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APR 23 1992

Decision 92-04-059 April 22, 1992

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ORIGINAL

In the Matter of the Application of Southern California Edison Company for a certificate that the present and future public convenience and necessity require or will require Edison to construct and operate a 220 kV double-circuit transmission line between the Kramer Substation and the Victor Substation in San Bernardino County, California.	Application 89-03-026 (Filed March 20, 1989)

(Appearances are listed in Appendix A.)

O P I N I O N

This decision resolves outstanding issues in Phase II of this proceeding by allocating the costs of certain transmission line facilities between the ratepayers of Southern California Edison Company (Edison) and California Energy Company (CalEnergy). CalEnergy is a qualifying facility (QF) which requires the interconnection facilities for its operations in the Mohave Desert. We find that CalEnergy should pay for 23.8% of the costs of certain capacitors and transformers and 100% of the unallocated costs of other subject facilities.

I. Background

Edison filed this application seeking a certificate of public convenience and necessity for construction of transmission facilities between the Kramer and Victor Substations in the Mohave Desert. The facilities were constructed to interconnect generating plants owned by CalEnergy and Luz International Ltd (Luz) to Edison's system.

We have already issued Decision (D.) 90-09-059 in Phase I of this proceeding, allocating slightly over half of the transmission line costs between Edison's ratepayers, CalEnergy, and Luz. D.90-09-059 approved a settlement reached between Edison and Luz which resolved all cost allocation issues as they pertain to Luz. The Commission allocated to CalEnergy a proportional share of the total costs of the Kramer-Victor 220 kV line, about 24%. We allocated to ratepayers all costs which were not allocated to CalEnergy or Luz, about 31%.

In D.90-09-059, we stated our intent to determine, in a second phase of this proceeding, remaining allocation issues as they pertain to CalEnergy. In this part of the proceeding, we address transmission facilities which are ancillary to the main 220 kV line. The ancillary facilities include a 115 kV temporary transmission line between the Kramer and Victor Substations ("115 kV rebuild"), 500/220 kV 1120 MVA transformers installed at the Lugo Substation ("Lugo transformers"), and the Inyokern-Kramer 220 kV line ("220 kV line").

Pursuant to a ruling of the assigned administrative law judge, hearings in this proceeding did not consider the reasonableness of costs incurred by Edison. Accordingly, this decision determines the allocation of costs but not the reasonableness of them. Division of Ratepayer Advocates (DRA) has stated its intent to consider reasonableness at a later time. CalEnergy has stated its intent to file a complaint against Edison regarding the appropriateness of the facilities it installed and their costs.

II. Standards for Determining Cost Allocation of the Facilities

A major issue in this proceeding has been the standard under which the Commission will determine how to allocate costs. In Phase I of this proceeding, the issue was hotly litigated. The Commission initially considered the issue of who should pay for transmission upgrades associated with new QF developments in D.85-09-058. In that decision, we found generally that facilities which do not provide benefits to ratepayers (or "system-wide benefits") should not be paid for by ratepayers but by the QFs who require them to interconnect to the utility system. Ratepayers would pay for facilities which provided system-wide benefits. We affirmed this policy in D.90-09-059 in Phase I of this proceeding.

DRA recommends in this proceeding that where ratepayers receive only a partial benefit from a facility, costs be allocated according to that benefit. CalEnergy objects to DRA's proposal. DRA's proposal has considerable conceptual appeal. However, D.90-09-059 rejected a strict cost-benefit approach on the basis that we have not defined parameters for undertaking cost-benefit analysis and would therefore await a determination in long-run avoided cost proceedings. D.85-09-058 did recognize, however, that where a facility's cost outweighs its benefits "QFs perhaps should be responsible for any excessive cost." Consistent with D.85-09-058 and D.90-09-059, we will allocate costs to CalEnergy where no system-wide benefits are shown. Where costs clearly exceed system-wide benefits, we will consider whether the QF should share some of the costs.

