meet ambient air quality standards. Additional fuel storage tanks for distillate fuel would be built, but they could be largely below grade and out of sight.

7. SDG&E studied a combined cycle unit alternative carefully before the decision was made to build a steam unit. Generating projects require planning and contractual commitments years in advance of the operational date. At the time commitments were made to satisfy its future capacity requirements, a combined cycle unit was not a feasible alternative due to many factors including uncertainty about emissions, lack of sufficient operating experience, and lack of data on operating and maintenance expenses. If the project were now changed to a combined cycle project, over $21 million in sunk costs for Encina Unit 5 would be incurred, plus substantial unknown costs for preparation of new applications for regulatory approvals and additional environmental studies. In addition, there would be substantial delay in completing the project resulting in an adverse impact on system reliability. The main advantage of a combined cycle unit in this case would be reduced thermal discharge to the ocean. This advantage is offset by disadvantages of restrictions on the type of fuel that can be burned, increased project capital cost, increased operating and maintenance expenses, potential problems with availability of the unit, inability to place the alternative in service in time to meet the capacity requirements of San Diego Gas & Electric Company in the 1977 time frame.

Alternative of Purchased Power

8. This alternative is not feasible as discussed in the Draft EIR and by witness Nesbitt who indicated that sufficient generating capacity could not be purchased for an extended period from any of the utilities with capacity available for the SDG&E Company system.

Gas Turbine Alternative

9. Gas turbine units could be constructed in time to provide capacity for the proposed time frame but cannot be considered as an alternative because of system reliability requirements. Unit 5 is intended to be a base-load generating unit, designed to operate continuously at a high load level to provide the bulk of the utility's energy generation. Also, distillate fuel oil that must be burned by gas turbine units is more expensive than low sulfur residual fuel oil that Unit 5 will burn.

Nuclear Alternative

10. This alternative is not practical because of the extended time required for design, certification and construction of a nuclear project compared with the time frame in which new capacity is needed.

Hydroelectric and Pumped Storage Hydroelectric

11. Limited rainfall in San Diego County precludes the development of stream flow hydroelectric facilities in the county. Pumped storage hydroelectric, designed to operate for a limited amount of time each day cannot be considered to be an alternative to Encina Unit 5.

Geothermal Power

12. Geothermal steam, where it is available in sufficient quantity and quality is a commercially feasible source of capacity but it can be utilized only at its source. SDG&E Company is participating in developing a small scale geothermal demonstration plant in the Imperial Valley but a substantial source of capacity would not be available to meet requirements in the time required.

Other Forms of Energy Considered as an Alternative

13. Other generation sources considered by the utility are (a) Tidal Energy, (b) Fast-Breeder Reactor, (c) Nuclear Fusion, (d) Geostatic Satellites, (e) Solar Farms, and (f) Fuel Cells. None of these forms of capacity are considered to be technically feasible at this time. They require greater development and cannot be considered as alternatives within the time frame proposed for installation of Encina 5."

The above evaluations do not cover a combined-cycle unit at an inland site, specifically at Sycamore Canyon. The record is quite clear, however, that resurrecting the Sycamore Canyon combined-cycle project is not a viable alternative to Encina 5 because of time constraints, so much so that not even the regulatory approvals for that project, including its evaluation under the EIR process, would likely be obtainable by 1978. After that, two or three years would be required to build the plant. Irrespective of the time constraints, a Sycamore Canyon unit would not compare favorably with Encina 5. It would cost $200 million more, establish a new power plant site, and probably require the opening of new transmission corridors.

Environmental Matters

A comprehensive record on environmental matters has been developed in this proceeding through public hearings, preparation of the Draft EIR, consultation with public agencies, and presentation of expert testimony and exhibits by various parties, all of which are elements in the EIR process culminating in the preparation and issuance of the Final EIR.

The next section of this decision includes, pursuant Rule 17.1 of our rules of practice, an extensive series of findings, Nos. 12 through 72, based on the Final EIR's coverage of (a) The environmental impact of the proposed action, (b) Any adverse environmental effects which cannot be avoided if the proposal is implemented, (c) Mitigation measures proposed to minimize the impact, (d) Alternatives to the proposed action, (e) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, (f) Any irreversible environmental changes which would be involved in the proposed action should it be implemented, and (g) The growth-inducing impact of the action.

