

ORIGINAL

Decision No. 67096

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of  
 SOUTHERN CALIFORNIA EDISON COMPANY for  
 a certificate that present and future  
 public convenience and necessity  
 require or will require the construction  
 and operation by applicant of a new  
 steam electric generating unit, to be  
 known as Unit No. 6, at its ALAMITOS  
 STEAM STATION, together with other  
 appurtenances to be used in connection  
 with said station.

Application No. 46208  
 (Filed February 18, 1964)

OPINION AND ORDER

By this application, Southern California Edison Company requests a certificate of public convenience and necessity to construct and operate at its Alamitos Steam Station a steam-electric generating unit to be known as Unit No. 6, rated at 450,000 kw together with related structures, equipment and facilities, and other appurtenances.

Pursuant to authority granted by Decision No. 51798 in Application No. 36873, applicant constructed and placed in commercial operation at Alamitos Steam Station Units Nos. 1 and 2, each rated at 156,250 kw, in September, 1956 and February, 1957, respectively. Pursuant to authority granted by Decision No. 59724 in Application No. 41620, and Decision No. 60644 in Application No. 42164, applicant constructed and placed in commercial operation Units Nos. 3 and 4, each rated at 310,000 kw, in December, 1961 and June, 1962, respectively. Subsequently, by Decision No. 66473, dated December 17, 1963, in Application No. 45620, filed July 25, 1963

(amended November 12, 1963), applicant was authorized to construct Unit No. 5, rated at 450,000 kw. Unit No. 5 is scheduled to be placed in operation in February, 1966.

Unit No. 6, as proposed, will have a turbine generator set rating of 450,000 kw, which will result in a total set rating for the six units of 1,832,500 kw. Applicant expects the actual maximum net capability of Unit No. 6 to be 488,500 kw.

The turbine generator for the new unit will be a cross compound type with steam being supplied by a single boiler having a capacity of 3,316,000 pounds of steam per hour for delivery to the turbine throttle at 3,500 pounds per square inch gage pressure and 1,000° F. temperature with reheat to 1,000° F. The estimated heat rate for Unit No. 6 at the expected maximum net output is 8889 Btu/kwhr for gas fuel and 8472 Btu/kwhr for oil fuel. There will be no separate auxiliary generator, as auxiliary power for the unit will be obtained from the main generator bus through a transformer.

Sea water obtained from Alamitos Bay and the Los Cerritos Drainage Channel will be used for cooling purposes.

Applicant states that natural gas will be burned for fuel, with provision for alternate burning of fuel oils including high viscosity fuel oil.

The new unit will be designed as an outdoor-type station with centralized control facilities and with provision for future addition of digital computer equipment. It is proposed that the power output of the new unit will be transmitted to applicant's interconnected system through existing transmission lines, some of which are scheduled to be reinforced and uprated in connection with the addition of Unit No. 5.

Applicant's records and studies submitted with the application indicate that its net system peak demand has increased from 2,633,000 kilowatts in 1957 to 4,619,000 kilowatts in 1963. Applicant states that since the merger was consummated with California Electric Power Company December 31, 1963, the California Electric Power Company's electric utility system has been and will be for the future integrated with that of applicant. During the period 1957 through 1963 the net system peak demand on the former California Electric Power Company system increased from 197,000 kw to 339,000 kw. It is estimated that the net system peak demand on the combined systems will increase to 6,265,000 kw by 1966. During the same period, applicant's net system energy requirements have increased from 14.9 billion kilowatt-hours in 1957 to 25.0 billion kilowatt-hours in 1963, and energy requirements on the former California Electric Power Company system increased from 1.26 to 2.11 billion kilowatt-hours during the same period. On a combined system basis it is estimated the energy requirements will increase to 34.9 billion kilowatt-hours in 1966.

The tabulation below, developed from Exhibit I, shows applicant's estimates of the system's net margins of available generating capacity over system peak demands at the time of annual peak demand in December for each of the next three years based on adverse hydroelectric generating conditions:

<u>Year</u>	<u>Net Margin Megawatts</u>	<u>Percent Net Margin</u>
1964	872	15.7
1965	772	12.8
1966 (Without Alamitos Unit No. 6) #	731	11.2
1966 (With Alamitos Unit No. 6)	1,058	16.2

# - Retirement deferred Long Beach 2, Units 8R and 9.

The above estimates reflect operating dates for the addition of new generating capacity to, and retirement of obsolete capacity from the system according to the following construction and retirement schedule for authorized and proposed electric generating units:

<u>Operating Date</u>	<u>Unit</u>	<u>Additional Capacity (Kilowatts)</u>	<u>Total System Capacity (Megawatts)</u>
January 1, 1964			6,073
June, 1964	Coolwater No. 2	81,000	6,154
August, 1964	El Segundo No. 3	325,000	6,479
April, 1965	El Segundo No. 4	325,000	6,804
February, 1966	Alamitos No. 5	475,000	7,279
August, 1966	Alamitos No. 6	475,000	7,754
August, 1966	Retire: Long Beach 2, Units 8R, 9	(148,000)	7,606

If Alamitos Unit No. 6 is not installed in 1966, the system net margin in December, 1966, under adverse hydro conditions and with no units out for scheduled maintenance, would be 731 Megawatts or 11.2 percent.

