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~~Item H-5~~
~~Agenda 12/9/88~~

Decision 89 02 074 FEB 24 1989

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of)
SAN DIEGO GAS & ELECTRIC COMPANY)
for authority to Increase its Rates)
and Charges for Electric, Gas)
and Steam Service.)

ORIGINAL

Application 84-12-015
(Filed December 17, 1984)

And Related Matter.)

I-85-02-010
(Filed February 6, 1985)

(Appearances are listed in Appendix A.)

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OPINION

I. Summary

In this opinion, we reconsider the Southwest Powerlink (SWPL) balancing account that we adopted in Decision (D.) 85-12-108. We also review the reasonableness of the acts of San Diego Gas & Electric Company (SDG&E) in connection with its contracts with several other utilities for purchases of power transmitted over SWPL.

Overall, we conclude that most of SDG&E's purchased power costs were reasonable and that it obtained many valuable provisions in its negotiations with other utilities. However, we find that SDG&E acted imprudently in some of its negotiations with Tucson Electric Power Company and its successor under the contract, Alamito Company, and we disallow \$5.9 million of the cost of SDG&E's purchases from Alamito. Interest increases this disallowance to \$7.1 million as of December 31, 1988. We find SDG&E's transactions with Comision Federal de Electricidad (CFE) to have been reasonable. We find several instances of SDG&E's imprudence in its negotiation of a new power purchase contract with Public Service Company of New Mexico, and we make two separate disallowances of \$21,134,000 and \$20,000. ✓

Finally, we determine that the SWPL balancing account should be terminated. ✓

II. Introduction

The Southwest Powerlink is a single-circuit, 500-kilovolt transmission line constructed by SDG&E and extending from the Palo Verde Switchyard about 40 miles west of Phoenix to the Miguel Substation 10 miles southeast of San Diego. The line connects with local systems in the Yuma and Imperial Valleys, and two additional

230 kilovolt transmission lines interconnect to the Mexican electric system operated by CFE. SWPL went into commercial operation on June 19, 1984, at a cost of \$208 million. SDG&E's initial scheduling entitlement on the line was 700 megawatts (MW), but improvements increased its entitlement to nearly 1,100 MW in early 1986.

The seed for this decision was planted over three years ago, in D.84-12-065, when we directed SDG&E and the Commission's staff to address the status of SWPL and, more specifically, "to determine whether there is reasonable use being made of the SWPL." D.84-12-065, which decided the reasonableness review phase of SDG&E's 1984 Electric Cost Adjustment Clause (ECAC) case, found the record in that proceeding inadequate to determine the reasonableness of the operation of SWPL and deferred the determination of reasonableness to the present application, the company's general rate case for test year 1986.

The decision in the general rate case, D.85-12-108, found that the price of SDG&E's purchases of capacity transmitted over SWPL was considerably higher than SDG&E's current cost and the costs of its other sources of generation. We were concerned about this development, because part of the purpose for SWPL was to decrease the cost of providing energy to SDG&E's customers. We concluded:

"We think that in order to restrict ratepayer costs to what is a reasonable cost of purchased power, to achieve intertemporal equity between ratepayers, and to give SDG&E the proper incentive to manage the SWPL line and ensure that it is a cost-effective resource, it is necessary to institute the SWPL Balancing Account." (D.85-12-108, mimeo. p. 120c.)

As originally constructed, the balancing account would allow SDG&E to recover in rates only the avoided-cost equivalent of

power transmitted over SWPL.¹ Costs in excess of avoided cost would be recorded in the balancing account, and the balance would decrease when purchases were made at less than avoided cost. The balances in the account would earn interest at the ECAC rate. Any remaining balance in the account after five years would be presumed to be unreasonable, subject to a persuasive showing by SDG&E that it had managed the line reasonably.

SDG&E applied for rehearing of D.85-12-108, and in D.86-06-026 the Commission granted rehearing limited to the following questions:

- "1. What would be the difference between the cost of power purchased over the SWPL and avoided cost, measured at a capacity value of \$78/kw/yr and current short-run avoided cost for the period January 1, 1986 through December 31, 1988?
- "2. Is the deferral of cash flows, by limiting SDG&E's revenue recovery for SWPL energy to the 'value' of that energy, a sufficient incentive to encourage the company to reduce its purchased power costs?
- "3. What is the appropriate standard by which to measure the value of SWPL power to ratepayers? Would pricing SDG&E's SWPL cash flow at current short run avoided cost discourage the utility from making long-term contractual commitments to purchase SWPL power?
- "4. What are SDG&E's energy and capacity needs in the 1986 through 1996 time frame?
- "5. What role in SDG&E's resource plan should the SWPL play? Should it continue to

1 The concept of avoided cost originated in connection with a utility's purchases of electricity generated by independent producers. Avoided cost refers to the cost that the utility avoids by purchasing from independent producers, rather than generating an equivalent amount of power itself.

provide largely firm capacity? Should contracts for the purchases be flexible to enable the deliveries to meet SDG&E's resource needs as determined bi-annually [sic] in the OIR-2 proceeding?

