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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of)
PACIFIC GAS AND ELECTRIC COMPANY for)
Approval of an Electric Service)
Agreement with Trustees of)
California State University on)
Behalf of California Polytechnic)
State University - San Luis Obispo.)

(EAD)
Application 89-10-020
(Filed October 15, 1989)

U-39-E

OPINION

Pacific Gas and Electric Company (PG&E) seeks accelerated approval of its Conservation Offer Agreement (Agreement) with the Trustees of California State University (Trustees) on behalf of California Polytechnic State University at San Luis Obispo (Cal Poly). The Agreement was executed on October 4, 1989 and is intended to avoid Cal Poly's construction of a 2.8 megawatt (MW) cogeneration facility to bypass PG&E's electric service. Cal Poly has a base demand in excess of 1 MW, and therefore qualifies to negotiate a special contract with PG&E. The Trustees have agreed that the Cal Poly campus will remain on Rate Schedule E-20P at primary service voltage for five years. During this time, an Outside Source Adder¹ will be paid to PG&E for all electric energy that Cal Poly consumes which is not sold by PG&E, except for a maximum 700 kilowatts (kW) of Cal Poly-owned cogeneration. In exchange, PG&E will grant Cal Poly the benefit of a negotiated rate for electricity.

1 The Outside Source Adder will be equal to the difference between the revenues which PG&E would have received under the E-20P-Firm Schedule and PG&E's marginal costs at that time.

The Trustees have elected to receive the negotiated rate in the form of a conservation payment rather than as an ongoing rate discount. The conservation payment is the present value of the difference between Cal Poly's contribution to margin if it remained on the E-20 Rate Schedule and Cal Poly's contribution to margin if it took the conservation option (adjusted for the effects of conservation) and avoided cogeneration, over the term of the agreement. Under this methodology, the present value of the difference in contribution to margin is \$750,000, expressed in 1990 dollars (Application p. 58). However, the calculations which produce the conservation payment² yield a difference in contribution to margin of \$691,333 (present value of discount plus present value of lost contribution to margin due to conservation) (Application p. 63). The difference is due in part to the use of PG&E's weighted cost of capital of 11.5% to discount cash flows in the calculation of contribution to margin, and the use of PG&E's currently authorized return on equity, 13%, to arrive at the conservation payment. The use of different inflation rates also contributes to the disparity. The net present value of the total rate discount, minus the lost contribution to margin due to conservation, is reduced by 2% to compensate PG&E for administering the conservation account. The result is the maximum conservation payment, \$586,074. Since the negotiated rate (\$0.05887) exceeds the average rate of the cogeneration alternative (\$0.05854/kWh), it is clear that the conservation payment is based on the bypass alternative, not on PG&E's marginal cost (currently \$0.05180/kWh).

² The current negotiated rate (\$0.05887/kilowatt-hour (kWh)) is subtracted from the current tariff rate (\$0.06533/kWh) to arrive at a current discount. This is escalated at the change in the consumer price index for each year of the contract term, then discounted at PG&E's current authorized rate of return on equity, multiplied by Cal Poly's current usage.

PG&E will make the \$586,074 available to the Trustees to install specific energy conservation measures at the Cal Poly campus. The conservation payment will be placed in an account by PG&E. When Cal Poly elects to install a specific conservation measure and PG&E concurs that the proposed project meets the Commission's guidelines for conservation options listed in Decision (D.) 88-07-058), funds will be disbursed to contractors in accordance with State Accounting Methods.³ Conservation payments will be made at the time of approval by the Commission so that Cal Poly will see the benefits of the Agreement by the estimated operation date of the cogeneration project, January 1, 1991.

This application was filed in the Commission's Expedited Application Docket (EAD), set out in Resolution ALJ-161 (April 12, 1989). Notice of the application appeared on the Commission's Daily Calendar on October 26, 1989. No protests have been received. However, the Commission's Division of Ratepayer Advocates (DRA) did file "Comments of the DRA of the Proposed Contract." PG&E, in turn, has filed its "Comments of Pacific Gas and Electric Company" in response. Given the fact that there were no official protests, there is no need for a workshop or evidentiary hearing.

Cal Poly is compelled by the Energy Conservation Action Plan adopted by the Trustees to reduce its energy use by 40% compared to base year 1973/74. Cal Poly has been able to reduce its energy use by 48%. It has investigated additional means of energy conservation with the State's Office of Energy Assessment and selected a Solar Centaur gas turbine. The cogeneration project

³ The four most likely projects include a boiler replacement, an energy management control system upgrade, and two lighting retrofits. Savings were calculated by Cal Poly and verified by PG&E as meeting the Total Resource Cost test of the cost-effectiveness of conservation measures.

would have served a maximum 2.8 MW of Cal Poly's current 5.3 MW of maximum demand.