Findings of Fact

NEED FOR PROJECT

1. To maintain reliable electric service, SDG&E must add generating capacity to its system on a timely basis.

2. Encina 5 is an important part of SDG&E's resource addition program.

3. Reliance on estimated peak demands through 1980 no lower than those forecast by SDG&E appears prudent in planning generation resource additions.

4. In testing the need for the additional generating capacity of about 300 MW represented by Encina 5, the crucial peak demands are the ones estimated for 1978 and the several years thereafter until the capacity of the San Onofre nuclear plant expansion and the Kaiparowits coal-fired power plant project, now expected in the early 1980's, starts becoming available.

5. During that crucial period, the unavailability of the capacity represented by Encina 5 would significantly reduce system reliability to the point where service interruptions caused by inadequate generating capacity would be almost certain if peak loads approach or exceed those forecasted.

6. SDG&E must add about 300 MW of generation capability in 1978 in order to provide reserve margins needed for reliable service.

7. Other than Encina 5 only a gas turbine alternative can be constructed and placed in commercial operation by 1978.

8. Encina 5 has base-load capability and is preferred over gas turbine peaking units from the standpoints of system reliability, operating costs, and fuel conservation.

9.a. New transmission circuits are needed to connect Encina 5 to the integrated transmission system.

b. The proposed new transmission circuits will reinforce the power supply to the Escondido, Mission, and Old Town Substations, limit to four the number of double circuit transmission structures leaving the Encina plant, and provide 230kv transmission that is compatible with the long-range system expansion contemplated by SDG&E.

10. SDG&E has the ability to finance the construction of Encina 5, and the associated transmission facilities.

11. After reviewing the exceptions and replies to exceptions to the Final EIR and the evidence on need for the project presented at the further hearing held on July 21, 1975, the Commission has determined that the Final EIR should be considered either modified or clarified, as appropriate, in the following respects:

(a) The need for the project has been moved back by one year (from 1977, as specified in the Final EIR, to 1978) consistent with the new lower load forecasts and Finding 6 above.

(b) The statement in the Final EIR with reference to flue gas desulfurization at page 5-11, paragraph 29, last sentence, reading "There are no commercially proven scrubbing systems for SO_2 removal appropriate for use in Encina 5 at this time" could be misleading. To recognize the potential to further control emissions by use of scrubbing systems, that sentence should be changed to read: "Scrubbing systems for SO_2 removal, although adding to plant costs and operating problems, have been applied commercially at coal-fired plants in the United States and oil-fired plants in Japan and therefore have potential application at Encina 5 should available fuel supplies change or should they become necessary to protect air quality."

(c) A statement in the Final EIR with regard to the impact on plankton of an offshore discharge, as an alternative cooling system to the across-the-beach discharge, at page 8-6, paragraph 22, second sentence reads: "The kinds of impact due to entrainment will be about the same whether the discharge of heated water is across-the-beach or through an offshore conduit." The quoted sentence is imprecise in that it fails to recognize the longer exposure time inherent to an offshore conduit and the probable effect on plankton mortality of such longer exposure times. Accordingly, paragraph 22 is deemed modified to reflect the fact that greater plankton mortality will be expected with an offshore type of system.

(d) In paragraph 10 of Chapter 14 of the Final EIR, there is a recommendation "that the project be designed and constructed to accommodate either an offshore discharge or closed cycle system for receipt of condenser cooling water." This recommendation should be construed as requiring sufficient flexibility in the design and construction of the project to accommodate whichever cooling water system, inclusive of the across-the-beach discharge system proposed by SDG&E, is eventually required by agencies having jurisdiction by law.

The Commission has carefully considered the evidence on environmental matters, especially the contents of the Final EIR, and makes Findings 12 through 72 pursuant to Rule 17.1(j)(3) of its Rules of Practice and Procedure.

ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

(a) Impact of Site Preparation and Construction

12. Site preparation will result in some minor impact upon terrain, vegetation, and wildlife. Construction of Encina 5 will require excavation for the boiler/turbine room and construction of service roads and material staging areas. Approximately 75,000 cubic yards of excavation tailings will be trucked away from the site to local residential and industrial developments for land fill. There will be no on-site burning and little, if any, clearing of natural vegetation at the site. The predominant birds and mammals of the area will not be significantly disturbed by site preparation.

13. The increased work force and vehicle traffic resulting from construction of Encina 5 will have only a slight effect on the human activities in the Encina area. Some dust will be developed during excavation and scraping of the site. The municipal water supply for the city of Carlsbad is adequate for the construction workers, and the local water supply for residents will not be affected by construction activity. Sewage and garbage disposal from the site will not affect other residents in the construction vicinity as chemical toilets will be provided in the construction area for workers. There will be unavoidable temporary environmental impacts at the site resulting from construction of Encina 5. However, these impacts will be relatively minor and of relatively short duration.

14. Construction of the transmission lines will result in some short-term impacts due to the construction activities necessary to build the lines. SDG&E will give special consideration in the design process to access roads, structure sites,and set-up areas. Grading requirements will be minimized and where grading is required the impact upon the land will be minimized due to good planning and restoration of grading areas after construction by recontouring and replanting. New access roads will, wherever possible, serve as required maintenance roads. In addition, applicant will consider the use of helicopters to erect structures and string conductors in areas where topographic conditions severely restrict access.

(b) Environmental Impact Upon Air Quality

15.a. The sulfur dioxide emissions from Encina 5 will comply with standards established by the United States Environmental Protection Agency and the San Diego Air Pollution Control District if low sulfur fuel is used in the unit. SDG&E anticipates it will have adequate supplies of low sulfur fuel for the next several years.

b. Although operation of Encina 5 will result in an increase in the amount of SO_2 emitted into the atmosphere from the Encina plant, the relative efficiency of this unit, as compared with other units on the applicant's system, will result in a net decrease in SO_2 systemwide emissions.

16. Encina 5 will emit nitrogen oxides into the air during operation. The unit will comply, however, with both the EPA and the SDAPCD nitrogen oxide emission standards for new sources.

17. Encina 5 will emit particulate matter into the air surrounding the Encina site. The particulate emissions from operation of Encina 5 will meet EPA standards for new sources, and will be less than the emissions allowable under SDAPCD rules. To the extent that Encina 5 replaces older, less efficient units on the system, total particulate emissions would be reduced.

18. Operation of Encina 5 will contribute to the sulfur dioxide concentrations in the ambient air surrounding the Encina site. With the construction of a 400-foot MSL stack and the burning of .5 percent low sulfur oil, the maximum ground level ambient concentrations of sulfur dioxide are expected to be within both the State and federal standards.

19. The calculated maximum ambient concentration of nitrogen dioxide in the air surrounding the Encina site due to the Encina plant emissions, with the addition of Encina 5 will comply with both the EPA and the California Air Resources Board standards. With the addition of the 400-foot MSL stack, the calculated maximum ground level ambient concentrations of NO_x from the Encina power plant will be significantly lower than ARB or EPA standards.

20. Operation of Encina 5 will result in the discharge of particulate matter into the atmosphere. The calculated maximum ambient concentration of particulates due to the emissions from the Encina plant, with a 400-foot MSL stack, will not exceed either the federal EPA or the State Standards. Furthermore, the addition of Encina 5 to applicant's system will result in a net decrease in the particulate emissions within the San Diego Air Basin contributed by the SDG&E system.

21. Although operation of Encina 5 will result in the discharge of some carbon monoxide, the calculated maximum ambient concentrations of carbon monoxide due to Encina plant emissions will be negligible.

22. Ambient oxidant concentrations at the Oceanside monitoring station frequently exceed the State standard. (One possible explanation for this are the land-sea breezes which bring oxidants from the South Coast Air Basin.) However, there is no evidence in this record to indicate the operation of Encina 5 will result in any increase in the ambient level of oxidants in the air surrounding the Encina site.

