

ORIGINALDecision No. 52592

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of CALIFORNIA)
 ELECTRIC POWER COMPANY, for)
 a Certificate under Section)
 1001 of the Public Utilities) Application No. 37463
 Code, authorizing construction)
 of a Steam Electric Generating)
 Plant, Transmission Lines, and)
 Gas Supply Line.)

Donald J. Carman, for applicant.
California Farm Bureau Federation
 by J. J. Deuel and Bert Buzzini;
Southern California Edison Company
 by Barnard Morse; and Dr. W. B.
Townsend, in propria persona, inter-
 ested parties.
L. S. Patterson, for the Commission staff.

O P I N I O NApplicant's Request

California Electric Power Company, a public utility serving portions of the Counties of Mono, Inyo, Kern, San Bernardino, Riverside and Imperial, in the State of California, and of the Counties of Nye and Esmeralda, State of Nevada, filed the above-entitled application on November 7, 1955, requesting a certificate of public convenience and necessity to construct, maintain and operate a steam-electric generating plant of up to 240,000 kilowatts capacity, including an eleven-mile gas supply line, transmission lines extending to applicant's main transmission substation in the City of San Bernardino, a line to Victorville and lines to connect with other existing transmission lines. The proposed steam-electric plant is to be located about three miles southeast of the City of San Bernardino, as shown by a map designated as Exhibit A attached to the application, the location being more particularly described as portions of Lots

3 and 4, Block 70, Rancho San Bernardino as per map in Map Book 7, page 2, records of San Bernardino County.

The Proposed Plant

Applicant proposes to install certain common facilities for an ultimate generating capacity of 240,000 kw name plate rating, but proposes to start installation of only one 60,000 kw generating unit and boiler at this time, with the second, third and fourth units of 60,000 kw each to be installed as the load may require. Based on present outlook for load growth, one of applicant's witnesses estimated the in-service dates for the units as follows:

Unit No. 1 - July 1, 1957
Unit No. 2 - July 1, 1958
Unit No. 3 - July 1, 1961
Unit No. 4 - July 1, 1963

For the first unit the steam turbine pressure is to be 1,800 pounds per square inch, operating at an original cycle temperature of 1000 degrees Fahrenheit with 1000 degrees Fahrenheit as a reheat cycle temperature. The boiler is to be rated at 450,000 pounds of steam per hour. The generator is to be rated 76,800 kva of capacity at 85% power factor and will generate electric energy at 13,800 volts. Applicant states that the plant is to be designed and constructed by the Fluor Corporation at an estimated total cost of \$33,930,100; the cost of the first unit being approximately \$10,282,800 including land, common on-site facilities, and gas line.

Public Hearing

After due notice, a public hearing was held upon this application before Commissioner Ray E. Untereiner and Examiner M. W. Edwards on January 11, 1956, at San Bernardino. At the hearing applicant presented two exhibits and testimony by three witnesses in support of its application. The Commission staff, represented by an electrical engineer, thoroughly cross-examined the witnesses for the purpose of developing in the record for the Commission to consider

the facts as to the present load, the expected load growth, the economies and need for authorization of units so large that each of the four represents an increment of about 25 per cent of applicant's present total capacity.

No one offered any objection to the granting of the request, however, one party was concerned over the question of the smog or air pollution that might be caused by the plant. The representative for the California Farm Bureau Federation urged the Commission to give favorable consideration to the application.

Additional System Capacity Requirements.

One of applicant's witnesses stated that for the past five operating years (June 1 - May 31) the system demand showed the following growth trend:

<u>Operating Years</u>	<u>Increase Over preceding year</u>
1950-51	22.6%
1951-52	7.0%
1952-53	11.8%
1953-54	12.6%
1954-55	3.4%

The reason for the drop in the sharp rate of growth in 1954-55 was the loss of a large cement plant having a 14,000 kw demand. For the next nine years he forecast that sales would increase at the rate of 11 per cent compounded annually; however, he anticipates rates of growth as high as 12.7 per cent in the year 1958-59.

