MW/GH

ORIGINAL

Decision No. 59724

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. 3, at its Alamitos Steam Station, together with the transmission lines and other appurtenances to be used in connection with said station.	Application No. 41620

Rollin E. Woodbury, Harry W. Sturges, Jr., John R. Bury, William E. Marx, attorneys, by William E. Marx and John R. Bury, for applicant.
Leonard S. Patterson for the Commission staff.

O P I N I O N

Southern California Edison Company, a corporation, by the above-entitled application, filed October 29, 1959, seeks a certificate of public convenience and necessity to construct and operate one additional steam electric generating unit at its Alamitos Steam Station to be known as Unit No. 3 to be located at applicant's present Alamitos Station site, consisting of approximately 234 acres, east of the City of Long Beach between the San Gabriel River and the Los Cerritos Drainage Channel northerly of the adjacent Seal Beach oil field in unincorporated territory of Los Angeles County. Said Unit No. 3 will be adjacent to existing Units Nos. 1 and 2 as shown on the plot plan, Exhibit "B", attached to the application.

A public hearing was held before Examiner Stewart C. Warner on January 20, 1960, at Los Angeles. No protests to the

granting of the application were entered, and the matter was submitted for decision on said date.

By Decision No. 51798, dated August 9, 1955, in Application No. 36873, amended, the applicant was granted a certificate of public convenience and necessity to construct Units Nos. 1 and 2 of its Alamitos Steam Station with auxiliaries and transmission lines, and to construct, operate and maintain its proposed Del Amo Substation and pertinent facilities. The stated name-plate rating of the units was 156,250 kw each.

In the instant application, the applicant proposes to install a steam turbine electric generator and related structures and equipment facilities with a name-plate rating of 300,000 kw resulting in a total station name-plate capacity of 612,500 kw. The proposed unit will be the largest in Southern California and its estimated cost is $43,300,000 plus approximately $652,000 of the allocation of the cost of certain joint facilities at the Station. The total cost of the Alamitos Station with three units is estimated to be $81,087,000. In addition, the applicant proposes to connect the new unit with its Del Amo Substation partly through existing transmission lines and partly through the construction of 5.6 miles of new 220 kv transmission lines. The cost of the proposed new transmission line facilities is $1,050,000, including terminal facilities at Del Amo Substation of $560,000. The cost of the proposed construction is planned to be financed through internal funds initially and, eventually, through the sale of securities. Completion of the unit is anticipated for January 1, 1962.

Exhibit No. 1-A is a chart of load-resource data based on an estimate date of December 10, 1959. Said chart shows spinning reserve and generating capacity deficits under peak power demands during 1960, 1961 and 1962, which take into account the placing in operation of the applicant's Mammoth Pool projects in May of 1960, its Huntington Beach Unit No. 3 in December of 1960, and its Huntington

Beach Unit No. 4 in July of 1961, together with Alamitos Unit No. 3 in January of 1962. The possible operation of Long Beach No. 3 with a capacity of 212,000 kw on 24-hour notice, of 150,000 kw of Long Beach No. 2's capacity on 48-hour notice, and of Long Beach No. 1's 20,000 kw capacity, and 18,000 kw of Long Beach No. 2's capacity on one month's notice, plus capacity available on a mutual standby or nonfirm purchase basis through interconnection with other utilities has not been considered in Exhibit No. 1-A in the resultant deficit. By considering such reserves and new units, the applicant expects to meet its peak demands. The addition of a 300,000-kw unit at an unnamed location is also planned for August of 1962.

The following tabulation shows applicant's net system peak demands and its net system energy requirements for the years 1954 through 1958 recorded, and 1959 through 1962 estimated:

		Increase Over Prior Year			Increase Over Prior Year	
Year	Kilowatts (Thousands)	Kilowatts (Thousands)	Per Cent	KWH (Millions)	KWH (Millions)	Per Cent
1954(recorded)	1,997.1	144.3	7.79	10,919.8	677.3	6.61
1955(recorded)	2,284.9	287.8	14.4	12,348.2	1,428.4	13.1
1956(recorded)	2,504.0	219.1	9.6	13,763.1	1,414.9	11.5
1957(recorded)	2,632.8	128.8	5.2	14,943.0	1,179.9	8.6
1958(recorded)	2,962.0	329.2	12.5	15,804.1	861.1	5.8
1959(estimated)	3,181.0	219.0	7.4	17,576.0	1,771.9	11.2
1960(estimated)	3,480.0	299.0	9.5	19,250.0	1,674.0	9.5
1961(estimated)	3,780.0	300.0	8.6	20,850.0	1,600.0	8.3
1962(estimated)	4,090.0	310.0	8.2	22,550.0	1,700.0	8.2

