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Decision 89 07 029 JUL 6 1989

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Pacific Gas and Electric Company for Expedited Approval of Electric Service Agreement with International Business Machines Corporation of New York. U-39-E	Application 88-10-021 (Filed October 12, 1988)

Louis Vincent, Attorney at Law, for Pacific Gas and Electric Company, applicant.
Irene Moosen, Attorney at Law, for the Division of Ratepayer Advocates, protestant.
Adam L. Pomerantz, Attorney at Law, for IBM Corporation and Carol Schmid-Frazee, Attorney at Law, for Southern California Edison Company, interested parties.

OPINION

On October 12, 1988, Pacific Gas and Electric Company (PG&E) filed this application for accelerated approval of an electric service agreement between it and International Business Machines Corporation of New York (IBM). PG&E and IBM executed the agreement on July 21, 1988 for electric service delivered to IBM's plant in San Jose, California, under negotiated rates.

By this decision, we deny PG&E's application.

I. Procedural Background

PG&E filed this application pursuant to the Expedited Application Docket (EAD) which was made effective on an experimental basis by Resolution ALJ-159 issued on June 15, 1987.

The original purpose of the EAD procedure was to provide a rapid response to requests for approval of special service contracts offered expressly to prevent a customer from bypassing the utility's electric system or from substantially reducing its requirements by fuel switching.

On November 1, 1988, the Division of Ratepayer Advocates (DRA) filed a protest to the application, arguing that the contract does not meet the special contract guidelines established for the EAD procedure in Decision (D.) 88-03-008. DRA cites three primary conditions required under D.88-03-008 which are not met by the proposed contract terms. First, DRA believes IBM's cogeneration project does not pose a credible threat of IBM imminently leaving the system.

Second, DRA states that the EAD guidelines call for a rate evaluation of the special contract based upon the time when the customer would have begun independently generating power. In DRA's opinion, this date is indeterminable under the present agreement.

Third, DRA finds that the contract terms extend the contract into a period when PG&E will need additional capacity, contrary to the EAD guidelines in D.88-03-008.

Under the EAD procedure, if a protest to the application is filed, a workshop is to be set and noticed not less than 27 days after the filing of the application. Accordingly, the assigned administrative law judge (ALJ) noticed and held a workshop on November 10, 1988. During that workshop, PG&E explained the terms of its contract and argued that it is appropriately the subject of the EAD procedure. PG&E and DRA subsequently filed reports on the outcome of the workshops.

DRA's report to the ALJ states that it continued its investigation of the proposed contract following the workshops but could not resolve the many unanswered questions raised at the workshop. DRA's report also found that the contract may present

undue risks to PG&E's ratepayers and should therefore be the subject of a regular application process during which hearings would be held.

PG&E's report argues that IBM's project does present an imminent bypass threat, and that the terms of the contract should not extend into any year when forecasts indicate that additional capacity will be needed to meet target reserve margins. PG&E's report also provides an analysis of the expected value of the project to ratepayers under different scenarios, showing that net revenues will be positive under any set of assumptions it used.

Subsequently, on December 27, 1988, DRA filed a motion to dismiss the EAD application. DRA's motion states that PG&E withheld information central to the issues in the proceeding and that it abused the EAD procedure by introducing such information in the context of its status report and numerous informal contacts. The assigned ALJ denied DRA's motion, but agreed with DRA that the IBM contract should not be the subject of the EAD procedure. The ALJ set forth a hearing schedule and dates for mailing testimony.

One day of hearing was held on March 8, 1989. The case was submitted on March 31, 1989.

II. PG&E's Application

In the present application, PG&E asks for approval of its agreement with IBM, which was negotiated to avoid bypass at IBM's General Products Division (GPD) facility in San Jose. PG&E states that such an agreement would "capture substantial benefits for PG&E's ratepayers."

