

ORIGINAL

Decision No. 64052

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 neces-
 sity require or will require the con-
 struction and operation by applicant
 of a new steam electric generating
 unit, to be known as Unit No. 3, at
 its El Segundo Steam Station, to-
 gether with other appurtenances to
 be used in connection with said
 station.

Application No. 44419

OPINION AND ORDER

Applicant's Request

Southern California Edison Company filed the above-entitled application on May 3, 1962, requesting a certificate of public convenience and necessity to construct and operate at its El Segundo Steam Station, in the City of El Segundo, an electric generating unit to be known as Unit No. 3, together with related structures, equipment, and facilities, including certain transmission lines and terminal facilities at nearby transmission substations.

Prior Authorization

Pursuant to the authority contained in Decision No. 50132 in Application No. 35152, applicant constructed and placed in commercial operation in May, 1955, the first turbine generator unit at its El Segundo Steam Station, Unit No. 1, rated at 156,250 kilowatts. Subsequently, pursuant to the authority contained in Decision

No. 51757, in First Supplemental Application No. 35152, applicant constructed and placed in commercial operation in August, 1956, El Segundo Steam Station Unit No. 2, also rated at 156,250 kilowatts.

Proposed Plant Addition

Unit No. 3, as proposed, will be located next to Unit No. 2 at the El Segundo Steam Station. The unit will have a turbine generator set rating of 325,000 kilowatts, resulting in a total station rating of 637,500 kilowatts. The turbine generator will be of the cross compound type. Steam will be supplied by a single boiler having a capacity of 2,490,000 lbs. of steam per hour at a throttle pressure of 2400 lbs. per sq. in. and 1050 degrees Fahrenheit, with reheat to 1000 degrees. The unit will be designed as an outdoor type with centralized and automated control facilities. Applicant anticipates that natural gas will be burned but provision will be made for the alternate burning of fuel oil. In order to make the output of the new unit available to its integrated system, applicant proposes to install additional transmission terminal facilities at its El Segundo Steam Station and El Nido and La Fresa substations and to reconductor the 220,000-volt transmission lines between El Segundo Steam Station and these two substations. Applicant states that the use of Unit No. 3 will be required no later than September 1, 1964, and that the major physical construction should be commenced by mid-July, 1962.

Estimated Plant Costs

Exhibit No. III submitted with the application shows the estimated cost of constructing Unit No. 3, including general

overheads, to be \$44,625,000 or approximately \$137 per kilowatt. This compares favorably with the cost per kilowatt of the first two units constructed at the El Segundo Steam Station as well as with the cost of other recent steam units installed on the Edison system. The total cost and cost per kilowatt of the El Segundo Steam Station, including all three units, may be summarized as follows:

<u>Plant</u>	<u>Plant Capacity KW</u>	<u>Capital Cost</u>	<u>Dollars per KW</u>
Units 1 and 2	312,500	\$ 42,710,000	\$ 137
Unit 3	<u>325,000</u>	<u>44,625,000</u>	<u>137</u>
Total	637,500	\$ 87,335,000	\$ 137

In addition to the above costs, the estimated cost of the transmission lines and the terminal facilities at El Nido and La Fresa Substations is stated to be \$2,433,000.

Annual Operating Costs

Applicant's estimated annual costs of operation for Unit No. 3 may be summarized as follows:

<u>Expenses (Total-Unit No. 3)*</u>	
Fuel (present price levels)	\$ 5,555,000
Other operation and maintenance	315,000
Depreciation (straight line)	1,114,000
Income Taxes (current rates)	1,100,000
Ad Valorem Taxes (current rates)	1,121,000
Return (average)	<u>1,429,000</u>
Total	\$10,634,000

*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 total cost per kilowatt hour at the steam station, assuming fuel at present price level, is 6.02 mills per kilowatt hour. Assuming a prorated cost of fuel of 50 cents per million BTUs, the estimated total cost is 7.44 mills per kilowatt hour. Details of these estimated costs and estimates of costs at varying capacity factors for Unit No. 3 and for the entire El Segundo Steam Station are contained in Exhibit No. III.

Load Growth

Applicant's records and studies indicate that its net system peak demand has increased from 2,504,000 kilowatts in 1956 to 3,780,000 kilowatts in 1961, and it is estimated it will increase to 4,800,000 kilowatts in 1964 and to 5,180,000 kilowatts in 1965. During the same period the net system energy requirement has increased from 13.76 billion kilowatt hours in 1956 to 20.87 billion kilowatt hours in 1961, and it is estimated to increase to 26.55 billion kilowatt hours in 1964 and to 28.60 billion kilowatt hours in 1965. The growth rate compounded annually for the net system peak demand reflected in the above figures is 8.6% for the five-year recorded period and 8.2% for the four-year estimated period.

The tabulation below taken from Exhibit No. I shows Edison'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 four years, based on what may be considered as average hydroelectric generating conditions:

<u>Year</u>	<u>Net Margin Megawatts</u>	<u>Percent Net Margin</u>
1962	668	16.2
1963	998	22.2
1964	868	17.9
1965	488	9.3

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

<u>Operating Date</u>	<u>Unit</u>	<u>Capacity - KW</u>
June 1962	Alamitos No. 4	310,000
May 1963	Etiwanda No. 3	310,000
October 1963	Etiwanda No. 4	310,000
September 1964	El Segundo No. 3	325,000

If El Segundo Unit No. 3 is not installed in 1964, the system net margin in December 1964 would be reduced to 11.2% or 543 megawatts.

The charts and tabulations contained in Exhibit No. I show that if no generation is added on the Edison system after Etiwanda No. 4 Unit in October, 1963, applicant, beginning in September, 1964, would have to depend upon its older Long Beach generating units to provide adequate spinning reserve. Such older plant is normally kept on cold reserve as a backup for spinning reserve to be used only for emergencies.

Staff Investigation

A Commission staff engineer has submitted a memorandum report covering his review of the application and of certain additional information available in applicant's files. His report

is hereby designated as Exhibit No. IV and made a part of this record. Exhibit No. IV includes staff estimated load demands which indicate that applicant's load estimates are conservative. It also contains an analysis of unscheduled outages which indicates that problems created by simultaneous unscheduled outages of generating units may be increasing and should be reviewed by applicant. It is the engineer's conclusion that a unit of at least 325 megawatt capacity will be required on applicant's system by September 1, 1964.

Findings and Conclusions

The Commission concludes that in view of the evidence presented concerning 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.

It is hereby found as a fact that public convenience and necessity require the construction, operation, maintenance and use of Unit No. 3 of the El Segundo 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:

That 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 a future rate base for the purpose of determining just and reasonable rates.

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

IT IS HEREBY ORDERED as follows:

1. That a certificate of public convenience and necessity is granted Southern California Edison Company to construct and operate Unit No. 3 at El Segundo Steam Station, together with modifications and additions to its 220,000-volt transmission system, and other related equipment, facilities and appurtenances all as described in the application.

2. That within one year following the date of completion, Southern California Edison Company shall file with this Commission a detailed statement of the capital cost of Unit No. 3 and related equipment and facilities, including the associated transmission and substation facilities.

3. 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 31st day of July, 1962.

George G. Grover
President

Frederick B. Heloboff
Commissioners

I concur in the finding of convenience and necessity and in the issuance of a certificate therefor - but I dissent as to the restrictive language concerning future rate base & tax