Decision 90 07 021 JUL 6 1990

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern California Edison Company (U-338-E) for Authority to Enter into an Electric Service Agreement with the Shell Oil Company - Wilmington Under the Accelerated Approval Guidelines of the Expedited Application Docket.

(EAD)
Application 90-04-018
(Filed April 11, 1990)

Gene Everett Rodriques, Attorney at Law, for Southern California Edison Company, applicant.
Michael Robertson, for Division of Ratepayer Advocates.

O P I N I O N

Summary of Decision

Southern California Edison Company (Edison) is authorized to enter into a Self Generation Deferral Contract (Agreement) with Shell Oil Company (Shell) for electric service provided at Shell's facility at Wilmington, California. Purchases under the Agreement would leave Shell economically indifferent to its choice to accept the Agreement or build a cogeneration power plant. The Agreement would defer the cogeneration project for five years, conceding a loss of contribution to margin (CTM) of $9,159,000 in order to retain $3,831,000 in CTM. Edison has made a credible showing that without approval of the Agreement, Shell will likely bypass the utility.

The Agreement can be terminated on 60 days' notice following a Commission decision that the rates or any other provisions in the Agreement adversely impact Edison's ratepayers. The Commission may exercise that right no matter what may be the

current balance of costs and benefits accrued by Edison and Shell in performance of the Agreement.

As a consequence of the Expedited Application Docket (EAD) procedure, Edison remains at risk for any ratemaking treatment of the Agreement the Commission may later determine is just and reasonable.

Background

Regulatory Guidelines

In Decision (D.) 87-05-071 the Commission determined that special electric service contracts can be used by utilities to mitigate uneconomic bypass of utility service by large customers, if excess generating capacity is available.

Guidelines for accelerated review of special contracts were set forth in D.88-03-008. The central elements of the guidelines are that the contracts: (1) have floor prices which in turn include energy prices equivalent to Standard Offer No. 1 energy prices, transmission and distribution components based on marginal costs from recent general rate cases, and generation components based on Standard Offer No. 1 capacity prices; (2) be limited to customers with electric demand of 1000 kilowatts or greater; (3) be limited to five year terms, and not extend into any period that additional capacity will be needed to meet target reserve margins; and (4) have time-of-use (TOU) provisions similar to those in otherwise applicable tariffs.

EAD rules were most recently established in Resolution ALJ-161, approved April 12, 1989. The rules specify the information required in each application and allow for a workshop as a substitute for evidentiary hearings. The information must include a customer affidavit on the bypass threat, an explanation of why the deviation from tariff rates is necessary, quantification of lost CTM, and other material. EAD rules allow for timely protests. The workshop may be cancelled if no protest is filed.

Because evidence cannot be received at workshops and facts disclosed at EAD workshops are privileged, the risk for recovery of any revenue discounts within the Agreement remains with the utility. Special contracts may be approved under the EAD procedure, but the Commission must defer judgment on further regulatory treatment.

In D.89-10-034 the Commission stated, in considering a special contract for sale of natural gas,

> "The primary requirements for approval are convincing showings that substantial ratepayer benefits exist and that no better deal is possible for ratepayers."
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> * * *
>
> "If demonstrated benefits do not clearly establish ratepayer value, then we intend to condition approval of agreements. The form of such conditions will depend on the circumstances." (At mimeo., p. 3.)

The special contract guidelines in D.88-03-008 are minimum standards for approval of the Agreement. The primary requirements in D.89-10-034 also apply to special contracts for electric service.

<u>Development of the Agreement</u>

Shell's Wilmington facility is a large oil refinery located in the Los Angeles basin near Shell's Dominguez facility and other refineries. Of the current electric demand at the Wilmington facility, about 21 MW is base load. Shell intends to continue operations at the facility for at least 20 years. Shell now receives electric service on Edison's Rate Schedule No. TOU-8, paying about $12.8 million annually. Shell also uses both natural gas and "off-gas", a refinery byproduct of the cracking process. The production of off-gas exceeds facility gas demand. Shell now sells the off-gas to Watson Cogeneration Company (Watson) to fuel a cogeneration plant at a nearby Arco Oil and Gas Company refinery.