IBM has at its San Jose facility an electrical generation plant which is designed to provide back up power to IBM in the event that PG&E's system fails. In 1984, IBM developed plans to modify its back up system to a 65 megawatt (MW) cogeneration project, which IBM expected would provide it with most of its

electricity requirements. In late 1986, PG&E initiated discussions with IBM for special rates in an effort to keep IBM on PG&E's system. By that time, IBM had obtained the necessary permits to construct the plant and planned project start up for July 1991.

IBM currently receives electric service from PG&E under schedule E-20T, Curtailable B. According to PG&E, its standard tariff rates are "not perceived by IBM to be competitive with its cost of building and operating a cogeneration unit." PG&E estimates electric sales to IBM are providing an annual contribution to margin of $7.7 million. PG&E estimates that it will save $5.5 million in contribution to margin if the contract is approved and IBM stays on PG&E's system.

The terms of the subject contract are:

> **Contract Length and Effective Dates.** The contract terms are in effect for five years. The contract becomes effective two years after IBM gives notice to PG&E. IBM may give notice any time within two years after the Commission approves the contract, a period during which IBM has contract rates for non-firm service which are lower than the costs of a cogeneration plant. IBM may cancel the contract after providing one year notice to PG&E.
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> **Rates.** Tariffed rates apply prior to the four-year activation period. Negotiated rates apply for the five-year contract term. Special rates include a fixed monthly charge and a time-of-use energy charge. Fixed monthly charges are based on the "fixed" costs of the cogeneration system; energy charges are based on the "variable" costs of operating the cogeneration plant. Both are escalated according to various indices.
>
> **Floor and Ceiling Limitations.** Rates are subject to floor and ceiling limitations. The floor price is based on PG&E's Standard Offer 1, plus allowances for marginal costs of generation and transmission capacity. The ceiling price is the otherwise applicable standard tariff, E-20T. If short-run marginal

> costs rise above the tariffed rate, the contract price rises accordingly. In this event, IBM may cancel the contract on 12 months' notice.

III. Major Issues

DRA raised a number of issues in this proceeding. DRA questions whether IBM's cogeneration project presents a real threat of bypass. It doubts that the contract is cost-effective to ratepayers, arguing that PG&E may require additional capacity during the contract period and that PG&E's economic analysis is flawed.

A. Does the IBM Cogeneration Project Present a Threat of Bypass of PG&E's System?

DRA believes that it is doubtful that IBM's project presents a threat of bypass of PG&E's system in large part because IBM's cogeneration plant is much less economical than it was when it was first designed in 1984. Specifically, DRA points out that IBM's tariffed rates have fallen about 40% since 1986.

PG&E testified that it does not believe IBM's cogeneration plant is cost-effective to IBM. Nevertheless, PG&E is convinced that IBM believes the project is economical and will leave PG&E's system if its contract with PG&E does not become effective. IBM did not testify in the proceeding.

DRA does not take issue with PG&E's assumption that IBM can obtain or has obtained all necessary construction permits for the cogeneration plant. It also agrees with PG&E's estimates of the costs of the cogeneration plant. Both PG&E and DRA express some doubts, however, as to whether IBM's cogeneration plant would retain "qualifying facility" (QF) status under federal guidelines because of design shortcomings. If the plant does not retain QF status, the plant will be less economic to build because IBM would

not realize the benefits of cogeneration gas rates or power sales to PG&E.

Discussion. DRA convinces us that IBM's project may no longer be economical to IBM because of changed circumstances. IBM's electrical rates have fallen significantly since 1984, and we have stated our intention to continue moving rates closer to cost in order to prevent uneconomic bypass. Other complications, such as the plant's questionable QF status, are likely to affect to a lesser extent IBM's decision regarding whether to build the plant. Further, IBM's delay in building the plant suggests it has had some reservations regarding the cost-effectiveness of the project. Completion of this plant, now scheduled for 1991, was originally anticipated to be 1987.

B. Does the Contract Extend into a Period When PG&E will Require Capacity?

DRA protests PG&E's application on the grounds that the contract may extend into a period when capacity is needed. Although the contract period is five years, it may not become effective for four; consequently, the contract period could extend out as far as 1998.