- "6. Should the balance in the SWPL account accrue interest?" (D.86-06-026, mimeo. pp. 12-13.)

The rate case decision, D.85-12-108, also directed SDG&E and the Commission's staff to address the reasonableness and the purported economic savings of SWPL for 1984-86 in SDG&E's 1986 ECAC reasonableness review. D.86-06-026, which modified D.85-12-108, further directed SDG&E "in its next ECAC reasonableness review to present an affirmative showing of the reasonableness of the actions it has taken to minimize the costs" of its purchases under contracts with Public Service Company of New Mexico (PNM), Tucson Electric Power Company (TEP), and CFE. However, in D.86-09-010, we granted SDG&E's motion to remove SWPL-related issues from the ECAC proceeding and to consolidate all SWPL issues in the rehearing proceeding.

The issues were further refined in an Assigned Commissioner's ruling of October 15, 1986. The ruling determined that the prudence of SDG&E's entering into the CFE, TEP, and 1979 PNM contracts would not be issues in the rehearing.

Thus, as eventually defined, the issues in this proceeding fall into two general areas. First are the issues relating to the operation of the balancing account and, in particular, the questions posed by the Commission in the order granting rehearing. Second are the issues relating to the reasonableness of SDG&E's purchases and related activities from May 1, 1984, through April 30, 1986, and, in particular, the reasonableness of the purchases under the contracts with PNM, TEP, and CFE during this period.

The reasonableness review will determine what portion of the money already expended by SDG&E should be allowed for eventual recovery from ratepayers. Resolution of the balancing account issues will determine the timing of that recovery. Logic suggests that we first resolve the reasonableness issues before addressing the balancing account.

Although many parties filed appearances in this proceeding, active participation in this case was limited almost exclusively to the four parties who filed briefs in this case: SDG&E, the Commission's Division of Ratepayer Advocates (DRA) (formerly known as the Public Staff Division), Utility Consumers' Action Network (UCAN), and the City of San Diego (City). At hearings in San Diego on April 20, 1987, statements were presented by representatives of the San Diego Energy Alliance, Hunter Industries, and the Grey Panthers. These statements supported the SWPL balancing account as a way to encourage SDG&E to lower its revenue requirement and its retail rates.

The procedures of Public Utilities Code § 311(d) were followed in developing this decision. The proposed decision of the Administrative Law Judge was issued on October 21, 1988. SDG&E, DRA, UCAN, and City filed comments on the proposed decision.

We have reviewed and carefully considered the comments. We have incorporated appropriate changes from these comments in this decision.

The broad issues in this case are conveniently discrete, and this decision will address and resolve them separately.

III. The Standard of Review

Both SDG&E and DRA raised the question of what standard the Commission should apply in its review of the reasonableness of the expenses that SDG&E has incurred under the contract. These parties had somewhat different views of the proper standard.

A. SDG&E's Position

SDG&E asserts that the standard is "whether the particular management attained the best reasonably achievable result based on facts and conditions known or which should have been known at the time the actions were undertaken," and the company cites D.87-06-021 as authority for its position. SDG&E goes on to quote more extensively from that decision:

"The term 'reasonable and prudent' means that at a particular time any of the practices, methods, and acts engaged in by a utility follows the exercise of reasonable judgment in light of facts known or which should have been known at the time the decision was made. The act or decision is expected by the utility to accomplish the desired result at the lowest reasonable cost consistent with good utility practices. Good utility practices are based upon cost effectiveness, reliability, safety, and expedition.

"A 'reasonable and prudent' act is not limited to the optimum practice, method, or act to the exclusion of all others, but rather encompasses a spectrum of possible practices, methods, or acts consistent with the utility system need, the interest of the ratepayers and the requirements of governmental agencies of competent jurisdiction." (D.87-06-021, mimeo. pp. 19-20.)