The off-gas now sold to Watson could be the fuel source for a cogeneration plant.

Shell is under the jurisdiction of the South Coast Air Quality Management District (District) and has banked air quality offsets which would mitigate new source emissions produced by a cogeneration plant.

In 1987 Shell approached Edison to begin negotiations of its energy needs and use of the off-gas supply. Proposals for Shell to sell its excess off-gas to Edison failed, in part due to costs of a new pipeline from the Wilmington facility to Edison's Redondo Generating Station at Redondo Beach. Proposals for the assignment of Shell to interruptible service also failed, due to customer requirements for firm service. As an inducement to stay on its system Edison offered Shell $1,779,700 in energy efficiency improvements, mostly energy efficient electric motors. Shell declined the offer.

Further negotiations resulted in the Agreement now before the Commission. The Agreement was signed by Shell and Edison on March 5, 1989. The EAD application to approve the Agreement was filed thirteen months later, on April 11, 1990. The target effective date is July 1, 1990. Although the electric rates in the Agreement are constructed to make Shell economically indifferent to the choice of building the cogeneration project or accepting Edison's contract rates, Shell prefers to accept the Agreement because production of electricity is not central to its regular business.

The Division of Ratepayer Advocates (DRA) protested the application on May 11, 1990, filed late as allowed by Ruling of the assigned Administrative Law Judge (ALJ). DRA raised three issues: (1) credibility of the bypass threat, in light of air quality permit problems; (2) calculations of contribution to margin; and (3) use of the same off-gas as a bypass threat at Shell's Dominguez facility.

The required EAD workshop was held before ALJ James Weil on May 21, 1990. At the conclusion of the workshop DRA withdrew protests (2) and (3). By Exhibit 6, late filed on May 25, 1990, DRA withdrew its protest altogether.

Credibility of the Bypass Threat

Position of Shell

As required by the EAD rules, Edison in its application presented the affidavit of Charles W. Wilson, Shell's Executive Vice President-Products. Shell states that unless the Agreement is approved by the Commission, Shell will develop a cogeneration project and substantially reduce its requirements for electricity from Edison. Shell claims it could complete the project in 18 months, assuming no difficulties in obtaining equipment and an air quality permit.

The specific cogeneration plant proposed is a 21 MW, General Electric, Model LM-2500, combustion turbine-generator set and heat recovery steam generator, designed to produce both steam and electricity. The plant capacity is 20.1 MW in summer, 21.7 MW in winter. The project would serve most of Shell's electric base load, reducing energy purchases from Edison by almost 86%. The plant would also serve about 30% of the steam load at the Wilmington facility. Initial capital investment would be $23,869,000, and estimated plant life is 20 years.

Shell is now negotiating with Edison to defer construction of a 13 MW cogeneration plant at its nearby Dominguez refinery. Shell has installed and operated similar cogeneration plants at other of its refineries.

The fuel supply for the cogeneration plant would be refinery off-gas, valued at the invoice price now paid by Watson.

Shell engaged Ralph M. Parsons Company (Parsons) to study the feasibility of the project. In September 1988 Parsons completed a report which found that the project is technically and economically sound, and that an air quality permit could be

obtained. The report is included in the workshop record, identified as Exhibit 7.

Shell has applied to the District for an air quality permit and believes it will be approved. According to Shell, its application was submitted to the District on January 20, 1989 and was deemed complete 30 days later because the District had not requested further information. However, on April 13, 1989 the District did request additional information. Shell provided the requested data, with the exception of the certified California Environmental Quality Act (CEQA) document sought by the District. Shell believes the CEQA document is not necessary because the District waited until after the 30-day deadline in its own rules.

Position of Edison

Based on information provided by Shell, review of the Parsons study, and investigation by its own staff, Edison accepts Shell's allegation that if the Agreement is not approved Shell will substantially reduce its requirements from Edison.

Edison has also analyzed the project using cost-effectiveness formulas from the Commission's "Standard Practice Manual - Economic Analysis of Demand-Side Management Programs." That analysis shows that the Agreement would provide net benefits for non-participating electric customers, non-participating gas customers, and society. Benefits to Shell are calculated to be less than costs, but Shell's voluntary participation indicates that other factors are sufficient for Shell to accept the Agreement.

