

ORIGINAL

Decision No. 42238

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
Construction and Operation by Appli-
cant of a New Hydro Electric Power
Project on the San Joaquin River in
Fresno and Madera Counties, California,
to be known as the Big Creek No. 4
Project, including a Dam and Reservoir
and appurtenant Water Conduit and Pen-
stock, Powerhouse, Switchyard, and
Transmission Lines, and Roads, Tele-
phone, Control and Power Lines,
Buildings, Structures and Facilities
Necessary or Useful for the Construction,
Operation or Maintenance of the Project.

Application No. 29989

Bruce Renwick, Rollin E. Woodbury and
Harry W. Sturges, Jr. for applicant.

O P I N I O N

Southern California Edison Company, by the above-entitled application, requests a certificate of public convenience and necessity authorizing it to construct and operate a new hydroelectric power project to be known as the Big Creek No. 4 Project. This project is to be located on the San Joaquin River in Fresno and Madera Counties, California, below applicant's present Big Creek No. 3 plant and above the Kerckhoff Reservoir of the Pacific Gas and Electric Company. A general map of the project is attached to the application and marked Exhibit "A". A public hearing on this application was held before Commissioner Potter and Examiner O'Brien on June 3, 1949 at Madera, California.

Applicant plans to install a dam, reservoir, conduit, penstock, powerhouse, switchyard, transmission lines and appurtenant

facilities. The dam will be a concrete arch type, 228 feet high with a crest length of 1,190 feet. The spillway will be at an elevation of 1,403 feet above sea level. The reservoir will flood 620 acres and store 35,000 acre-feet of water. The conduit will be 11,716 feet long and consist of two tunnel sections approximately 24 feet in diameter connected by a 16-foot diameter steel pipe section. The penstock will consist primarily of a 15-foot single steel pipe 549 feet long to a "Y" branch into two pipes nearly ten feet in diameter for 188 feet length to each turbine. The turbines will be of the reaction type, rated 57,500 hp each, and will drive vertical, direct-connected 42,000 kva generators, operating at 11,500 volts. The switchyard will contain three 28,000-kva single-phase transformers to step the voltage up to 230,000 volts for transmission purposes. High voltage switching will be handled by two 230-kv, 800-ampere oil-circuit breakers rated at 3,500,000 kva each. A three-phase transmission line of three 605,000 circular-mil conductors approximately six miles long will deliver the energy from Big Creek No. 4 to a connection with applicant's interconnected primary transmission network at Big Creek No. 3 Powerhouse. In an average water year it is estimated that the 84,000 kva of generating capacity will produce 394,000,000 kwhr of energy.

Applicant estimates the total cost of the project to be \$19,214,900 segregated as follows:

Dam and Reservoir	\$ 6,596,400
Waterways	4,998,360
Penstocks	1,310,390
Power Plant	5,268,000
Roads and Bridges	297,500
Transmission and Telephone	396,750
Miscellaneous	297,500
Land and Land Rights	50,000
Total	<u>19,214,900</u>

The cost of operation and maintenance is estimated at \$1,565,938 annually. The major portion of this cost consists of interest on the capital investment. On the basis of 394,000,000 kwhr

per year and allowing for transmission losses to the system load center, an increment cost of 4.5 mills per kwhr is estimated. Comparable increment costs of energy generated from fuel at Redondo Steam Plant with \$2 per barrel fuel oil is estimated at 7.4 mills per kwhr. Even with \$1 fuel oil, which is considerably below the present market price, the comparable cost would be 5.4 mills for steam-electric energy. The incremental cost to applicant for energy from this project, therefore, is quite favorable. This is in part due to the fact that a large storage development upstream from the Big Creek No. 4 site has been previously constructed in connection with Big Creek Plants Nos. 1, 2, 2A, and 3.

Applicant proposes to finance the construction of this development in part from general funds, in part from the sale of 800,000 shares of additional stock, and in part from either bank loans or sale of additional securities. Of the \$19,000,000 cost, applicant's Executive Vice President, Mr. Harold Quinton, testified that this year's expenditure is estimated at \$5,000,000, next year's at \$9,000,000, the balance of the costs to be incurred in 1951.

With respect to applicant's need for this additional capacity, its Vice President, Mr. H. W. Tice, introduced Exhibit No. 5, which showed that net peak loads have registered the following percentage growth increase: 1944, 12%; 1945, 6%; 1946, 11%; 1947, 11%; 1948, 7%.

In January, 1949 the total net system peak load was approximately 1,200,000 kw. This was a growth of 119,000 kw from January of 1948. By the end of 1951 when this plant is expected to be ready for service, applicant estimates the system operating capacity will be 1,717,000 kw, and after allowing for overhaul, maintenance, and system limitations, would leave available capacity of about 1,550,000 kw. If past load growth trends continue, the net system peak will approach the net capability of the system without this additional capacity.

The completion of Big Creek No. 4 unit at the end of 1951 is therefore necessary if the utility is to have sufficient reserve capacity.

At the hearing on the instant application, no person appeared to object to the granting of this certificate. The evidence indicates that the utility has the financial means to install, operate, and maintain the hydroelectric plant proposed in this application. Under the circumstances a certificate of public convenience and necessity will be granted to applicant.

The certificate of public convenience and necessity herein-
after granted is subject to the following provisions 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,

IT IS HEREBY FOUND AS A FACT that public convenience and necessity require or will require the construction, operation, and maintenance of a hydroelectric power project by Southern California Edison Company in Fresno and Madera Counties in the area set forth in the map marked Exhibit "A" in this proceeding; therefore,

IT IS HEREBY ORDERED that a certificate of public convenience and necessity be and it is granted Southern California Edison Company to construct, operate, and maintain a public utility hydroelectric

project to be known as Big Creek No. 4 Project for the production and sale of electric energy within the territory hereinbefore described.

The effective date of this order shall be twenty (20) days after the date hereof.

Dated at San Francisco, California, this 28th day of

June, 1949.

D. Z. [Signature]
Justus F. [Signature]
[Signature]
[Signature]
[Signature]
Commissioners.