(c) Environmental Impact Upon Water Quality

23.a. SDG&E's proposal for Encina 5 is that the cooling water be discharged into the surf at the shoreline. This has been referred to in these proceedings as the across-the-beach or surface jet discharge method. It is the method currently in use at the Encina power plant.

b. The species of kelp offshore from the plant site are common along the entire West Coast and the amount of such kelp in the area of possible impact of the discharge plume is not great.

c. It is likely there will be some environmental impact resulting from the discharge of all five Encina units upon the kelp beds existing offshore at the Encina site. However, it is impossible to predetermine what will happen to the kelp bed when the discharge flow is increased with the addition of Encina 5.

24. There is an element of uncertainty involved in making predictions of the impact on fish as a result of plankton mortality. However, it is probable that the impact upon the plankton community of the operation of Encina Units 1 through 5, using an across-the-beach method of discharge, will result in a maximum possible adverse impact of 320 pounds per day of decreased fish production, assuming a 100 percent kill of zooplankton.

25. The increased flow resulting from the addition of Encina 5 to the existing discharge at the Encina site will adversely affect certain organisms in the intertidal sand beach community within about a 7-acre area. There will be some impact upon the bean clams while the sand crabs will be unaffected. Significant adverse effects to marine organisms will occur only in the area near the point of discharge.

26. There are two intertidal rock jetty communities near the Encina 5. These are the jetty and riprap of the intake and the discharge channels. There will be little or no thermal impact on the intake jetty as a result of the increase in discharge flow. The discharge jetty community is directly affected by the normal elevated discharge temperatures and the heat treatment discharge. These variables will decrease the number of species in this community.

27. There will be no impact upon the benthic community as a result of the addition of Encina 5 other than minor second order impacts that would result from an indirect effect, such as from an increase or decrease of food supply from entrained organisms.

28. Compounding conservative assumptions of high tide, high current speed, and full plant load, the impact upon Agua Hedionda Lagoon resulting from the increased discharge flow resulting from the addition of Encina 5 will be an increase in the lagoon temperature by as much as $5^{\circ}F$ for short periods of time. This infrequent incremental temperature rise in the lagoon, resulting from the coincidental occurrence of these assumed factors, is not expected to result in any significant impact upon marine species in the lagoon.

(d) Visual Impacts

29. Encina 5 will require a building structure larger than that required for any of the existing four units. To minimize the visual impact resulting from the construction of Encina 5, SDG&E will lower the basement of Encina 5 to make the proposed unit the same height as the existing four units, then continue the walls of the existing building to join with Encina 5 and thereby provide the appearance of a single 750-foot building with a continuous roofline.

30. Applicant has proposed a landscaping program for the Encina site under the guidance of a landscape architect. Although some structures within the Encina plant will still be visible from Interstate Highway 5, the trees, bushes, and various plantings will help conceal the plant and lessen the visual impact resulting from plant construction.

31. There will be some visual impact resulting from placement of the 400-foot stack approximately midway along the 750-foot structure. The stack is required to adequately disperse the flue gases of the Encina units. It will rise 242 feet above the roof and replace the existing four stacks, which presently rise 50 feet above the roof of the structure. The Carlsbad City Council approved the 400-foot stack as proposed with certain conditions on November 21, 1973. This approval followed, and was based upon, consideration of an environmental impact report prepared for the City dealing with the aesthetic impact of the stack.

32. The placement of the proposed transmission poles and lines will have some visual impact. However, the placement of the poles and lines through proper routing and the use of aesthetically pleasing poles will lessen the impact.

(e) Environmental Impact Upon the Historical and Archaeological Environment

33. The construction and operation of Encina 5 will not have any adverse impact upon archaeological resources in the vicinity.

34. Construction and operation of Encina 5 will have no impact upon the historical resources of the Encina site and vicinity. The closest historical resource to the Encina plant is Mission San Luis Rey, which is approximately 6-1/2 miles from the power plant site.

35. The possibility exists that proposed construction within the transmission corridors may come in contact with some areas of archaeological and historical interest. If that should happen, SDG&E's transmission construction program will insure the protection of any archaeological and historical sites along and within the transmission corridors.

(f) Other Environmental Impacts

36. Construction and operation of Encina 5 will result in some added noise in the vicinity of the Encina plant. Even under the most adverse conditions, however, noise emanating from the plant is not expected to exceed federal standards. In addition, enclosing Encina 5 will reduce the noise emanating from that plant and will result in ambient noise levels being increased only slightly.