Position of DRA

At the conclusion of the workshop DRA was concerned only with Shell's assumption that the District would grant an air quality permit. DRA discussed the matter with District staff, and by late-filed Exhibit 6 withdrew its protest. DRA believes the bypass threat is credible.

Exhibit 6 notes that while District staff does not believe the Shell project will significantly affect the

environment, it continues to recommend that Shell be required to file an Environmental Impact Report.

Discussion

Shell clearly has control of the cogeneration site and has adequate financing capability to go forward with the project. Refinery expansion plans demonstrate Shell's intent to operate the facility for at least the 20-year life of the proposed plant. Continued operation of the refinery will assure the off-gas fuel supply. Shell's cogeneration experience at other refineries shows management ability to build and operate a plant at the Wilmington facility. The Parsons study demonstrates the technical and economic viability of the cogeneration option.

There remains some uncertainty about the required air quality permit. Although Shell claims that its application for a permit is deemed complete according to District rules, District staff continues to recommend that Shell file a CEQA document. This action might delay the project, but it does not appear to prevent its completion. We agree with Shell that the project can be issued an air quality permit, but the timing of that permit might adversely impact construction and startup in the 18 months claimed.

Shell's estimate of completion time may be overly optimistic, but the bypass threat is credible. In determining the overall merit of the Agreement, we must balance the uncertainty surrounding the air quality permit against other ratepayer risks and benefits.

Analysis of the Agreement

Basic Terms

The Agreement covers base load service only, up to the seasonal capacity limits of the cogeneration plant. The remainder of Shell's load will be served on Rate Schedule No. TOU-8. The Agreement term is five years.

After Commission approval, Shell or Edison can terminate the Agreement on two years' notice. However, either party may

terminate the Agreement on 60 days' notice at any time following a Commission decision that, in the Commission's opinion, the rates or any other provision of the Agreement adversely impact Edison's ratepayers.

The Agreement is assignable by either party only with the written consent of the other, but that consent may not be unreasonably withheld.

Customer Rates

Rates under the Agreement are calculated using an innovative scheme based on Shell's economic indifference to taking electric service under the Agreement or building the cogeneration plant. A monthly Self Generation Deferral (SGD) rate is calculated by Edison to reflect the imputed operation of the cogeneration plant as if it had actually been constructed and operated.

Within the SGD rate, a monthly facilities charge covers hypothetical fixed costs as if the cogeneration plant had been completed. The fixed costs are: (1) levelized capital costs of the plant including depreciation, taxes, insurance, administrative and general expenses, and a 23.7% after-tax return on equity for Shell; (2) operations and maintenance expenses for the plant, less the expenses retained by Shell to operate its conventional steam supply source; (3) standby charges on Edison's Rate Schedule No. S, imputed from historical data for cogeneration plant availability; and (4) Edison's cogeneration interconnection charges. The levelized capital costs do not include the asset value of Shell's banked air quality offsets, which would be used if the cogeneration plant were built. The facilities charge may be updated to reflect changes in tariff rates, inflation of operations and maintenance expenses, and regulatory changes.

The SGD rate also includes a monthly variable charge with components of: (1) an energy charge based on actual kilowatt-hours used, historical availability of similar cogeneration plants, fixed heat rate estimates, recorded off-gas availability and revenues

from its sale, and actual prices of other gas sources; (2) a variable operations and maintenance charge; (3) a sellback credit for those limited periods when the cogeneration plant would provide electricity back to Edison's grid; and (4) a thermal energy credit for fuel purchased by Shell for its steam supply.

The SGD rates are adjusted to allow for line losses, government fees and taxes, and the Public Utilities Commission Reimbursement Fee (PUCRF).

Shell is subject to a floor price derived from the special contract guidelines in D.88-03-008. The floor price elements are an energy price from Edison's Standard Offer No. 1, transmission and distribution costs from the marginal costs in Edison's most recent general rate case, and generation costs equal to Standard Offer No. 1 capacity prices.