In January 1988, Cal Poly and PG&E began negotiations for the deferral of the cogeneration project. Because of the need to meet Cal Poly's energy reduction commitment, Cal Poly sought the conservation option in lieu of any rate reduction.

In an affidavit attached to the application, PG&E's expert declared that PG&E's standard tariff rates under Schedule E-20P-Firm are not competitive with Cal Poly's cost of building and operating a cogeneration plant. He also concludes that the project is technically and financially feasible, and that an air quality permit would have been issued subject to the installation of the proper air pollution control equipment. The details of the cogeneration project appended to the application demonstrate that reasonable assumptions concerning net plant output, availability factor, total installed cost, operation and maintenance costs, lifetime heat rate, boiler efficiency, and permitting feasibility were used to arrive at the average cost of the cogeneration alternative. Cal Poly's representative declared that if the proposed Agreement is not approved by the Commission, Cal Poly will proceed to complete its cogeneration project.

Had Cal Poly proceeded with its cogeneration project, Cal Poly's contribution to margin would have dropped from \$3.68 million to \$817,000 in present value terms. Instead, under the conservation offer PG&E is expected to retain about \$2.93 million in contribution to margin. The difference consists of the present value of the conservation payment plus reduction in energy and demand revenues due to conservation.

Discussion

In D.88-03-008, guidelines for these special contracts were adopted to accelerate review under the EAD procedure. The Commission realized that greater societal gains would be possible if the need for electricity were in fact reduced by the customer,

rather than continuously served by the utility. The Commission approved the use of a "conservation payment" to the customer in exchange for that customer's promise to remain on the utility system at tariffed or negotiated rates. So long as the combination of conservation payment and rate concessions did not exceed the value of the otherwise applicable rate discount, the other ratepayers of the utility would be indifferent to the customer's choice of conservation payment or negotiated rate. The negotiated rate must enable the utility to recover all of the costs it incurs in serving the customer under the contract, that is, it must not disadvantage other ratepayers in either the short or long run.

We observe the guidelines for special contracts set out in D.88-03-008. At the outset, we find that the contract between PG&E and Cal Poly is properly before us, as Cal Poly's demand exceeds 1 MW and PG&E has shown that Cal Poly would have pursued its cogeneration plans had a special contract not been negotiated. The term of the contract is five years, the limit for contracts designed to deter proposed self-generation. The price concession results in revenues to PG&E that exceed forecasts of PG&E's marginal energy, transmission and distribution, and capacity costs for the duration of the contract. Since Cal Poly has agreed to remain on the E-20 Schedule and accept its price concession in the form of a lump-sum conservation payment, the time of use requirement is met. PG&E asserts that the conservation options that it has evaluated with Cal Poly pass the Commission's total resource cost test. Since PG&E will dispense the funds to Cal Poly's contractors once it has certified that the specific job meets the Commission's guidelines for conservation options, the potential for misallocation of funds intended for demand side management (DSM) is minimized. The cost of the conservation option to PG&E does not exceed the present value of the total discount from tariff rates that PG&E and Cal Poly would have agreed to in the absence of the conservation option. The conservation payments

will be made from PG&E's authorized DSM budget. PG&E's existing DSM budget appears to be sufficient to fund Cal Poly's conservation payments. The reasonableness of these payments is subject to review in PG&E's Energy Cost Adjustment Clause (ECAC) proceeding.

In its filed comments, DRA expressed concern that PG&E may not have excess electric generating capacity during the entire term of the contract.⁴ DRA also fears that its lower capacity forecast would yield a smaller contribution to margin than estimated by PG&E. This is due to higher marginal cost under the DRA forecast for capacity compared with PG&E's.

Given the doubt it has cast on PG&E's capacity reserve margins, DRA believes it unwise to penalize Cal Poly for self-generation through the Agreement's Outside Source Adder. DRA recommends that PG&E be flexible enough to allow customers to reconsider self-generation in future contracts, as was done in its contract with Texaco (D.89-09-021). In the Texaco case, either party may cancel the contract by giving a year's notice.

PG&E responds that the Outside Source Adder does not preclude Cal Poly from cogenerating. In the event capacity is needed, PG&E's offer to qualifying facilities would reflect PG&E's need for resources and encourage cogeneration development. Cal Poly could sell its output to PG&E while remaining a PG&E customer. We note that since the Outside Source Adder is calculated as the difference between the E-20 Firm Schedule and PG&E's marginal costs of providing electric energy, if marginal energy costs increase in the short run and the E-20 rate remains unchanged, Cal Poly will have less of a disincentive to self-generate.