37. There is expected to be no adverse environmental impact resulting from discharge of sanitary waste material, waste waters from the regeneration and dealkalizers and condensent polishers, and chromate waste. Oil will be unloaded at the offshore terminal and could present an environmental problem in the event of an accident.

38. There is expected to be some noise impact resulting from the operation of the proposed transmission lines. However, the audio noise produced by them is expected to be minimal, and the worst case value for radio interference noise is expected to be slight.

39. Construction and operation of Encina 5 will result in a minor amount of land being taken for the plant site, and thus unavailable for other uses.

40. SDG&E selected the transmission route which was deemed by its consultants to be the best available route. The determination that the selected route was the best available was predicated upon inflicting the least potential environmental impact. Because no new transmission corridors are required, the impact of construction of these lines upon existing land use is negligible.

ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED

41. Certain unavoidable adverse environmental impacts will result from construction and operation of Encina 5. These adverse environmental impacts are as follows:

(a) Operation of Encina Unit 5 will contribute some amounts of SO_2, NO_x, and certain particulates to the ambient air in the vicinity of the Encina plant. The release of these pollutants is an unavoidable impact resulting from burning fuel at high temperatures.

(b) Adverse environmental impacts will result from the discharge of heated cooling water. This heated cooling water will have some adverse environmental impact upon the kelp bed offshore of the Encina site. In addition, there may occur some adverse impacts upon plankton, fish eggs, larvae and juvenile fishes and those species that exist within the intertidal sand beach community.

(c) Some unavoidable aesthetic impact will result from plant construction. The extension of the Encina plant to include proposed Unit No. 5, and the proposed 400-foot MSL stack, will have some adverse impact upon the environment.

(d) Operation of Encina 5 will contribute a negligible amount of noise to the ambient noise levels in the vicinity of the Encina plant.

(e) Encina 5 is to be constructed upon land which is zoned for public utility use and cannot be used for any other purpose. This environmental impact is negligible, however, because of the small area required for Encina 5.

42. Construction and operation of the proposed transmission lines will have some adverse aesthetic and noise impact.

MITIGATION MEASURES PROPOSED TO MINIMIZE THE IMPACT

43. During site preparation dust dispersion resulting from excavation and scraping of the site will be minimized by spraying water on traffic paths used by earth moving equipment. In addition, chemical toilets will be provided in the construction area for workers. Construction waste materials will be trucked to a San Diego County landfill area, and no on-site burning will occur at the Encina plant site.

44. The noise produced by the operation of the proposed Encina 5 will be mitigated by enclosing the plant.

45. The aesthetic impact of Encina 5 will be lessened through use of an aesthetically sound building design. Applicant will lower the basement of Encina Unit No. 5 to reduce the difference in height between the proposed unit and the existing building, and the walls of the existing building will be continued to join with Encina Unit No. 5 and provide the appearance of a single building with a continuous roofline which will have less visual impact than a separate building structure. In addition, the height of the Encina plant building will be raised 24 feet to hide the duct work required to tie the units into the 400-foot stack.

46. The aesthetic impact of Encina 5 will be mitigated through sound landscaping practices. SDG&E's landscaping proposal, as approved by the Carlsbad Planning Commission, will help to minimize the visual impact resulting from plant placement.

47. The impact upon the air quality surrounding the Encina site from operation of Encina 5 is to be mitigated through the use of low sulfur fuels, the construction of a 400-foot stack to disperse the pollutants, and the adoption of a boiler design to minimize the production of pollutants.

48.a. To mitigate the impact of the cooling water discharge upon the marine biota, a condenser design and dilution system is proposed that will insure that the outfall water will not exceed 20° above the temperature of the receiving water.

b. Pending the outcome of pertinent final regulations, in response to the provisions of the 1975 amendments to the Federal Water Pollution Control Act, which are to be implemented by EPA regulations and are the subject of litigation, there is considerable doubt as to what cooling water discharge will be ultimately employed by Encina 5.

c. In the interim the action taken by the State Water Resources Control Board, under Resolution No. 73-55, provides for, among other things, "The discharger should proceed with the design of Unit 5 such that cooling water from the entire Encina complex, Units 1 through 5, may be directed to an ocean outfall if an outfall later is found to be necessary..."

d. In due course the Regional Water Quality Control Board, the State Water Resources Control Board, and the federal government, through the Environmental Protection Agency, will determine the environmentally acceptable method of discharge of cooling water for Encina 5 including any necessary conditions to be imposed to preclude placing an unreasonable burden on the marine environment.