There is no rate ceiling. However, the Agreement creates a tracking account that allows Shell to offset any revenues from SGD rates that are higher than tariff rates against revenues when the floor price exceeds the calculated SGD rate. At the termination of the Agreement there are no obligations to ratepayers based on any balance in the tracking account.

Contribution to Margin

At the workshop Edison presented a table, identified as Exhibit 3, in which CTM is calculated for three scenarios: approval of the Agreement, bypass of Edison's system, and maintaining tariff service. The calculated CTM is on a present value basis, at 12% discount rate over the five-year term of the Agreement. The calculations in Exhibit 3 are summarized below:

Scenario	CTM	Net CTM, relative to bypass
Agreement	$ 6,774,000	$ 3,831,000
Bypass	2,943,000	-
Tariff	15,933,000	12,990,000

CTM for the bypass scenario derives from standby service and tariff service of loads in excess of base load. The net impact of the Agreement, if approved, would be that Edison is conceding the loss of $9,159,000 in order to retain $3,831,000 in CTM.

Discussion

Discounting of rates based on customer indifference is beneficial because it encourages negotiations with the customer and assists in determining that no better deal is possible. However, the results of the approach are reasonable only if ratepayers are protected against subsidies to the customer (i.e., situations where there is no CTM, or CTM is insubstantial or uncertain).

The floor price protects ratepayers against subsidies, as long as Standard Offer No. 1 energy prices reflect Edison's short run avoided costs. The $3.8 million in CTM retained by the Agreement is a substantial fraction of the $9.2 million in margin being conceded, so imperfections in Standard Offer No. 1 prices should not compromise estimates of CTM. However, we note that Standard Offer No. 1 energy prices may not accurately reflect current avoided costs due to vintaging problems in the data behind the prices. The prices are adjusted quarterly for variations in fuel cost, but internal incremental energy rates are calculated only annually, and marginal costs within the incremental energy rate are determined in general rate cases. If the CTM retained by the Agreement was very small relative to the CTM conceded, the risk of subsidies by ratepayers would increase.

The termination clause in the event we find adverse ratepayer impact also protects ratepayers against subsidies. Edison and Shell should clearly understand that we intend to invoke

the termination clause at any time adverse impacts are found. The Agreement makes termination optional following the requisite Commission decision, but we may force that option by ordering Edison to terminate the Agreement, or by making it clear that continued performance under the Agreement would be imprudent. If we do order termination, Edison and Shell would not be allowed to continue performance under the Agreement based on any argument that one party or the other is disadvantaged by the timing of the termination. No right to continue performance under the Agreement is preserved by the Commission approval herein.

It is possible that ratepayers will be exposed to termination costs in the event Edison is required to assign the Agreement but Shell declines to consent. For example, the Commission is now litigating Application (A.) 88-12-035, in which Edison and San Diego Gas & Electric Company (SDG&E) are seeking to merge into a single company. While we make no comment on the likelihood of our approving the merger, the two companies have requested in A.88-12-035 that they be combined for ratemaking purposes in test year 1995, which includes the final months of the Agreement. If that comes to pass, the Standard Offer No. 1 prices of the combined company might be higher than Edison's own prices. Shell would then have an incentive to dissent from assignment of the Agreement to the combined company because its rates might increase. Although any resulting settlement payment would likely be small compared to overall ratepayer benefits, the risk exists.

We are convinced that Shell's bypass threat is credible and that the Agreement should provide a positive CTM, but there remain three risks for ratepayers: (1) the risk that an air quality permit might not be issued, or that delay in its issuance would adversely impact ratepayers due to our approval of the Agreement before it is necessary; (2) the risk that the Agreement is not the best deal possible for ratepayers, for example due to exclusion of the banked offsets from calculation of the

indifference rate; and (3) the risk that ratepayer benefits will be truncated or reduced due to assignment by Edison.

We must balance these risks against the CTM benefits being retained for ratepayers. In general, prospects for margin retention outweigh risks to ratepayers; therefore, we will approve the Agreement, subject to reasonableness review. However, we know that the SGD rate is lower than Shell's indifference rate, due to exclusion of the value of the banked air quality offsets. We will compensate for that omission by conditioning approval on Shell's acceptance of any assignment of the Agreement as a result of the Edison-SDG&E merger, if the merger is approved. With that concession by Shell, the SGD rates are justified.