4 DRA testified in PG&E's test year 1989 general rate case proceeding (Application (A.) 88-12-005) that PG&E will require new generating capacity by the early 1990s. The Commission has not yet issued its decision in that case. ✓

As to the financial basis of the conservation payment, PG&E claims that the conservation option will improve Cal Poly's contribution to margin by avoiding the need for PG&E generation at high marginal costs. This may be true, but there is no record for such a finding at this time. While PG&E's marginal cost of service was not the basis for the conservation offer, it is a component in the calculation of contribution to margin. If marginal capacity costs are greater than forecast, the contribution to margin will decrease. In the worst case, since PG&E will be obligated to make the conservation payments, other ratepayers would be forced to subsidize Cal Poly's purchases of electricity at the E-20 rate. The Commission has sought to avoid this result by prohibiting the term of a contract from extending into any period when forecasts indicate that additional capacity will be needed to meet target reserve margins. (D.88-03-008, Ordering Paragraph 1.c.)

Since PG&E's marginal costs of production are currently less than Cal Poly's cost of self-generation, we think there is no problem so long as PG&E's forecast of capacity is accurate. However, in the event capacity reserves decline to the point that PG&E's marginal cost to serve the customer exceeded the basis of the conservation payment, i.e., the cost to Cal Poly of cogenerating, then Cal Poly should be encouraged to bypass PG&E. Retention of Cal Poly on the system at a discounted rate would be uneconomic.

Since we have provided that reviews of the reasonableness of special contracts will be reviewed in the utility's ECAC proceeding, and DRA's comments were not presented as a protest to the application, we will not pass on the adequacy of PG&E's marginal cost assumptions. In general, the option to cancel a special rate concession is desirable when capacity reserves may be running low. However, we note that PG&E and Cal Poly have negotiated a rate concession in the form of conservation payments. Since those payments equal the present value of a discount over

five years, cancellation of the special rate is impractical. The Commission has recognized DSM as a means of deferring the need for capacity additions and expressly provided the conservation alternative as a means of retaining utility customers. Given this policy, in the face of declining capacity reserves, we would be more willing to uphold the reasonableness of a negotiated contract containing the conservation option than a contract providing a discounted rate.

We note that the calculations of the conservation payment and calculations of lost contribution to margin incorporated different discount rates and inflation rates. In the future, we expect that applications such as this one will be supported by consistent assumptions.

DRA also questions the use of PG&E's DSM budget to fund the conservation payments due under the contract. The Commission recently affirmed that the direct costs of conservation items will come out of the utilities' existing budget for DSM. If the existing DSM budgets are exhausted, requests for additional funding for conservation items will be considered in connection with the approval of individual special contracts or conservation items. (D.89-05-067.) Since PG&E has not requested additional funding for DSM for nonresidential ratepayers, the sufficiency of PG&E's DSM budget is not an issue at this time.

Conclusion

The agreement between PG&E and Cal Poly should be approved because the contract meets the guidelines for special electricity sales contracts considered under the EAD procedure. DRA's reference to its testimony concerning PG&E's capacity reserve margins in A.88-12-005 is insufficient to base a finding that PG&E will incur marginal generating capacity costs in excess of its revenues under the negotiated rate. Given the fact that Cal Poly has chosen the conservation option, calculated as a lump sum, rather than a discounted rate over the five-year term of the

CEC recommends that SCE be required to base the DPV2 reevaluation upon the assumptions adopted in CEC's 1988 Electricity Report (ER7).¹⁰ In CEC's view, using the ER7 assumptions would accomplish the Commission's objective of consistency in planning assumptions, as described in the Joint Ruling. In addition, CEC argues that these assumptions are the only ones which have been recently adopted following extensive opportunity for comment and input by all interested parties. Moreover, the ER7 assumptions served as the base case for SCE's recent filing in the BRPU proceeding. Finally, CEC argues that using ER7 assumptions is appropriate because such assumptions represent a "conservative" view of the need for additional resources. In CEC's view, if SCE can justify the need for DPV2 using these ER7 planning assumptions, the PUC can feel comfortable proceeding on an expedited schedule as requested by SCE.

DRA, on the other hand, anticipates that the starting point of resource planning assumptions in the DPV2 reevaluation would be the same as the assumptions used by SCE in their merger filing. DRA and SCE would then vary those assumptions as necessary to determine the vigor of the project under changing conditions. In addition, SCE would be required to analyze DPV2 against a range of merger scenarios, which would be determined by the DRA. The objective of this analysis would be to account for the present level of uncertainty on relevant aspects of a potential merged entity. In DRA's view, to obtain approval for DPV2 prior to the decision on the agenda, SCE must show expected project benefits even in a merger scenario which proves to be a "worst-case" for DPV2.