SDG&E fears that DRA seeks to impose a standard requiring the best imaginable results and will improperly rely on after-the-fact knowledge of how events occurred, rather than considering the parties' reasonable expectations at the time the decisions were being made.

B. DRA's Position

DRA emphasizes that SDG&E bears the burden of proving by clear and convincing evidence that it reasonably and prudently administered each contract. In reasonableness reviews, DRA asserts that the Commission requires the utility to make a substantial affirmative showing, and "the burden rests heavily upon a utility

to prove it is entitled to rate relief and not upon the Commission, its staff or any interested party...to prove the contrary" (D.83-05-036, mimeo. p. 2).

DRA seems to concur with the definition of "reasonable and prudent" put forward by SDG&E, but DRA adds that the utility must also take into account the risks associated with the size and complexity of the contract. DRA quotes from a decision on Pacific Gas and Electric Company's Helms pumped storage project:

"[When] tasks are undertaken which in and of themselves are of such enormity as to greatly expose the utilities and potentially their ratepayers to substantial financial risks, utilities must exercise even greater care and managerial acumen than would be called for in ordinary circumstances." (D.85-08-102, mimeo. p. 21.)

In response, SDG&E points out that the Commission has applied this higher standard only in cases involving large capital additions costing more than a billion dollars. In the case of SWPL, no capital costs are under review, and the sums in dispute are considerably less than a billion dollars. SDG&E believes that this higher standard should not apply in these circumstances.

C. Discussion

First, we reiterate our recent statements elaborating on the meaning of "reasonable and prudent," which were quoted previously. In the circumstances of this case, it is particularly important to emphasize that a reasonable and prudent act is not limited to the optimum act, but includes a spectrum of possible acts. As we have stated even more recently, "Our legitimate concern as the agency charged with oversight and economic regulation of the monopoly utilities is not merely with the outcomes of the utilities' decisions; we are also concerned with the process employed to arrive at a particular decision." (D.87-12-071, mimeo. p.32.) Thus, a decision may be found to be reasonable and prudent if the utility shows that its decision

making process was sound, that its managers considered a range of possible options in light of information that was or should have been available to them, and that its managers decided on a course of action that fell within the bounds of reasonableness, even if it turns out not to have led to the best possible outcome. As we have previously stated, the action selected should logically be expected, at the time the decision is made, to accomplish the desired result at the lowest reasonable cost consistent with good utility practices.

DRA has argued that a higher standard should apply in this case because of the large amount of money involved. We view the amount of money potentially affected by a decision to be one of the circumstances that the utility's managers should take into account in coming to their decision. Our previous decisions should not be read to establish two discrete standards of review, a high standard for large generating projects and an ordinary standard for other decisions. Rather, we expect that the utility's managers will consider that decisions involving large amounts of money, high degrees of risk, and greater levels of uncertainty will require proportionately greater care than routine decisions.

The decisions under review in this case are not as weighty or risky as a decision to invest billions of dollars in a new generating plant, but neither are they as routine as deciding to purchase \$1,000 of office supplies. The contract at issue foreseeably required SDG&E's commitment to purchase hundreds of millions of dollars of power and, moreover, these purchases were expected to produce savings to justify the construction of a power line costing several hundred million dollars. By any standard this is a major commitment, and to fall within the zone of reasonableness and prudence SDG&E's decision making should have reflected a level of care and thoroughness appropriate to this magnitude of expenditure.

Although the standard of our review is relatively clear, applying this standard to the issues in this case is extremely difficult. Several of the decisions being reviewed were made in the context of negotiations for revisions of an existing contract. The terms of the original agreements set the stage for and constrained the scope of those negotiations. We have already determined that the prudence of entering into the original CFE, TEP, and 1979 PNM contracts is not an issue in this case, so our review is limited to the reasonableness of SDG&E's negotiations for changes in the existing contracts.

Even without the added complication of the constraint of the original contracts, evaluating the performance of a utility in negotiations is extremely difficult. One of the paramount problems is establishing a baseline against which the utility's performance can be measured. In theory, the baseline would be the result that a reasonable and prudent negotiator would achieve in the same circumstances. But even in simple negotiations there are nearly an infinite number of proposals and combinations of proposals that could be considered and, as we have discussed, a range of outcomes that are reasonable and prudent. Successful negotiations usually involve a subjective balancing of interests, a compromising of objectives, and much creativity in developing a solution that satisfies all parties. It is a delicate process and one that is very difficult to reconstruct, even when thorough documentation of proposals, responses, and evaluations is present.