To remind Commission staff of any adverse impacts that might arise, we will order that Edison track recorded CTM flowing from the Agreement, as part of annual Energy Cost Adjustment Clause (ECAC) reasonableness reports.

Other Issues

Compliance With Special Contract Guidelines

The rate provisions of the Agreement meet the floor price guidelines of D.88-03-008, and Shell meets the customer size guideline.

The Agreement term does not exceed the guideline maximum, but some explanation is in order concerning extension into a period when any additional capacity will be needed. Edison forecasts that its Energy Reliability Index (ERI) for the years 1990 through 1994 will be 0, 0, 0, 0.19, and 0.48. The ERI is a measure of the need for additional capacity, with zero indicating no such need and 1.0 indicating a definite need. DRA stated at the workshop that intermediate values of ERI, such as those forecast for 1993 and 1994, do not show a need for additional capacity. We concur with DRA that the Agreement meets the guideline in that respect.

Energy prices in the Agreement do not show the TOU terms required by the guidelines, but that failing is without substance.

Because the energy delivered serves only base load, TOU pricing is not needed. All supplementary power is delivered under Rate Schedule No. TOU-8, which does have TOU terms. The customer will receive time differentiated price signals. Strict compliance with the guideline is not necessary.

Compliance With EAD Rules

The documents filed with the application, along with workshop discussion, satisfy the rules in Resolution ALJ-161 concerning customer affidavit, utility allegations, necessary explanations, and other ministerial needs. The required quantification of CTM conceded is shown in the workshop document identified as Exhibit 3.

The application does not explicitly show from whom the lost CTM will be recovered, but Edison stated in the workshop that lost margin will be made up from all ratepayers, through the normal workings of its ratemaking balancing accounts.

Ratemaking Accounting

In approving this special sales contract, we must determine where contract revenues will flow once they reach the utility. Generally speaking, lost margin will be made up from other ratepayers, but exactly how should that be done?

Edison proposes to credit its various balancing accounts at tariff rates in the following order, until the revenues are exhausted: (1) PUCRF, (2) Annual Energy Rate (AER), (3) ECAC, (4) Major Additions Adjustment Clause (MAAC) deferred debit accounts, (5) Electric Rate Adjustment Mechanism (ERAM) balancing rate, and (6) base rates, which also flow into the ERAM account. Under this scheme, the Agreement rates would make a reduced contribution to some accounts, relative to service at tariff rates, or no contribution at all.

When Edison filed this application the Commission was considering accounting credits for special contracts in Investigation 86-10-001. Edison filed comments in that proceeding

in June 1989, seeking approval to make credits in the order listed above, but asking that credits be made at avoided cost rates rather than tariff rates. In May 1990, after the filing of this application, the Commission issued D.90-05-030, which includes orders on crediting of special contract revenues. That decision orders that credits be made "in the following general order:" AER, other offset rates (including PUCRF and low income ratepayer assistance (LIRA) surcharges), ECAC, ERAM, and balancing account amortization.

Although we had hoped to finally resolve this issue in D.90-05-030, we are now confronted with a specific example of the consequences of such a crediting scheme. In this instance we will authorize a revised scheme for making the balancing account credits. First, credits should dispose of minor revenues generated by the PUCRF, LIRA surcharge, etc. These are not major items, and for administrative ease they should be assigned first.

Second, fuel-related revenues should be assigned to the AER and ECAC. By enforcement of a floor price the Agreement should maintain revenues above avoided energy costs, but we will take an extra step to assure that the crediting is done fairly. Fuel-related credits to the AER and ECAC accounts shall be made at Standard Offer No. 1 energy rates. However, assigning revenues to the AER in preference to the ECAC account might unfairly advantage shareholders if revenues did not completely cover all fuel costs. Therefore, of each fuel-related dollar available after the first crediting step above, the AER fraction (10% for Edison) shall be credited to the AER and the remainder to ECAC.