The forecasts as presented in Exhibit I reflect an annual growth rate of approximately 9.0 percent.

The estimated operating date for Alamitos Unit No. 6 is August, 1966, provided construction is commenced by April, 1964.

Exhibit III shows the estimated cost of constructing Unit No. 6, including general overheads, to be \$32,085,850, or approximately \$71 per kilowatt. This compares favorably with the cost per kilowatt of the first five units authorized to be constructed at the Alamitos Steam Station as well as with the cost of other steam units installed in recent years on the Edison system. The total cost of the entire Alamitos Steam Station, after the completion of Unit No. 6, is estimated to be \$176,951,047. Applicant states that a substantial saving in accounting costs

may be realized if it is allowed to file a consolidated cost report for Units Nos. 5 and 6 and related equipment and facilities one year after Unit No. 6 is placed in commercial operation.

The transmission facilities included in the cost of Unit No. 5 are stated to be of sufficient capacity to provide for the full output of both Units Nos. 5 and 6.

Applicant's estimated annual cost of operation for Unit No. 6 may be summarized as follows:

Annual Expenses

Fuel (present price levels)*	\$ 6,816,000
Other operation and maintenance	428,000
Depreciation (straight-line)	917,000
Income taxes (current rates)	806,000
Ad Valorem taxes (current rates)	888,000
Return (average)	1,031,000
Total	<u>10,886,000</u>

\*Assumes operation at 62% capacity factor, using gas fuel 75% of the time and oil fuel 25% of the time.

Based on the foregoing assumptions, the estimated average cost per kwhr at the steam station for energy from Unit No. 6, assuming fuel at present price levels of 32.2 cents per million Btu for gas and 30.4 cents per million Btu for oil, is 4.45 mills per kwhr. Assuming a prorated fuel cost of 50 cents per million Btu, the estimated average total cost per kwhr is 6.06 mills per kwhr.

Applicant proposes to finance the construction of this unit from available funds or funds to be obtained through the sale of securities, applications for the issuance of which will be filed with the Commission.

Applicant proposes to obtain all necessary permits and/or authorizations which are required from public authorities and which

may be needed for the construction and operation of the new generating unit and related facilities. These would include miscellaneous building and right-of-way permits required by authorities having jurisdiction in the premises, as well as an authorization to construct from the air pollution control authorities of Los Angeles County. It is alleged that the latter authorization has been applied for, with the necessary approvals anticipated at an early date. Applicant states that no additional franchises are required for the construction and operation of the new generating unit and appurtenant facilities.

Based upon the evidence, the Commission finds that with the continuing growth in demand and energy requirements that applicant is experiencing, the generating capacity proposed herein will be needed to provide adequate and reasonable electric service to the public within the area it serves; that a substantial saving in accounting costs may be realized by applicant if it is allowed to file a consolidated cost report for Units Nos. 5 and 6 and related equipment and facilities one year after Unit No. 6 is placed in commercial operation. The Commission further finds that public convenience and necessity require the construction and operation of Unit No. 6 at the Alamitos Steam Station, as described in this application.

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 the 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 a 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.

The Commission having considered the above-entitled application and having concluded that the application should be granted, and that a public hearing thereon is not necessary; therefore,

IT IS HEREBY ORDERED that:

1. A certificate of public convenience and necessity is granted to Southern California Edison Company to construct and operate Unit No. 6 at its Alamitos Steam Station, together with related equipment, facilities, and appurtenances.
2. Southern California Edison Company shall file with this Commission a detailed statement of the capital costs of Alamitos Steam Station Units Nos. 5 and 6 and related equipment, facilities and appurtenances thereto, within one year following the date on which the second of the said two units is placed in commercial operation.
3. If the authorization herein granted is exercised, compliance with paragraph 2 of this order will satisfy paragraph 2 of the order in Decision No. 66473.

4. The authorization herein granted will 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 14<sup>th</sup> day of APRIL, 1964.

*William B. Beards*  
President  
*[Signature]*  
*Carol A. [Signature]*  
*George H. [Signature]*  
*Fredrick B. Holdhoff*  
Commissioners