DRA comments that special contracts are economical to ratepayers during periods of surplus capacity, when marginal costs are below average costs. Keeping a customer on the system under these circumstances is economical to ratepayers as long as the negotiated rates are higher than marginal costs. The difference between the negotiated rate and the marginal cost represents contribution to margin. However, when additional capacity is required, marginal costs could rise above average costs. Under such circumstances, bypass could benefit ratepayers by allowing the utility to defer new projects. Discounted special contracts, under this scenario, could represent a subsidy from the general body of

ratepayers to the contracting customer. DRA cites D.88-03-008, which states:

> "The purpose of allowing special contracts is to take advantage of existing excess capacity. Considerable justification will be required to demonstrate the benefits of extending discounted rates into a period when increased demand creates a need for additional capacity."

As support for its belief that it will not need capacity during the contract period, PG&E cites D.87-11-024 in which the Commission found "SDG&E, but not PG&E or Edison, needs significant additional capacity over the next eight years." DRA notes that this language does not find that PG&E does not need capacity; rather it refers to SDG&E's need for significant capacity.

PG&E further cites the California Energy Commission's (CEC) 1986 Electricity Report, which indicates that PG&E will not need additional capacity until 1995 or 1996. DRA points out that the contract may extend beyond 1995 and could be in effect until 1998. DRA also cites the CEC's more recent Electricity Report draft, which forecasts that PG&E's capacity deficit could grow to 318 MW by 1992. DRA believes the CEC reports are conservative because they assume the continued operation of the troubled Rancho Seco nuclear power plant, which is a 900 MW facility.

Discussion. Consistent with D.88-03-008, the issue of excess capacity is critical to our determination of whether the IBM contract is reasonable. The value of the IBM contract to ratepayers is significantly affected during periods when capacity additions are required.

PG&E has not convinced us that it will have excess capacity throughout the term of its contract with IBM. D.87-11-024 does not support PG&E's argument that it will not need capacity through the contract period. That order refers to "significant" capacity through 1995. PG&E's contract with IBM could extend to 1998. The draft CEC report, while not endorsed by Energy

Commission members, casts additional doubt on PG&E's view that it will not need capacity before 1998. Further, the 1986 CEC report does indicate some capacity requirements in the 1990s.

Finally, we note that PG&E's analysis assumed that the Rancho Seco plant would be operational, an assumption that now appears improbable. PG&E may need additional capacity before 1998. Thus, the risk of the IBM contract to ratepayers is significantly greater than it would be if excess capacity were known to exist throughout the contract period. This risk should be offset by potential benefits and protections in order to be reasonable.

C. Does the Contract Provide Adequate Ratepayer Protections?

According to DRA, the IBM contract could require PG&E to sell electricity to IBM below the cost of serving IBM. Under the terms of the contract, IBM could, upon 12 months' notice, terminate the contract and pay tariffed rates if the contract "floor" rate exceeds tariffed rates. The floor rate could rise above tariffed rates because it is based on short-run marginal costs. If short-run marginal costs, and therefore the floor rate, rise above tariffed rates, they will do so because of capacity additions which are required to serve IBM, since IBM is the "marginal" customer for purposes of analyzing this contract. Accordingly, the general body of ratepayers could ultimately subsidize IBM by paying tariffed rates that are higher because of capacity additions required to serve IBM.

PG&E responds that this contract term is not risky to ratepayers because IBM will have purchased electricity at the higher rate for at least 18 months before the tariffed rates could go into effect. This is because the floor must exceed tariffed rates averaged over a one-year period in order for IBM to exercise its option to terminate the contract.

DRA also expresses concern with PG&E's economic analysis. DRA undertook a sensitivity analysis which includes an assumption

that capacity will be needed during the contract period. Under a scenario whereby industrial electrical rates rise more slowly than the consumer price index (CPI), IBM's contribution to margin under the rate contract would be $6 million less than what could be obtained if IBM were to bypass the system. (IBM may still provide contribution to margin if it bypasses PG&E's electrical system mainly because it would purchase natural gas services from PG&E for operating its cogeneration plant.) Under the same scenario, IBM's contribution would be $7.2 million less than a situation where IBM paid tariffed rates. If electrical rates were to escalate at 100% of CPI, ratepayers would be better off by $3 million if IBM were to bypass the system. DRA argues that PG&E's assumption of electrical rates rising at 125% of CPI is unreasonable because industrial rates have been decreasing in recent years.