Although different approaches may be preferable in other circumstances, for purposes of the review of amendments to existing contracts, as required in this case, we have found the following approach to be useful. We have first examined the goals that the utility hoped to achieve in the negotiations and have evaluated whether that goal was reasonable. We then compared the actual outcome with the goal. Finally, we considered whether a reasonable and prudent utility would have taken other steps to come closer to

achieving the utility's goals. This approach is not always articulated in the following discussion, but it provided the background to much of our analysis of this case.

IV. The Purchases From Tucson Electric Power Company

A. Background

The chronology for the TEP purchases is complicated but important. We will first attempt to set out the sequence of events as simply as possible.

TEP and SDG&E signed the original contract on November 29, 1978. SDG&E agreed to purchase energy and capacity from TEP in five phases over ten years, with somewhat different terms governing the deliveries for each phase. The contract set prices according to a cost-of-service formula, which was intended to produce rates reflecting the actual fixed and variable costs of the plants producing the power. The contract is a "take or pay" agreement in the sense that SDG&E must pay a demand charge for specified levels of capacity whether or not energy is actually delivered, unless the failure to deliver results only from TEP's willful action. No ceiling was placed on the resulting rates. The parties amended the contract several times before the period we are concerned with in this decision.

The original contract gave TEP an option to sell up to 100 MW of power from its system to SDG&E from July 1985 through June 1987, during what was then called Extended Phase 3. TEP exercised its option in June 1983.

Under the original contract, Phase 4 was to begin on the commercial operation date of TEP's Springerville Unit 1, a coal-fired generation plant located in Arizona, and was to continue for 24 months or until December 31, 1988, whichever came earlier. During this phase, contract demand, the amount of capacity reserved and paid for by SDG&E, was set at 230 MW from Springerville Unit 1.

Phase 5 was to begin the day after the end of Phase 4 and was to continue for 19 months. Contract demand for Phase 5 would be between 200 and 500 MW, at TEP's option, from Springerville 1 and 2, TEP's system, or a combination of these resources. In 1981, TEP notified SDG&E that demand during Phase 5 would be between 350 and 500 MW.

Various considerations led the parties to begin negotiating Amendment 3 in September 1983. Amendment 3 was executed on January 6, 1984, and made several changes to the parties' obligations. Extended Phase 3 was eliminated, and Phase 3 was replaced with a Revised Phase 3, which would continue until the commercial operation date of Springerville Unit 1. Revised Phase 4 was to begin on the commercial operation date of Springerville Unit 1 and was to continue for 24 months. During this period, SDG&E would purchase 230 MW from Springerville Unit 1 and 100 MW (at a 60% capacity factor) from TEP's system. An agreement to set Springerville Unit 1's net dependable capacity for purposes of the contract at 330 MW, rather than its actual net dependable capability of 360 MW, had the effect of increasing SDG&E's contract demand by an additional 21 MW from Springerville Unit 1. Phase 5 was extended five months to cover 24 months after the end of Revised Phase 4. During this phase, SDG&E would purchase 400 MW from TEP's system. SDG&E also received rights to 106 MW of transmission service from San Juan to Palo Verde until May 1, 1985, and SDG&E was relieved of an obligation to pay for part of 170 MW of transmission during Phase 5.

The parties also agreed to modify the assignment clause of the contract to permit TEP to assign the contract to a wholly owned subsidiary without SDG&E's consent. The contract had previously permitted assignment only with SDG&E's written approval. In June 1984, TEP assigned the contract to Alamito Company, which was then TEP's wholly owned subsidiary. The assignment took effect November 1, 1984. In December 1984, TEP spun off Alamito, and it

became an independent company. In late 1985, Alamito's management conducted a leveraged buy-out of the company.

The implications of the spin-off of Alamito led to several revisions of the contract, which were incorporated in Amendments 4 and 5 and in a letter agreement between the parties. Negotiations of these changes began in March 1985.

Under these amendments, the parties stipulated that Alamito's capitalization ratio, for purposes of calculating the cost of service, would be 30% equity and 70% debt, and the return on equity was set at 15%. Alamito agreed to give access to the Springerville site to the consultant who was advising SDG&E on determining and verifying the plant's commercial operation date. Alamito agreed to increase the capacity factor for system sales from 60% to 65%. If a change in the price of coal for Springerville Unit 1 was proposed, Alamito agreed to give SDG&E full access to information. If the price increase was not justified, Alamito agreed to take all necessary legal action to resist the price increase.