¹⁰ CEC did not address the issues raised in SCE's Petition.

5. The conservation payment is net of a 2% administration fee retained by PG&E to administer Cal Poly's conservation account and disburse funds to Cal Poly's contractors once PG&E has concurred that the particular conservation measures selected by Cal Poly meet the Commission's Total Resource Test.

6. The Agreement results in no electric rate reduction to Cal Poly.

7. Retention of Cal Poly on Schedule E-20P plus liability for the conservation payment results in a contribution to margin over the five-year duration of the contract of approximately \$2.9 million, whereas the contribution to margin would have been \$817,382 had Cal Poly built the cogeneration unit (expressed in 1/1/90 dollars).

8. PG&E would receive \$691,333 to \$750,000 less in contribution to margin under the conservation payment scenario than under the status quo scenario over the five-year period. The difference includes the conservation payment plus the reduction in revenues, net of the marginal cost of production, due to conservation.

9. The Agreement complies with the standards set by this Commission in D.88-03-008 and in subsequent cases for the approval of special electric rate contracts designed to avoid bypass.

10. DRA does not protest the Agreement, subject to later reasonableness review.

11. No party has filed a protest to the Agreement.

Conclusions of Law

1. The Agreement should be approved.

2. PG&E is at risk for any ratemaking treatment of the Agreement that the Commission later determines to be unreasonable.

ORDER

IT IS ORDERED that:

1. The Conservation Offer Agreement (Agreement) between Trustees of the California State University on behalf of California Polytechnic State University, San Luis Obispo, and Pacific Gas and Electric Company (PG&E) is approved.

2. PG&E shall file the Agreement with the Commission Advisory and Compliance Division Energy Branch within 15 days after the effective date of this order.

3. The Agreement shall be marked to show that it was approved for filing effective the date of this order.

4. PG&E shall revise its List of Contracts and Deviations to include the Agreement and shall file revised tariff sheets with the Commission within 30 days of the effective date of this order.

This order is effective today.

Dated DEC 6 1989, at San Francisco, California.

G. MITCHELL WILK
President
FREDERICK R. DUDA
STANLEY W. HULETT
JOHN B. OHANIAN
PATRICIA M. ECKERT
Commissioners

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

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Wesley Franklin
WESLEY FRANKLIN, Acting Executive Director

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will be made from PG&E's authorized DSM budget. PG&E's existing DSM budget appears to be sufficient to fund Cal Poly's conservation payments. The reasonableness of these payments is subject to review in PG&E's Energy Cost Adjustment Clause (ECAC) proceeding.

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⁴ DRA testified in PG&E's test year 1989 general rate case proceeding (Application (A.) 88-12-005) that PG&E will require new generating capacity by 1990. The Commission has not yet issued its decision in that case.

early 1990's

contract, it would be inappropriate to condition approval of the contract on cancellation of the discount when PG&E's excess capacity is depleted. DRA's point is well taken, however. PG&E is cautioned to ensure that future contracts for electric rate discounts limit the availability of the discount to the period during which excess generating capacity exists. Otherwise, as excess capacity disappears and the marginal cost of generation increases, it will be extremely difficult to demonstrate that the negotiated rate protects the interests of PG&E's other ratepayers.

Findings of Fact

1. PG&E has filed an application under the EAD seeking approval of the "Conservation Offer Agreement Between Trustees of the California State University on behalf of California Polytechnic State University, San Luis Obispo and Pacific Gas and Electric Company."

2. Cal Poly's current maximum demand is 5.3 MW. The cogeneration plant which Cal Poly has agreed not to construct is technically, economically, and environmentally feasible. It would have provided 2.8 MW of capacity and become operational on or about January 1, 1991. PG&E has demonstrated a threat of bypass.

3. The Agreement provides Cal Poly a conservation payment of \$586,074 in exchange for its promise to remain an electric customer of PG&E at the primary voltage level on Schedule E-20P-Firm, and to pay PG&E an Outside Price Adder for all electricity consumed which is not provided by PG&E (except for a maximum of 700 kW of on-site cogeneration) for a period of five years.

4. The conservation payment is the product of the difference between the forecast of the otherwise applicable E-20 tariff rate and the average cost of Cal Poly's cogeneration alternative times Cal Poly's current demand level, for a period of five years, reduced to present value terms.