CalEnergy raises the issue of burden of proof. It argues that Edison, as the applicant, must carry that burden with respect to obtaining the relief it seeks. We agree. It is Edison's burden to demonstrate the reasonableness of its proposals in the first instance. Once it has provided reasonable support for its proposals, however, it is up to opposing parties to demonstrate the superiority of their own proposals or provide evidence which rebuts the applicant's position. This is consistent with our finding in Phase I of this proceeding in which we found that parties who asserted that the 220 kV line provided system-wide benefits had not met their burden to "clearly demonstrate that the proposed project will provide system-wide benefits."

III. Positions of the Parties

Edison and DRA argue that the facilities which are the subject of this part of this proceeding provide no system-wide benefits. Both believe all of the facilities were constructed solely for the purpose of interconnecting projects owned by Luz and CalEnergy. Consequently, Edison and DRA recommend that all associated costs be borne by Luz and CalEnergy. Because D.90-09-059 resolved all cost allocation issues for Luz, Edison and DRA recommend that CalEnergy bear all remaining costs of the subject facilities. Edison initially proposed certain costs be allocated to ratepayers, as discussed below.

CalEnergy argues that all of the subject facilities provide system-wide benefits and that, therefore, ratepayers should bear the costs of the facilities.

The parties' positions on each facility are discussed below.

A. The 115 kV Rebuild

1. Reduction of Line Losses

When power travels between two points on an electrical transmission line, a portion of the power is lost primarily due to the heating of the line. Line losses are proportional to the resistance of a line and to the square of the current flowing in the line.

CalEnergy claims that the 115 kV rebuild reduces line losses. Edison and DRA argue that any system-wide benefits from reduced line losses are already recognized in avoided cost payments. Recognizing the reduced line losses again, therefore, would be double-counting the benefit. DRA points to D.82-12-120 which states that the Commission would not make individual line loss adjustments for remote QFs and would instead aggregate line losses for all QFs.

Edison adds that net line losses will actually increase over its system by $3-7 million per year prior to the completion of the 220 kV Kramer-Victor line because of the new QF generation. After that, according to Edison, line loss savings will be less than $1 million per year. Also, as pointed out by DRA in its comments on the Proposed Decision, Luz's bankruptcy now makes completion of the 220 kV line a highly questionable proposition.

CalEnergy states that DRA and Edison misconstrue the Commission's treatment of line losses in avoided cost calculations. According to CalEnergy, line loss savings attributable to QFs and those attributable to a specific line rebuild are distinguishable. It believes the line loss savings in this case are not attributable to the QF but to the 115 kV rebuild itself. CalEnergy comments that these reduced line losses would accrue to Edison's ratepayers whether the rebuild had been constructed to accommodate a QF project or one of Edison's own projects. CalEnergy believes, therefore, that ratepayers receive system-wide benefits from the rebuild that are not recognized already in avoided cost payments.

2. <u>Other Potential System-wide Benefits</u>

CalEnergy believes ratepayers will realize system-wide benefits other than line loss savings from the 115 kV rebuild. First, CalEnergy believes that load growth in the Kramer-Victor area would have required the construction of the 115 kV rebuild by 2008. On this basis, CalEnergy estimates the net present value of benefits to ratepayers from the line to be about $4 million.

Edison does not agree, arguing that regional growth will not require the additional transmission facility within the forseeable future. Edison rejects CalEnergy's assumption of 17% annual load growth in the area, characterizing the estimate as "absurd."

Second, CalEnergy argues that the construction of the 115 kV rebuild allows Edison to defer installation of a third transformer bank at Victor Substation, saving ratepayers about $2.6 million. These transformer banks would convert 220 kV power to 115 kV power which, in this case, is required in order to serve regional load when back-up power is needed. Instead of converting 220 kV power, the utility may simply use power over a 115 kV line, such as the subject 115 kV rebuild. CalEnergy states the 115 kV rebuild will displace an additional transformer bank. Edison takes issue with CalEnergy's assessment. Edison states that it has several alternative sources of 115 kV power if it requires back-up power in the area. Edison also argues that it will require a transformer upgrade at Victor when load in the area hits 559 megawatts (MW) with or without the 115 kV rebuild.