The significance of these bare facts will be illuminated by the discussion of the parties' positions on the disputed issues. Generally speaking, DRA, supported by UCAN and City, believes that the original contract worked to the disadvantage of SDG&E's customers during the period under consideration. According to DRA, SDG&E was locked into an obligation to pay for expensive capacity it did not need, when SWPL could have been more economically used to transmit cheap economy energy that was plentiful in the Southwest. DRA criticizes SDG&E for not taking advantage of the negotiations leading to the amendments to reduce SDG&E's obligation to pay for unneeded capacity.

More specifically, the parties challenging SDG&E's actions believe that Amendment 3 resulted in unnecessary increases in contract demand of 21 MW and 100 MW in Revised Phase 4 and of 50 MW in Phase 5. These parties also assert that Amendments 4 and 5

resulted in SDG&E's unreasonable waiver of its right to object to certain assignments, which had harmful effects when TEP spun-off Alamito and assigned to the contract to Alamito.

SDG&E believes that its actions were reasonable in all respects.

Under the current version of the contract, Phase 4 ran from June 1, 1985 to May 31, 1987, and involved sale of 251 MW of capacity and energy from Springerville 1 and 100 MW of capacity and energy from TEP's system. Phase 5 began June 1, 1987, and continues to May 31, 1989. During Phase 5, SDG&E has the right to purchase up to 400 MW of capacity and energy from TEP's system.

B. SDG&E's Position

SDG&E rejects the other parties' specific criticisms of its actions during the negotiations, and it asserts that its actions resulted in substantial savings for ratepayers.

First, SDG&E believes the DRA's criticism of the agreement to accept 100 MW of system sales during Revised Phase 4 is misplaced. DRA's criticism is based on the notion that SDG&E assumed a new obligation for additional capacity, according to SDG&E. In fact, SDG&E asserts, the 100 MW in Revised Phase 4 was merely a continuation of an existing obligation to purchase 100 MW during Extended Phase 3, which was eliminated as part of Amendment 3. Viewed in this way, the obligation actually arose when the original contract was negotiated in 1978, according to SDG&E, and SDG&E had no reasonable opportunity to reduce its purchases during the negotiations of Amendment 3.

Second, SDG&E acknowledges that defining net dependable capacity for Springerville Unit 1 as 330 MW, rather than the actual net dependable capability of 360 MW, had the effect of increasing its obligation to purchase capacity during Revised Phase 4 by 21 MW. However, SDG&E believes that DRA ignores the concomitant benefits that were tied to SDG&E's acceptance of this increase. SDG&E argues that access to cheaper energy costs from coal-fired

plants should be included in the calculation of the cost of this 21 MW increase, for a net cost of \$6 million, rather than the \$15,681,000 in total demand charges that DRA uses. Against this cost should be balanced \$29 million in benefits, according to SDG&E.

SDG&E believes that extending Phase 5 from 19 to 24 months and reducing the amount of capacity it was required to purchase from a potential 500 MW to 400 MW saved about \$14 million in production costs. Securing the transmission path from San Juan to Palo Verde for 106 MW was worth another \$12 million. In addition, SDG&E gained transmission rights during Phase 5 that cost it nothing but were worth about \$3 million.

When all of these benefits from the negotiations are balanced against the small cost of accepting a slightly higher capacity obligation, SDG&E concludes that its actions during the negotiations were reasonable.

Third, SDG&E rejects DRA's position that it could have negotiated its Phase 5 obligation down to 350 MW from the 400 MW it actually achieved. SDG&E points out that the excess capacity in the Southwest, combined with the decline in TEP's retail load growth and TEP's commitment to build Springerville Unit 1 made it extremely unlikely that TEP would accept any reduction of the contract demand amount. The contract assured TEP a higher price than it could obtain elsewhere for its capacity, and TEP made clear that it intended to hold SDG&E to its commitment. In addition, at the time of the renegotiation, SDG&E's analyses showed that the price of the 400 MW was about \$42 million cheaper than purchases from independent producers at long-run avoided cost prices.

Fourth, SDG&E believes that its consent to the amendment of the assignment clause was reasonable in light of the information available to it at the time it agreed to the amendment. Its contemporaneous analyses uncovered no risk to SDG&E from the change in the clause, and TEP repeatedly assured SDG&E that assignment to

a wholly owned subsidiary would not affect SDG&E costs under the contract. Furthermore, SDG&E saw no basis at the time for protesting the change in the clause to the Federal Energy Regulatory Commission (FERC), the federal agency with the authority to review contracts for sales between utilities.

