

Decision No. 35994

BEFORE THE RAILROAD COMMISSION OF THE STATE OF CALIFORNIA

In the matter of the application of MT. SHASTA POWER CORPORATION, a corporation, and PACIFIC GAS AND ELECTRIC COMPANY, a corporation, for a certificate under Section 50 (a) of the Public Utilities Act declaring that public convenience and necessity require the construction of the power plants and projects mentioned herein, including power houses, dams, diverting and forebay reservoirs, appurtenant thereto and the use of all lands and water rights which might be used or useful in connection therewith; and requires the construction of the transmission lines described in this petition.

Application No. 6044

ORIGINAL

BAKER, COMMISSIONER:

SIXTH SUPPLEMENTAL OPINION AND ORDER

In this Sixth Supplemental Application, Pacific Gas and Electric Company seeks an order authorizing it to construct and carry to completion applicant's Pit No. 5 development, under the certificate of Public Convenience and Necessity granted by order of this Commission in Decision No. 15749, dated December 11, 1925, and substantially in accordance with the revised plans submitted with the aforesaid supplemental application.

A public hearing was held in the above entitled matter in the Commission Courtroom at San Francisco on Wednesday, October 14, 1942, at which time and place evidence was taken and the matter submitted for decision.

Historically it may be recited that the initial application, filed August 19, 1920 by the Mount Shasta Power Corporation⁽¹⁾ and Pacific Gas and Electric Company, sought a certificate of public convenience and necessity to proceed with an extensive power development on the Pit River. Such development was to include the construction of five hydroelectric plants and the necessary connecting facilities, and the development of the project was to extend over a

(1) Mount Shasta Power Corporation was dissolved on July 30, 1936, and all of its properties, both real and personal of every kind was acquired by Pacific Gas and Electric Company by authority conferred on the latter by Commission Decision No. 28291.

period of years. The certificate prayed for was granted under date of October 6, 1920, by Decision No. 8212. In 1925 applicants came before the Commission (Fifth Supplemental Application⁽²⁾) and recited, in part, that because of certain changes in plans respecting the construction of additional plants on the Pit River (two plants, namely Pit No. 1 and Pit No. 3 had been constructed), further authorization was sought to proceed with four additional plants (as compared with three plants remaining to be built under the original plan) as well as certain transmission line construction.

On December 11, 1925, after a public hearing, the Commission issued its Decision No. 15747 under the Fifth Supplemental Application and again found that public convenience and necessity required the applicants to proceed with the power development on the Pit River, "substantially in accordance with the revised plans -----."

After a period of nearly seventeen years, during which time no plants were constructed on the Pit River, applicant, Pacific Gas and Electric Company, again comes before the Commission seeking its approval for the construction and the carrying to completion of its new revised power development, designated as Pit No. 5. Applicant's present application recites, for comparative purposes, the Pit No. 5 Project, as set forth in the Fifth Supplemental Application in 1925, and as follows:

"PIT RIVER NO. 5 POWER PLANT

The present plans for this project contemplate the construction of a power house on the Pit River at Bush Bar in the north-west quarter of Section 9, Township 36 North, Range 1 West, M.D.B.&M., to utilize a maximum flow of three thousand (3000) c f.s. under a total static head of five hundred ninety-five (595) feet. The diversion works will consist of a concrete over-pour type diversion dam approximately thirty (30) feet in height, raising the water surface to the level of Pit No. 4 tail canal. The intake structure will be placed flanking the dam at the head of a short section of open canal which will lead to the pressure tunnel. The pressure tunnel will be concrete lined, nineteen (19) feet in diameter, and will extend to the surge chamber, a distance of approximately thirty thousand (30,000) feet. Steel penstocks approximately two thousand four hundred (2,400) feet in length will connect the surge chamber with the power house. The installation will consist of four forty-five thousand (45,000) horsepower vertical turbines direct connected to four thirty-five thousand (35,000) k.v.a. generators, making a total installation of one hundred forty thousand (140,000) k.v.a."

(2) The Second, Third and Fourth Supplemental Applications were those dealing with secondary matters involving permits to cross and construct certain rail lines at grade and all in connection with the hydroelectric development.

The applicant points out that since the issuance of the Commission's order of 1925, many changes have taken place respecting its system's power developments and further investigations have been made by Pacific engineers, and as a result revised plans have been developed for the construction of the proposed Pit No. 5 development, which had been approved by Applicant's management. It is the opinion of Applicant that the proposed revisions will be in the interests of its consumers, inasmuch as the changed development will be of greater capacity and at lesser proportionate cost. In respect to the changes, the following taken from the application sets forth the principal provisions in the plan of construction:

"(a) The location of the diversion dam has been shifted downstream approximately 3500 feet and the power house, previously stated as being on the Pit River at Bush Bar, will be located on the left bank of said Pit River approximately 5,000 feet downstream from Bush Bar. These changes were made for economic reasons and will permit advantage to be taken of the additional head and the installation of larger generating units than previously contemplated for this plant.