Third, CalEnergy states the construction of the 115 kV rebuild increases the amount of capacity that can be delivered from the area north of Kramer to Edison's system. CalEnergy believes a change made to Edison's remedial action scheme (RAS, an operational plan used, in part, to establish when power curtailments over a line are necessary) demonstrates its point. Prior to the 115 kV rebuild, the RAS required curtailments when power over the Kramer-Lugo lines reached 900 MW; after the rebuild, the RAS requires curtailments when power over the Kramer-Lugo lines reaches 950 MW. The 50 MW increase in deliverable power, according to CalEnergy, results from the 115 kV rebuild.

Edison asserts that the change to the RAS does not show that additional power can be delivered to its system. According to Edison, the portion of the RAS to which CalEnergy refers concerns power over the 220 kV Kramer-Lugo line. The 115 kV rebuild in no way changes the thermal rating of that line or the amount of power which can be transmitted over it. Edison also states that before the 115 kV rebuild, the RAS provided for automatic curtailments when power flows exceeded 900 MW; since the 115 kV rebuild, the RAS provides for manual curtailments when power flows exceed 950 MW. Edison adds that changes to the RAS were necessitated by the energy brought into the system by CalEnergy and Luz and cost approximately $1 million.

Finally, CalEnergy believes the existing 115 kV line was old and substandard and that the rebuild would have been required for safety reasons in the near future notwithstanding the additional QF power in the area. Edison states the line would have been safe and useful for the forseeable future.

<u>Discussion.</u> CalEnergy has not demonstrated that the 115 kV rebuild will provide system benefits. The evidence does not demonstrate that the 115 kV line would have been required to accommodate regional load growth by the year 2008. CalEnergy's estimates require an assumption that load in the Mohave Desert will increase sixteen-fold over a sixteen-year period. We concur with Edison that CalEnergy's regional load growth estimates are highly improbable and are not supported by independent documentation.

We also doubt whether the 115 kV rebuild allows Edison to defer a third transformer bank at the Victor Substation. Edison admitted that it will use the 115 kV rebuild for back-up power just as it used the pre-existing 115 kV line for that purpose. Nothing in the record, however, suggests that Edison would have required a third transformer bank at the Victor Substation in the near future or that existing 115 kV capacity would not have been adequate without the 115 kV rebuild.

Neither does CalEnergy show that the 115 kV rebuild will increase system capacity. Changes to the RAS may lend credence to CalEnergy's conclusion that the 115 kV rebuild increased system capacity. However, the RAS alone does not demonstrate the 115 kV rebuild increased system capacity. Edison may have changed its operational procedures for any of several reasons. The critical issue is whether the 115 kV rebuild increased capacity over the Kramer-Lugo 220 kV line or other lines. CalEnergy does not provide evidence to support this claim.

Finally, on balance, system-wide line losses will increase over the life of the project. The record shows that line losses could decrease slightly on Edison's system once the Kramer-Victor line is completed. However, as Edison demonstrates, line losses over its system will increase substantially between the period 1990 and 1992, prior to construction of the Kramer-Victor 220 kV line, as a result of CalEnergy's QF project. In sum, when both periods are taken into account, and especially given the uncertainty now whether the 220 kV line will be built, we must conclude that the overall effect of the 115 kV rebuild will be to increase line losses.

B. Lugo Transformers

In order to accommodate the facilities of CalEnergy and Luz, Edison upgraded the transformers at the Lugo Substation. The transformers increased the capacity at Lugo from 100 MVA (the amount of power which can safely flow across the transformers) to 240 MVA. CalEnergy states that its facilities require only 12.1% of the added capacity. The excess capacity on the transformers, according to CalEnergy, represents a system-wide benefit and should be paid for by Edison's ratepayers.