Third, in theory any remaining revenues represent CTM and can be assigned as convenient. Ratepayers as a whole are indifferent to assignment of revenues to specific accounts. However, crediting miscellaneous accounts (e.g., the ECAC account at the ECAC balancing rate, or MAAC accounts) could cause confusion among those not familiar with ratemaking practices. If base rate

or ERAM credits were left to the end of the crediting sequence, there may be no revenues left to assign. This would give the false impression that a special contract makes no contribution to margin. This is incorrect, because the CTM would already be received in balancing accounts higher in the queue. For simplicity, we will order that all revenues remaining after fuel-related revenues are assigned shall be credited to the ERAM account. This way an approximation for CTM is readily found, and confusion will be minimized. The miscellaneous balancing accounts will receive no special contract revenues, but they will still be amortized over time, without disadvantage to either shareholders or ratepayers.

An alternative to the above third step would be to credit all the miscellaneous balancing accounts proportionally from each remaining revenue dollar, as was done for AER and ECAC revenues. We reject this scheme because any benefits are outweighed by administrative complexity.

Findings of Fact

1. Edison filed this application on April 11, 1990 under the EAD procedure, seeking approval of its Agreement with Shell for electric service at Shell's Wilmington facility.

2. Approval of the Agreement would defer construction of a cogeneration power plant by Shell for five years.

3. Edison estimates that if the Agreement is approved, Edison would concede loss of $9,159,000 in CTM in order to retain $3,831,000 in CTM.

4. On May 11, 1990 DRA protested the application. DRA withdrew its protest following the May 21, 1990 EAD workshop.

Conclusions of Law

1. The Agreement should be approved, subject to Shell's acceptance of any assignment of the Agreement by Edison as a result of the Edison-SDG&E merger, if the merger is approved.

2. With Shell's acceptance of any assignment as a result of the merger, the SGD rates contained in the Agreement are justified.

3. Edison remains at risk for any ratemaking treatment of the Agreement that the Commission may later determine to be just and reasonable.

4. Edison should report recorded CTM from the Agreement in its annual ECAC proceedings.

5. This decision should become effective today so the Agreement can go into effect immediately.

O R D E R

IT IS ORDERED that:

1. The Self Generation Deferral Contract (Agreement) between Southern California Edison Company (Edison) and Shell Oil Company (Shell) is approved, subject to Shell's acceptance of any assignment of the Agreement by Edison as a result of the pending merger between Edison and San Diego Gas & Electric Company, should the merger be approved.

2. Edison shall credit revenues from the Agreement to its ratemaking accounts in three steps, as follows: (1) minor regulatory revenues for Public Utilities Commission Reimbursement Fee, low income ratepayer assistance surcharges, etc.; (2) fuel-related revenues at Standard Offer No. 1 energy rates, divided proportionally between the Annual Energy Rate (AER) and the Energy Cost Adjustment Clause (ECAC) account at Edison's approved AER fraction; and (3) all remaining revenues to the Electric Revenue Adjustment Mechanism balancing account.

3. For each ECAC reasonableness review period during the term of the Agreement, Edison shall in its ECAC reasonableness report include recorded contribution to margin from the Agreement, expressed as revenues from step (3) above.

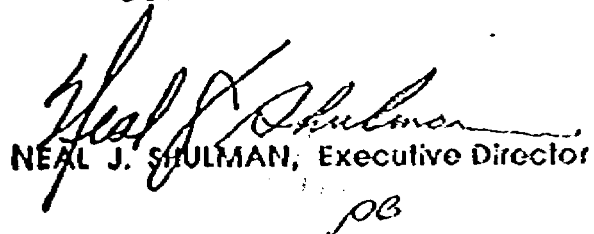
4. Edison shall file the Agreement and an amended list of contracts and deviations within five days of the date Shell first receives service under the Agreement, as an advice filing pursuant to General Order 96-A. The advice filing shall include Shell's acceptance of the condition in Ordering Paragraph 1 above. The Agreement shall be marked to reflect the effective date of this decision and upon filing shall be available for public inspection upon request.

This order is effective today.

Dated JUL 6 1990, 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



NEAL J. SHULMAN, Executive Director