According to DRA's analysis, the risks posed under the contract are greater than if the contract is not undertaken. This is because the range of potential contributions to margin is greater if the contract is signed. The contribution to margin if bypass occurs varies between $10 million and $14 million; the contribution to margin if the contract is signed is $4 million to $22 million depending on the assumptions used.

PG&E argues that DRA's economic analysis is unreasonable because of the improbability of simultaneously requiring capacity in 1992 and cost increases occurring at an average of 75% of the consumer price index (CPI) over the contract term. PG&E comments that DRA's witness testified that he was not aware of any nine-year period during which PG&E's industrial rates have risen at 75% or less of CPI. Both DRA's and PG&E's economic analyses are presented in Appendix A.

To protect ratepayers from potential losses under the terms of the contract, DRA recommends that the Commission establish a cost-based floor for purposes of ratemaking. Costs would be based on the long-term marginal costs for capacity and energy in

the upcoming biennial resource plan update proceeding for long-term standard offers. DRA would use long-term marginal costs rather than short-term marginal costs because the latter does not capture the costs and benefits of a decision to add capacity during that (short run) period. Under DRA's proposal, PG&E would be required to credit the ERAM (or its successor) with revenue requirement equal to these long term marginal costs.

DRA recommends that this floor should remain in effect until five years after the contract takes effect, whether or not it is cancelled by IBM. Whenever the revenue from the contract (or if the contract is cancelled, the revenue from the volume of sales that would have been sold under the contract) is less than the cost-based floor, PG&E's shareholders should be liable for the difference.

DRA suggests that if the Commission does not adopt such an approach, it should require modifications to the contract which would provide comparable safeguards. DRA recommends the Commission approve the contract only if that provision is eliminated which would allow IBM to cancel the contract after one year.

DRA's proposal to establish a cost-based floor for purposes of ratemaking increases risk to PG&E's shareholders by making PG&E, rather than its ratepayers, liable for contracts terms. DRA states that this additional risk to PG&E is offset by PG&E's ability to keep a large customer satisfied and on its system under contract terms which PG&E characterizes as nearly risk-free.

PG&E objects strongly to this proposal because it would increase risk to PG&E shareholders without increasing the potential return. If the Commission imposes this condition of risk, PG&E proposes that shareholders be allowed to receive the revenues, net of costs, associated with the contract throughout its term. PG&E objects to DRA's marginal cost floor because, based on a fifteen-year supply contract, it is "not a good match" with a five-year

agreement. PG&E notes that its agreement with IBM includes a $0.005 per kilowatt hour "adder" to the price floor.

<u>Discussion</u>. The terms of the IBM contract impose significant risks upon ratepayers. PG&E is correct that floor rates which exceed the tariffed rates may be in effect for 18 months before IBM may begin paying lower tariffed rates. Under that circumstance, however, IBM could pay tariffed rates below its cost-of-service for the next three and a half years.

We are also concerned with the potential cost-effectiveness of the contract to ratepayers based on our review of the economic analyses of the parties. PG&E's assumption that industrial electrical rates will rise at 125% of CPI is unsupported by its testimony. The range of possible revenue outcomes under the contract is significantly greater than that under other scenarios, resulting in higher ratepayer risk, as DRA suggests.

For these reasons, and because we are uncertain about future capacity requirements, we will deny approval of the contract.

Our decision in this case does not signal that we are abandoning our policy of permitting special contracts in cases where uneconomic bypass would otherwise occur. We recognize that special contracts between PG&E and its industrial customers may promote efficient use of utility resources and simultaneously benefit utility ratepayers. On the other hand, we will not unconditionally approve special contracts where potential risks to ratepayers are greater than benefits. It is for that reason that we require advance review of these contracts and a strong showing by the utilities. We also continue to view these contracts as beneficial primarily during periods of excess capacity. To the extent additional capacity may be required, special contracts are unlikely to provide the ratepayer benefits we intended when we established guidelines for their review.