(b) The four steel penstock lines, extending from the surge chamber to the power house, will each be approximately 1000 feet shorter than originally planned. As a result critical steel requirements have been materially reduced.

(c) Utilization of a greater static head at the new power plant location will result in the installation of turbines and generating units of greater capacity than previously planned, four 50,000 horsepower turbines and a like number of 40,000 kva generators having been substituted for four 45,000 h.p. turbines and four 35,000 kva generators. Economy in the use of transmission facilities will result from the proposed increase in plant capacity. Corresponding changes will be made in related equipment, such as transformers and oil circuit breakers."

Applicant further points out that on the basis of said revised plans, the Federal Power Commission issued its order on or about June 2, 1942, authorizing amendments of licenses for the Pit No. 3 and 4 units - Projects No. 232, 233 - California, so as to consolidate the licenses of Pit No. 3 and 4 units and to include the Pit No. 5 Project, and on or about July 15, 1942 the Federal Power Commission executed an amended license covering all three of said units. Copies of said order of June 2 and that of amended license dated July 15, 1942 are made a part of this application as Exhibit "A."

Very briefly it may be stated that the development of Pit No. 5 Project will involve the construction of a diversion dam, diversion conduit, open canal, pressure tunnel and connecting penstock lines, control mechanisms, standpipes and surge chamber. A power house, substation and switchyard are to be constructed, and the generating units will consist of four 50,000 h.p. turbines, each directly connected to a 40,000 kva generator. There will also be two high tension transformer banks, with necessary oil circuit breakers which will connect with and deliver the output of plant to Applicant's transmission system. There likewise is involved, the construction of additional transmission circuits and, at the present time, due to the necessity of conserving critical materials, the new transmission construction will be limited essentially to that of connecting the Pit No. 5 Plant with existing circuits at a terminal known as Round Mountain. At a later date, and when conditions permit, additional circuits will be constructed between Round Mountain and Applicant's Vaca-Dixon Substation, involving an additional expenditure of approximately \$5,000,000. Applicant further alleges that said transmission lines will be constructed almost entirely on private right-of-way, although at a number of locations the lines will cross over or be located upon certain roads, highways and other public places in the County of Shasta. Applicant further states that it is now in possession of the necessary county franchise and a certificate which has heretofore been issued by this Commission which will permit the construction and operation of said transmission lines.

The estimated cost of the Pit No. 5 Project, as testified by Applicant's witness, Henry B. Lutge, is as follows:

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| Lands and Rights | \$ 261,000 |
| Diversion Dams | 727,000 |
| Tunnel and Intake | 9,325,000 |
| Storage Tank | 529,000 |
| Penstocks | 1,607,000 |
| Power House Building and Tailrace | 648,000 |
| Power House Equipment | 5,906,000 |
| High Tension and Step-Up Transformers | 1,194,000 |
| General Improvements | 159,000 |
| Permanent Roads | 264,000 |
| Transmission Line to Round Mountain | <u>660,000</u> |
| Subtotal | \$21,280,000 |
| Substation Additions at Newark & Contra Costa | <u>3,750,000</u> |
| Grand Total | \$25,030,000 |

It is of record that Applicant intends to meet the payments for the above expenditures, involved in the construction of the project, out of income and from funds in its treasury or from such funds as it may secure from the issuance of securities as this Commission may hereafter authorize for the purpose.

Mr. P. M. Downing, Vice President and General Manager of Applicant, testified as to the general nature of the project and, particularly, as to his company's system production capability and the increasing consumer load. Such consumer load, he stated, was being materially accelerated by reason of industries engaged in war necessities. This, in Mr. Downing's opinion, clearly required the addition of new production capacity, such as would be developed by Pit No. 5. It was further stated that the project is now well under way and that actual electric generation is scheduled for late in the year 1943. The project was also deemed to be an economical development and one in which resulting production costs would compare favorably with other current developments.

Although this Sixth Supplemental Application does not seek a new amended certificate but merely an authorization to approve the construction and the carrying to completion of the Pit No. 5 power development, it is my opinion that, because of the long lapse of time, the importance of the project and the material changes in the plans, any authorization now given should include the granting of a new certificate. The record clearly justifies the need of the added production capacity and, further, the project appears to be a reasonably economical one and thus, in my opinion, Applicant should be authorized to carry to completion the Pit No. 5 power development.

O R D E R

A public hearing having been had in the above entitled application, there being no protests, the matter having been fully considered and it appearing and being found as a fact that public convenience and necessity so require, Pacific Gas and Electric Company is hereby granted a certificate to construct, operate and maintain and to develop an electric power supply

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and to transmit it to its general transmission system from the Pit No. 5 power project discussed in the foregoing opinion, subject to the condition, however, that no claim of value shall ever be made for the certificate herein granted in excess of the actual cost thereof.

The foregoing Opinion and Order are hereby filed as the Opinion and Order of the Railroad Commission.

The effective date of the Order shall be the date hereof.

Dated at San Francisco, California, this 1st day of December

1942.

Justin D. Cooney
Frank S. Haverly
Richard H. Hatcher
Commissioners.