Exhibit No. 2 is a report on the Pacific Southwest Power Area power resource capability as estimated under both median and adverse hydro conditions for the years 1960 through 1962. Said exhibit contains a statement of new generating capacity actually installed and scheduled for service for the period of January 1, 1959 to December 31, 1962. Said statement shows the following additions

to generating capacity scheduled for the systems included in the Pacific Southwest Power Area:

Additions to Generating Capacity Scheduled
(Megawatts)

	1959	1960	1961	1962	Total
Fuel	548.0	972.0	821.0	1,251.0	3,592.0
Hydro	-	327.5	95.0	224.5	647.0
Total	548.0	1,299.5	916.0	1,475.5	4,239.0

An engineering witness of the applicant testified that without the addition of applicant's proposed Unit No. 3, applicant's ability to supply its estimated loads would be seriously limited and the Pacific Southwest Power Area's margins would be reduced to unreasonable low levels.

Applicant proposes to operate its proposed Unit No. 3 with a single steam generator having a capacity of 2,250,000 pounds of steam per hour for delivery to the turbine throttle at 2,400 pounds per square inch pressure and 1050° Fahrenheit temperature and built to reheat the steam leaving the high pressure turbine to 1000° Fahrenheit for return to the reheat section of the turbine. The estimated heat rate for Unit No. 3 at net rated output, assuming gas fuel, is 9325 BTU/KWH, and assuming oil fuel, 8802 BTU/KWH.

The turbine generator for Unit No. 3 will be a cross compound unit with a high pressure turbine and an intermediate pressure turbine on one shaft rotating at 3600 r.p.m. and coupled to one generator, and a low pressure turbine on a second shaft rotating at 1800 r.p.m. and coupled to another generator. There will be no separate auxiliary generator and auxiliary power for the unit will be obtained from the main generator bus through a transformer.

A single 18/220 kv three-phase 360,000 kva transformer will be installed with the unit.

The proposed unit is to be an outdoor type station with centralized control facilities; sea water obtained from Alamitos Bay and the Los Cerritos Drainage Channel, through a canal leading to a screenwell structure, will be used for cooling purposes; and natural gas will be burned for fuel, with provision for alternate burning of fuel oils including high viscosity fuel oil. In its estimates of operating costs, submitted as Exhibit No. 4, the applicant derived its fuel cost figure of $4,720,000 per year on an estimated capacity factor of 62.8 percent over the life of the unit, and the use of natural gas 60 percent of the time and fuel oil 40 percent of the time.

Applicant estimated the annual station expenses for Unit No. 3 as follows:

Expenses (Total-Unit No. 3)	
Fuel (present price levels)	$ 4,720,000
Other operation and maintenance	315,000
Depreciation (straight line)	1,076,000
Income taxes (current rates)	1,070,000
Ad Valorem taxes (current rates)	1,099,000
Return (average)	1,386,000
Total	$ 9,666,000

As the above costs are estimated costs, the Commission is not at this time passing upon the reasonableness of these charges as the actual cost will be of record when the construction work is complete and subject to review for rate fixing purposes.

In order to save accounting expense applicant requested one year rather than six months following completion in which to file a report of the actual cost of the project.

Findings and Conclusions

From a review of the record, particularly with respect to the estimated net system peak demands and the net system energy requirements of the applicant through the year 1962, it is evident that the applicant's presently installed electric generating capacity would be deficient for said year. It is found as a fact and concluded that public convenience and necessity require that the instant application be granted, and the order hereinafter will so provide.

Applicant's request for a one-year period in which to file a cost report appears reasonable and will be granted.

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

> That 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 for any amount of money in excess of the amount (exclusive of any tax or annual charge) actually paid to the State as consideration for the issuance of such certificate of public convenience and necessity or right.

O R D E R

Application as above entitled having been filed, a public hearing having been held, the matter having been submitted and now being ready for decision,

IT IS HEREBY ORDERED that:

1. A certificate of public convenience and necessity be and it is granted to Southern California Edison Company, a corporation, to construct and operate one additional steam electric generating unit at its Alamitos Steam Station to be known as Unit No. 3 consisting principally of a steam turbine electric generator and related

structures, equipment and facilities, and a new transmission line to and including terminal facilities at its Del Amo Substation all as set forth in the application.

2. Applicant shall file with this Commission a detailed statement of capital costs of Unit No. 3 and the transmission facilities certificated herein within one year following the date of completion of such unit and facilities.

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

Dated at San Francisco, California, this 29th day of February, 1960.

President

Commissioners

Commissioner Everett C. McKeage, being necessarily absent, did not participate in the disposition of this proceeding.