Findings of Fact

1. PG&E has requested in this application that the Commission approve a contract between it and IBM under which PG&E would provide electricity at non-tariffed rates.

2. PG&E does not believe IBM's cogeneration plant would be cost-effective to IBM, but does believe IBM will bypass PG&E's system if it does not receive discounted rates from PG&E.

3. The evidence in this proceeding does not demonstrate that PG&E will have excess capacity throughout the contract term.

4. In general, marginal costs of electrical generation are lower during periods of excess capacity than during periods in which additional capacity is needed.

5. PG&E has not demonstrated that the risks to ratepayers of the IBM contract are offset by potential benefits.

6. IBM's rates have fallen about 40% since it began planning its 65 MW cogeneration plant.

7. PG&E did not meet its burden to demonstrate that its contract with IBM is reasonable during the contract period, a period during which PG&E may not have excess capacity available.

Conclusions of Law

1. The Commission found in D.88-03-008 that the utilities have a considerable burden to demonstrate the reasonableness of special contracts which are in effect during periods where capacity additions may be necessary.

2. PG&E's application for approval of its IBM contract should be denied.

ORDER

IT IS ORDERED that Pacific Gas and Electric Company's application for approval of its contract with International Business Machines is denied.

This order is effective today.

Dated JUL 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.

Victor Weisser, Executive Director

APPENDIX A

CONTRIBUTION TO MARGIN ANALYSIS

Assumptions	Negotiated Rate	Build Scenario	Tariff Rate	Source
1. Escalation = 75% CPI; no capacity reqd.	$ 10,626,131	$ 10,938,164	$ 10,626,131	(Ex. 3, Attachmt III)
2. Escalation = 125% CPI; no capacity reqd.	$ 17,380,354	$ 11,886,359	$ 17,380,354	(Ex. 3, Attachmt II)
3. Escalation = 200% CPI; no capacity reqd.	$ 21,980,100	$ 13,549,624	$ 29,228,204	(Ex. 3, Attachmt III)
4. Escalation = 125%; CPI; capacity reqd. in 1995	$ 13,948,522	$ 11,405,261	$ 13,948,522	(Ex. 4, Table 2)
5. Escalation = 125% CPI; capacity reqd. in 1992	$ 10,819,235	$ 10,966,576	$ 10,819,235	(Ex. 4, Table 1)
Escalation = 75% CPI; capacity reqd. in 1992	$ 4,065,012	$ 10,018,382	$ 4,065,012	(Ex. 6)

(END OF APPENDIX A)

Findings of Fact

1. PG&E has requested in this application that the Commission approve a contract between it and IBM under which PG&E would provide electricity at non-tariffed rates.

2. IBM's electrical rates have fallen significantly since it began planning its cogeneration facility in 1986.

3. PG&E does not believe IBM's cogeneration plant would be cost-effective to IBM, but does believe IBM will bypass PG&E's system if it does not receive discounted rates from PG&E.

4. The evidence in this proceeding does not demonstrate that PG&E will have excess capacity throughout the contract term.

5. In general, marginal costs of electrical generation are lower during periods of excess capacity than during periods in which additional capacity is needed.

6. PG&E has not demonstrated that the risks to ratepayers of the IBM contract are offset by potential benefits.

7. IBM's rates have fallen about 40% since it began planning its 65 MW cogeneration plant.

8. PG&E did not meet its burden to demonstrate that its contract with IBM is reasonable during the contract period, a period during which PG&E may not have excess capacity available.

Conclusions of Law

1. The Commission found in D.88-03-008 that the utilities have a considerable burden to demonstrate the reasonableness of special contracts which are in effect during periods where capacity additions may be necessary.

2. PG&E's application for approval of its IBM contract should be denied.