49. The impact of the circulating water system upon the marine biota will be further mitigated by the use of an intake filtration system which will filter out the larger organisms and fish.

50. SDG&E will mitigate the adverse visual impact of the transmission facilities through proper placement of the transmission structures, through the use of steel poles rather than towers in certain areas, through the use of existing rights-of-way, and through the use of structures colored to blend with their backgrounds.

51. SDG&E will mitigate possible transmission line construction impacts upon potential sites of archaeological and historic value. This will be achieved by utilizing the services of a professional archaeologist, locating the towers away from possible sites, excavating under the supervision of the archaeologists, and not publicizing discovered site locations.

ALTERNATIVES TO THE PROPOSED ACTION

(a) Alternative Types of Generation

52.a. In the event of "no Project" as an alternative, SDG&E would attempt to generate sufficient power for its system needs by utilizing other resources on its system. In this event, its system would consume substantially greater quantities of fuel oil than it would if Encina 5 were in operation. This would result in an increased amount of air pollutants discharged into the atmosphere.

b. To the extent that the power which Encina 5 would provide could not be generated by other units on SDG&E's system, electrical service would have to be interrupted. Such an interruption could have substantial environmental and social impacts.

c. Substantial money already spent for engineering, equipment, and material for Encina 5 would be lost.

53.a. A combined cycle unit at the Encina site is not a feasible alternative to Encina 5 because there is insufficient time to design and construct a combined cycle unit to service SDG&E's customers when the new unit will be needed. Furthermore, construction of a combined cycle unit at this time would result in incurring significant additional costs. Although the combined cycle alternative offers certain environmental benefits over proposed Encina 5, many of the benefits are because a combined cycle unit would have to burn a distillate fuel.

b. Resurrecting the Sycamore Canyon combined-cycle project is not a viable alternative to Encina 5 also because of time constraints.

54. Purchased power is not an alternative to proposed Encina 5 because sufficient generating capacity could not be purchased for an extended period from any of the utilities adjacent to SDG&E's system.

55. Gas turbine units could be constructed and be in operation in time to provide the needed capacity in 1978. Gas turbine units, however, are less efficient, burn distillate fuel which is more expensive than the low sulfur residual fuel oil that steam plants burn, and are not suitable for generation in either the base load or intermediate capacity factor ranges. For these reasons gas turbine units are not a viable alternative to Encina 5.

56. Nuclear power cannot be considered an alternative to Encina 5 because of the lead time required for construction of such a unit.

57. Limited rainfall in San Diego County precludes the development of stream flow hydroelectric facilities in the county. Pumped storage hydroelectric, designed to operate for a limited amount of time each day, cannot be considered to be an alternative to Encina Unit 5. Geothermal power generation, fast breeder reactor generation, nuclear fusion, solar farms, and fuel cells cannot be considered as alternatives to the construction and operation of Encina 5 because the costs involved and the lack of experience in their use as well as the time frame restrictions limit their applicability.

(b) Alternate Cooling Systems

58. An offshore conduit discharge is an alternate cooling system to SDG&E's proposed across-the-beach discharge. The cost of such a system to handle the cooling water from Encina 5 only is estimated to be $18.5 million and construction of the discharge conduit would require approximately 22 months. There are environmental benefits and drawbacks to an offshore discharge which, on balance, suggest that such a system would be somewhat preferable from the point of view of providing protection to the existing environmental setting. However, the prohibitive cost of such a system weighs heavily against its use absent a determination that SDG&E's proposed across-the-beach discharge would place an unreasonable burden on the marine environment.

59. Closed cycle cooling systems (cooling towers and cooling ponds) would be more costly than other alternatives and require longer construction times; they would also have greater adverse environmental impacts than the across-the-beach discharge.