The detailed future estimated load figures on which applicant bases its conclusions as to the need for four new 60,000 kw generating units are set forth in Exhibit No. 1. While the figures are in considerable detail and on a somewhat different basis than shown below, for the purpose of this order our analysis of applicant's estimates indicates the following capacity deficiencies, assuming that a 15 per cent margin over the load is desirable:

Year	Present Capacity kw	Estimated Maximum Load kw	Load Excess over Capacity kw	15% allowance for Margin kw	System Capacity Deficiency kw
1956-57	284,000	233,000	(51,000)	35,000	-
1957-58	284,000	281,000	(3,000)	42,000	39,000
1958-59	284,000	329,000	45,000	49,000	94,000
1959-60	284,000	375,000	91,000	56,000	147,000
1960-61	284,000	364,000	80,000	55,000	135,000
1961-62	284,000	393,000	109,000	59,000	168,000
1962-63	284,000	428,000	144,000	64,000	208,000
1963-64	284,000	471,000	187,000	71,000	258,000

() Inverse Figure

Based on the above analysis we arrive at the same general conclusion as applicant that over the next eight years additional plant of some 240,000 kw nominal rating will be needed if the load grows as fast as estimated; however, there would be capital savings in the first three years by installing two 40,000 kw units instead of two 60,000 kw units. In this analysis we have used the estimated effective operating capacities of 47,000 kw for the 40,000 kw rated units and 66,000 kw for the 60,000 kw rated units.

Applicant's witness testified that it had not given consideration to installing 40,000 kw units because it could realize about 10 per cent better fuel economy with the larger units and an over-all operation cost saving of about 6 per cent.

It will be noted that the estimated load shows a drop from 375,000 kw in 1959-60 to 364,000 kw in 1960-61. This is due to applicant's tentative plan to install a new steam-electric plant near the Mexican border primarily to serve the fast growing load of its subsidiary company in Mexico.

In showing the present capacity at 284,000 kw the Commission has reflected the present reduced capacity of 39,000 kw from Hoover Dam and has assumed 30,000 kw of capacity as normally being available from the City of Los Angeles over an interconnecting line. The record indicates that in serious emergencies this amount might be increased to 50,000 kw. Applicant also has an interconnection with San Diego

Gas and Electric Company of 10,000 kw capacity, power being available only on an if, as, and when available basis for an isolated load. Also, some 25,000 kw of load could be isolated and served by the Southern California Edison Company if Edison has the power available. In this analysis we have relied on only 30,000 kw from these inter-connecting companies, but the availability of these several sources gives flexibility as to in-service dates for new units and the size of the units.

Estimated Plant Cost

The increase in applicant's production capital which will result from the first unit is estimated at \$10,282,800. The estimated cost of the total plant of four 60,000 kw units is \$33,930,100. In Exhibit No. 1 the following segregation of these amounts was shown:

<u>AC No.</u>	<u>Description</u>	<u>Unit No. 1</u>	<u>Total Plant</u>
310 -	Land and Land Rights	\$ 545,700	\$ 545,700
311 -	Structures and Improvements	1,417,000	2,029,200
312 -	Boiler Plant Equipment	3,199,300	12,083,100
314 -	Turbo Generator Units	4,567,800	17,358,300
315 -	Accessory Electric Equipment	429,300	1,735,200
316 -	Misc. Pr. Plant Equip.	123,700	178,600
	Totals	10,282,800	33,930,100

The above cost of \$10,282,800 for the first unit is \$582,800 greater than the figure of \$9,700,000 set forth in the application. Applicant's witness stated that the additional cost is for the gas line.

Applicant proposes to finance the project initially by bank loans from the Bank of America which, from time to time, it plans to refund by proceeds of issues of bonds and stocks as the Commission shall hereafter, upon proper application, authorize for that purpose.

Annual Operating Cost

Applicant's estimated annual cost of operation for the San Bernardino Steam Plant may be summarized as follows:

<u>Annual Expense Item</u>	<u>Unit No.1</u>	<u>Total Plant</u>
Fuel (at 80% Plant Factor)	\$1,240,000	\$4,960,000
Other Operation and Maintenance	218,375	520,240
Depreciation (5% S.F. Annuity)	101,000	360,000
Property Taxes @ 2%	205,700	678,600
Income Taxes (State and Federal) @ 3.9%	401,000	1,323,300
Administrative and General Expense	85,800	204,500
Return @ 6%	617,000	2,035,800
	<u>2,868,875</u>	<u>10,082,440</u>

The above fuel cost is predicated on an average composite price for oil and gas of about \$1.75 per barrel. Currently, the price of fuel oil alone, delivered in the area, is \$2.34 per barrel based on a \$2.00 posted price in the Los Angeles area. On the basis of 434 million kwhr annual output from the No. 1 Unit the estimated unit cost of energy is 6.602 mills per kwhr. On the basis of 1.74 billion kwhr annual output from the four units the estimated unit cost of energy is 5.795 mills per kwhr.