CalEnergy supports its argument by pointing to Edison's plans for interconnecting a biomass plant and a geothermal plant at Kramer. It also points to Edison's testimony that Texaco has an option to purchase the Coolwater 5 facility which would use the increased capacity of the upgraded Lugo transformers. Finally, CalEnergy refers to Edison's filing in the Commission's transmission access investigation (I.90-09-050), in which Edison proposed transformer upgrades at Lugo prior to the addition of CalEnergy's and Luz's power.

DRA and Edison state the upgraded Lugo transformers were required solely to accommodate CalEnergy and Luz power. Edison states it did not plan to upgrade the transformers. It also argues that the plans to which CalEnergy refers concern interconnection facilities involving or affecting other utilities. The transformers, according to Edison, are not interconnection facilities affecting other utilities. Edison proposes that CalEnergy pay for 23.8% of the cost of the Lugo transformers. This is the same percentage D.90-09-059 allocated to CalEnergy for the costs of the Kramer-Victor line.

DRA opposes Edison's proposal to require ratepayers to bear 76.2% of the costs of the Lugo transformers. It states that Edison foresees no system-wide benefits from the transformers, but would allocate a large share of their costs to ratepayers anyway because of a faulty interpretation of the Phase I decision. In that decision the Commission allocated a share of certain expenses to ratepayers after concluding the parties had not presented enough evidence to show system-wide benefits. DRA believes there have been ample time and opportunity for the parties to demonstrate system-wide benefits in Phase II.

CalEnergy characterizes DRA's proposed allocation as unfair and discriminatory on the basis that Luz will use capacity on the transformers but will not pay for a share of their installation. DRA would have CalEnergy pay for all of the costs of the transformers which, according to CalEnergy, is contrary to Commission policy.

Discussion. It is unclear whether the Lugo transformers will provide system-wide benefits. Edison may be able to use the excess capacity at the Lugo Substation as new projects come on line in the area. Edison's rebuttal that the facilities do not affect other utilities does not convince us otherwise. On the other hand, the record does not demonstrate near-term system-wide benefits. In the case of the Lugo transformers, we believe a compromise is possible which is very fair to both CalEnergy's and Edison's ratepayers.

The settlement adopted in Phase I of this proceeding resolved all cost allocation issues as they affect Luz, as explained earlier. The settlement did not allocate any costs of the Lugo transformers to Luz. In D.90-09-059, we declined to allocate to CalEnergy all costs of a facility where Luz paid nothing under the terms of the settlement. Consistent with our earlier decision, we allocate to CalEnergy 23.8% of the costs of the Lugo transformers.

C. 220 kV Line

In interconnecting its facilities to Edison's system, CalEnergy installed a 220 kV conductor on existing Edison towers near Inyokern. Edison permitted this use of its towers, saving CalEnergy about $15 million which it would have otherwise had to spend securing rights of way and constructing towers. The parties do not dispute that there are no system-wide benefits associated with the 220 kV line. CalEnergy proposes, however, that the Commission order Edison to reimburse CalEnergy if Edison eventually uses the facility following an upgrade of its Inyokern Substation.

Edison states it has no plans to use the facilities and opposes CalEnergy's proposal to leave cost allocation for the facilities open-ended. DRA argues that CalEnergy has received substantial benefits from the use of the towers. DRA believes that ratepayers are put at risk for foregoing the use of the capacity on the towers and should therefore not assume any additional costs in the future.

Discussion. Edison provided CalEnergy with capacity on its towers at no charge to CalEnergy, saving CalEnergy an enormous investment. We agree with DRA and Edison that ratepayers have "shared" enough of their assets with CalEnergy and should not bear any future costs associated with the line. The line provides no system-wide benefits. The record does not show that system-wide benefits are anticipated in the near future. Moreover, there is no evidence to suggest that Edison's use of the conductor would impose any incremental cost on CalEnergy. CalEnergy cannot expect both free use of Edison's towers and "reimbursement" when CalEnergy's facilities are used in ways which impose no costs on CalEnergy. Accordingly, we will not require Edison or its ratepayers to reimburse CalEnergy at some future date if Edison does upgrade the Inyokern Substation.