60. Either the State Water Resources Control Board or the Federal Environmental Protection Agency may require that an alternative cooling system be adopted. Accordingly, prudence requires that the proposed unit be designed and constructed in such a way that if it becomes necessary to install an offshore discharge or a closed cycle cooling system, it will be possible to do so.

(c) Air Pollution Control Alternatives

61. SO_2 removal systems and mechanical means of controlling particulate emissions would be aesthetically displeasing, costly, and of dubious effectiveness and therefore are not considered to be alternatives at present to the proposed SO_2, NO_x, and particulate control features, including the use of low sulfur fuel, of Encina 5.

62. There is no feasible alternative at present to the proposed 400-foot stack, which would reliably meet air quality standards, except a still taller stack.

(d) Other Engineering Alternatives

63. SDG&E and its consultants considered a higher seismic design criteria for Encina 5. However, a review of the seismic history of the area and the reports of SDG&E's consultants indicate that the chosen design is reasonable.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

64. The only irreversible and long term impact of Encina 5 would be the consumption of fossil fuel. Short term effects would be the impact on air quality, the impact on marine biota, and the temporary effects resulting from plantconstruction. All of these impacts are addressed more fully in the foregoing findings. Balanced against these environmental effects are SDG&E's obligation to provide needed electric energy in its service territory and the adverse impacts, both social and environmental, of any failure to do so.

65. The only short-term use of the environment involved in construction and operation of the proposed transmission lines is in the use of land in the transmission line corridors. Balanced against this short-term use are the energy needs of SDG&E's customers in the southern California area.

IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IF THE PROPOSED ACTION SHOULD BE IMPLEMENTED

66. The only irreversible environmental effect of the proposed construction and operation of Encina 5 is the irretrievable and unavoidable consumption of fossil fuel. However, Encina 5 is a very efficient unit and if the power to be generated by it had instead to be generated by applicant's other less efficient units, the

fossil fuel consumption would be even greater. There may be an irretrievable loss of some of the existing kelp offshore of the Encina site and the possible loss of plankton organisms due to entrainment. However, the kelp species offshore from the site are common to the California shoreline and the recovery time for such species, after cessation of the cooling water discharge, is two to four years.

67. There are no irreversible environmental changes involved in the construction and operation of SDG&E's proposed transmission lines.

GROWTH INDUCING IMPACT OF THE PROPOSED ACTION

68. Construction and operation of Encina 5 will have some minimal growth inducing impact resulting from the addition of 500 construction employees during construction of the unit and 5 to 10 permanent employees for operation of the Encina plant. These permanent employees will presumably live in the area and to that extent there will be some growth. In addition, there may be some secondary effects resulting from the impact of the additional property taxes and new employees' salaries on the local economy.

69.a. The need to build Encina 5 in order to provide reliable electric service is a response to anticipated growth in SDG&E's territory.

b. Encina 5, as a generating resource in an integrated system, can affect growth in SDG&E's service territory to some extent in the sense that reliable electric service is a factor. However, growth causation obviously involves more direct factors such as zoning and the attractions of climate and economic opportunity.

c. Without additional generating capacity, reliable electric service could not be maintained, even for present customers, as new customers are added and sufficient load growth occurs. In that event SDG&E would not meet one of its fundamental public utility obligations.

70. The 230kv transmission lines associated with Encina 5 are being constructed to meet expected electrical demand, not to create any increased demand.

ENVIRONMENTAL ASSESSMENT IN THE AGGREGATE

71. In summary, the project should not, on balance, have a significant effect on the environment:

(a) Air Quality - Compliance will be made with standards for emissions established by the United States Environmental Protection Agency (EPA) and San Diego Air Pollution Control District; compliance will be made with ambient air quality standards established by EPA and California Air Resources Board.

Furthermore, maximum ground level concentrations of air contaminants in Carlsbad and vicinity are expected to be less with the proposed 400-foot stack in use for Encina Unit Nos. 1 to 5 than without it for existing Encina Unit Nos. 1 to 4. Also, total emissions by SDG&E's power plants into the San Diego Air Basin are potentially less with Encina 5 available, i.e., Encina 5 will displace generation by less efficient basin units.