A witness for applicant testified that the installation of the first unit at 60,000 kw would tend to lower the system's over-all rate of return by about 0.225%. He had no estimate as to the effect on rate of return of installing a smaller unit, such as one of 40,000 kw size. It is in evidence, however, that the unit capital cost per kw would be about the same for a 40,000 kw plant as for the proposed 60,000 kw plant. At the estimated cost of \$140 per kw the capital costs of the smaller installation would be approximately \$2,800,000 less than those of the proposed installation. The annual incremental cost saving on this investment would be at the rate of approximately 12.9 per cent^{1/} or \$360,000. However, applicant should realize fuel

^{1/} Depreciation	1.0 per cent
Property Taxes	2.0 " "
Income Taxes	3.9 " "
Return	6.0 " "
Total	<u>12.9 " "</u>

savings on the quantity of energy that could be generated by a 40,000 kw unit of roughly \$75,000 the first year by installing the larger, more efficient, unit. It is evident that the lower total annual cost the first year of operation with a smaller unit would have considerably lesser effect on reduction of rate of return and possible impact on the level of the rates at which applicant sells its electric energy.

Franchise and Competition

Applicant represents that no franchise from public authorities is necessary for the proposed construction inasmuch as the plant site is located in Zone M-2 pursuant to Ordinance No. 678 of the County of San Bernardino, California, which permits the construction, operation and maintenance of steam-electric generating stations therein. Also it represents that no certificate is required for the right to serve the energy to be generated to any cities or counties which it is now and has been for many years serving and authorized to serve. Applicant states that the proposed construction will not compete with other utilities or increase or diminish competition, and, in this regard, mentions that it is and, for many years, has been distributing electric energy in competition with Southern California Edison Company.

With regard to the question of possible air pollution by this plant, the witness indicated that the applicant will comply with the county ordinance and requirements on this subject.

Conclusions

On the basis of the estimates which applicant's management has presented, necessity has been shown for the construction of a new steam-electric generating plant. While our analysis indicates that a first unit therein of 40,000 kw size would meet the estimated load requirement in the 1957-58 operating year and probably would not

require an upward adjustment in customers' rates, the management anticipates operating savings sufficient to justify its request for authorization of a 60,000 kw first unit. After considering this matter it is our conclusion that a 60,000 kw first unit will prove more economical in the long run and should be authorized, as any reduced rate of return for the system should be temporary and continue only during the load-building period.

While applicant seeks authorization for four units at this time the evidence indicates that it would not be prudent to authorize more than one unit until further experience demonstrates that this estimated rapid rate of growth is likely to be realized. Authorization for the additional units in the plant should be sought by supplemental applications herein as the load develops. Authority to install the necessary gas line transmission lines will be granted.

It is our opinion that the applicant has the financial means to construct the first unit of the project and place it into successful operation. After considering the record in this proceeding and the statement by the Farm Bureau representative it is our conclusion that the construction of the proposed San Bernardino Steam-Electric Plant to the extent of one unit is in the public interest.

The Commission finds that public convenience and necessity require the construction, operation and maintenance of the proposed steam-electric plant only to the extent necessary to install the

first unit therein, together with the necessary transmission lines and gas line as proposed to place the first unit in successful operation, and that an order should be issued granting such limited authority.

The certificate of public convenience and necessity issued herein 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 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.

O R D E R

The above-entitled application having been considered, a public hearing having been held, the matter having been submitted and now being ready for decision; therefore,

IT IS HEREBY ORDERED that California Electric Power Company be and it is hereby granted a certificate that public convenience and necessity require the construction, operation, maintenance and use of the steam-electric generating plant described in this application, but limited to the first unit therein, and the necessary transmission and gas lines, the procurement of the requisite lands or land rights, permission for such franchise as may be necessary for the construction and operation of the first unit of the project, the production, transmission, distribution, delivery and sale of such electric energy as may be generated by the first unit to its present and prospective customers in accordance with its certificates of public convenience and necessity and with its rates, rules and regulations duly filed with the Commission.

IT IS HEREBY FURTHER ORDERED that California Electric Power Company shall file with this Commission a detailed statement of capital costs of the first unit of the generation project and the transmission lines and gas line within six months following their dates of completion.

Applicant's request for a certificate of public convenience and necessity for Units Nos. 2, 3 and 4 in said San Bernardino Steam Plant is denied at this time without prejudice to later filing of supplemental applications for certificates as load development warrants such added units.

The authorization herein granted will expire if not exercised within three years after the date hereof.

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

Dated at San Francisco, California, this 28th day of February, 1956.

John E. Miller
President

Justin G. Casper

Ralph W. Linterman

W. H. Hardy

Commissioners

Commissioner Matthew J. Dooley, being necessarily absent, did not participate in the disposition of this proceeding.