D. Other Ancillary Facilities

Edison installed certain other facilities in order to interconnect Luz and CalEnergy. Those facilities include Kramer Substation capacitor banks, telecommunications, and a 220 kV operating bus at Kramer. CalEnergy does not argue on brief that any of these facilities provide system-wide benefits to ratepayers and the evidence does not support a finding of such benefits.

Edison recommends that CalEnergy be allocated 23.8% of the cost of the capacitor banks. Under the terms of the settlement between Luz and Edison, Luz paid 25.8% of the costs of the capacitor banks. As a matter of fairness to CalEnergy, we will adopt Edison's recommendation that CalEnergy pay for only 23.8% of the cost of the capacitor banks even though we cannot make a finding of system-wide benefits. This percentage reasonably reflects CalEnergy's use of the capacitor banks relative to Luz's use of the capacitor banks.

The unallocated costs of other ancillary facilities will be allocated to CalEnergy.

Findings of Fact

1. D.90-09-059 resolved all outstanding cost allocation issues as they pertain to Luz.

2. This proceeding addresses the allocation but not the reasonableness of costs incurred by Edison in interconnecting the QF projects of Luz and CalEnergy.

3. The record in this proceeding shows that the 115 kV rebuild will increase net line losses over the life of the project.

4. The record does not demonstrate that the 115 kV line will be required to accommodate regional growth.

5. The record does not demonstrate that Edison would have required a third transformer bank at the Victor Substation within the foreseeable future.

6. Edison's amendment to its RAS does not by itself demonstrate that the 115 kV rebuild increased system capacity by 50 MW.

7. The cost of the 115 kV rebuild is approximately $11 million.

8. It is unclear whether the Lugo transformers will provide system-wide benefits, although it appears possible that Edison may be able to use the excess capacity on the transformers.

9. It is reasonable to allocate to CalEnergy 23.8% of the costs of the Lugo transformers.

10. Edison permitted CalEnergy to install the 220 kV line conductors at no charge to CalEnergy. The conductors installed on Edison's towers benefited CalEnergy but provide no system-wide benefits.

11. The record does not show that Edison's future use of the 220 kV conductors will impose any incremental costs on CalEnergy.

12. The record does not demonstrate any system-wide benefits associated with other ancillary facilities which are the subject of this proceeding.

13. It is reasonable to allocate to CalEnergy 23.8% of the costs of the Kramer Substation capacitor banks.

Conclusions of Law

1. The Commission should allocate to CalEnergy all of the unallocated costs of the 115 kV rebuild.

2. The Commission should allocate to CalEnergy 23.8% of the costs of the Lugo transformers.

3. The Commission should not leave open the question of whether Edison's ratepayers should have to pay for the use of the 220 kV line conductors in the future.

4. The Commission should allocate to CalEnergy 23.8% of the costs of the Kramer Substation capacitor banks.

5. The Commission should allocate to CalEnergy all of the unallocated costs of other ancillary facilities which are the subject of this proceeding.

ORDER

IT IS ORDERED that:

1. All unallocated costs of facilities which are the subject of this proceeding shall be allocated to California Energy Company, Inc. (CalEnergy) except that 23.8% of the costs of the capacitor banks at the Kramer Substation and 23.8% of the costs of the Lugo transformers shall be allocated to CalEnergy.

2. Because this decision resolves all outstanding matters in this proceeding, this proceeding is closed.

This order becomes effective 30 days from today.

Dated April 22, 1992, at San Francisco, California.

DANIEL Wm. FESSLER
President
JOHN B. OHANIAN
PATRICIA M. ECKERT
NORMAN D. SHUMWAY
Commissioners

I CERTIFY THAT THIS DECISION WAS APPROVED BY THE ABOVE COMMISSIONERS TODAY

Neal J. Shulman

NEAL J. SHULMAN, Executive Director

APPENDIX A

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(END OF APPENDIX A)