(b) Water Quality - To preclude placing any unreasonable burden on the marine environment, the Regional Water Quality Control Board, the State Water Resources Control Board and the federal government, through the EPA, will determine an environmentally acceptable cooling water system for Encina 5.

(c) Land Use - Encina 5 will expand and make greater use of an existing power plant site. As contrasted with establishing a new site, this expansion will require minimal new transmission, parking, and other related facilities.

(d) Other - The visual impact of the 400-foot stack, although undesirable, is acceptable in light of its dispersion function. Although contributing to fuel conservation in SDG&E's total operations, fuel consumption in the operation of relatively efficient Encina 5 will be an irretrievable commitment of a non-renewable resource.

72. In conformance with General Order No. 131, the construction and operation of Encina 5 and related transmission facilities:

(a) Is reasonably required to meet area demands for present and/or future reliable and economic electric service; and

(b) Will not produce an unreasonable burden on natural resources, aesthetics of the area in which the proposed facilities are to be located, community values, public health and safety, air and water quality in the vicinity, or parks, recreational and scenic areas, or historic sites and buildings, or archaeological sites.

73. The project will help maintain reliable electric service from an integrated system serving a substantial part of southern California; its benefits thus outweigh any minor environmental impact possible; its planned construction and operation is an economic, efficient, and appropriate means of providing this needed capacity by early 1978.

74. Present and future public convenience and necessity will require the construction and operation of the Encina 5 generation and transmission project.

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

The Notice of Determination for the project is attached as Appendix A to this decision, and the Commission certifies that the Final EIR has been completed in compliance with CEQA and the Guidelines and that it has reviewed and considered the information contained in the EIR.

Based on the foregoing findings the Commission concludes that the Encina 5 generation and transmission project should be authorized in the manner and to the extent set forth in the following order.

O R D E R

IT IS ORDERED that:

1. A certificate of public convenience and necessity is granted to San Diego Gas & Electric Company to construct and operate (1) a new steam electric generating Unit No. 5 at its Encina power plant, together with a 230kv substation and other appurtenances, (2) a 230kv transmission circuit from the Encina power plant to the Escondido Substation, (3) a 230kv transmission circuit from the Encina power plant to the Old Town Substation, and (4) two 230kv transmission circuits from Old Town to Mission Substation, all as proposed by San Diego Gas & Electric Company in this proceeding.

2. In the design and construction of Encina Unit No. 5, San Diego Gas & Electric Company is also authorized to make a provision for the installation of an offshore cooling water discharge for Encina Unit 5, which may be required by other governmental agencies having jurisdiction by law.

The Secretary of the Commission is directed to file a Notice of Determination for the project, with contents as set forth in Appendix A to this decision, with the Secretary for Resources.

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

Dated at San Francisco, California, this 7th day of OCTOBER, 1975.

President

Commissioners

A.53369

APPENDIX A

NOTICE OF DETERMINATION

TO: [X] Secretary for Resources
1416 Ninth Street, Room 1311
Sacramento, California 95814

FROM: (Lead Agency)
California Public Utilities Commission
350 McAllister Street
San Francisco, CA 94102

[ ] County Clerk
County of _____

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code

Project Title Encina Unit No. 5 Power Plant and Associated 230kv Transmission Lines
State Clearinghouse Number (If submitted to State Clearinghouse) 73092417
Contact Person: William R. Johnson — Telephone Number: 415-557-1487
Project Location Carlsbad, DelMar, Escondido, and San Diego
Project Description Application by San Diego Gas & Electric Co. to California Public Utilities Commission for a certificate to construct Unit No. 5, a new 292 MW steam-electric generating unit at Encina Power Plant in Carlsbad and to construct 230kv transmission lines from the plant to Escondido and Old Town Substations and from Old Town Substation to Mission Substation.

This is to advise that the California Public Utilities Commission (Lead Agency) has made the following determinations regarding the above described project:

1. The project has been [X] approved [ ] disapproved by the Lead Agency.

2. The project [ ] will [X] will not have a significant effect on the environment. (See Decision No. attached.)

3. [X] An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.

[ ] A Negative Declaration was prepared for this project pursuant to the provisions of CEQA. A copy of the Negative Declaration is attached.

Date Received for Filing

Signature William R. Johnson

Title Secretary

Date