Fifth, SDG&E believes that the 70/30 debt-equity ratio it accepted for Alamito was reasonable in light of the information available at the time. SDG&E feared that Alamito could manipulate its capital structure to the detriment of SDG&E if a year-by-year actual capital ratio were used to calculate the cost of service. SDG&E also feared that Alamito's cost of debt could increase suddenly with lower bond ratings. For these reasons, SDG&E thought it beneficial to tie down a fixed ratio, based on reasonable projections.

C. DRA's Position

DRA believes that SDG&E was imprudent for failing to take advantage of the negotiations and amendments to reduce the ill effects of what was turning out to be an unfavorable contract.

DRA argues that as early as 1982, SDG&E's own analyses raised concerns about the high prices of capacity under Phases 4 and 5 of the contract. At the same time, an article in Forbes magazine discussed the clever manipulations of TEP and quoted TEP management as saying that the contract with SDG&E was cheap for TEP and relatively expensive for SDG&E. Yet SDG&E waited a full year before even attempting to get TEP to negotiate changes in the contract.

When Amendment 3 was negotiated, SDG&E agreed to provisions that created four specific costs or risks, according to DRA.

The first cost noted by DRA was the agreement to take an extra 21 MW during Revised Phase 4, when DRA believes SDG&E should have been striving to decrease its capacity obligations. The increase in the contract capacity resulted from SDG&E's agreement

to set the net dependable capability of Springerville Unit 1 at 330 MW. The demand charges were based on a ratio of 230 MW to the net dependable capability of the plant. DRA asserts that SDG&E knew that the actual net dependable capability of the unit was 360 MW, yet it allowed the amendment to state it as 330 MW. When the ratio was applied, this stipulation resulted in an increase of capacity of 21 MW, with a corresponding increase in demand charges. The demand charges for these extra, unneeded megawatts, according to DRA, was \$15,681,000. DRA believes that the agreement to set the net dependable capability at lower than its actual level was imprudent, in light of the fact that SDG&E did not need capacity during Revised Phase 4, and DRA urges the disallowance of \$15,681,000 in demand charges.

Second, DRA believes the agreement to establish contract demand at 400 MW for Phase 5 was imprudent. The contract gave TEP the option of setting the contract demand between 200 and 500 MW, and TEP had earlier notified SDG&E that demand for Phase 5 would be between 350 and 500 MW. DRA points out that SDG&E's own internal memos concluded that TEP was incapable of delivering much more than 350 MW, and DRA views SDG&E's agreement to accept a contract demand at 50 MW over the 350 MW minimum level as imprudent. DRA rejects SDG&E's claim that TEP threatened to purchase enough capacity over the Inland Power Pool to enable it to sell SDG&E the 500 MW maximum permitted under the contract. DRA points that there is no written record of the making or receiving of this threat, and that, in any event, SDG&E had already agreed to take 400 MW before the date that the alleged threat was made. DRA also criticizes SDG&E's acquiescence in TEP's request to extend Phase 5 from 19 to 24 months. This extension provided no benefits to SDG&E and appears to be for the convenience of TEP. Yet, according to DRA, SDG&E received no concession for granting TEP this extension. DRA recommends disallowance of \$24,348,000 of demand charges for the extra 50 MW during Phase 5.

The third extra cost that DRA finds is the agreement to take 100 MW during Revised Phase 4. Although DRA recognizes that this 100 MW probably offsets the elimination of 100 MW scheduled for Extended Phase 3, DRA believes that SDG&E was imprudent for not even attempting to negotiate a further reduction in its capacity obligation when it had the opportunity. DRA recommends a disallowance of \$60,104,000 for this imprudence.

Fourth, DRA believes that SDG&E was imprudent to agree to modify the assignment clause so that SDG&E would not have the right to object to an assignment to a wholly owned subsidiary of TEP. DRA points out that SDG&E failed to track the proceedings before the Arizona Corporations Commission which would have provided information on TEP's intentions. DRA says that the ability to withhold consent to any proposed assignment is particularly important when the buyer, SDG&E, was obligated to pay even if the seller fails to perform under a broad range of circumstances. DRA believes that this was such a contract, and that SDG&E should have been particularly careful to safeguard its rights under the assignment clause. DRA finds imprudence in SDG&E's agreement to alter the clause after only minimal and short-sighted analysis.

DRA feels that SDG&E was unreasonably passive in the face of the spin-off of Alamito. Especially after the amendment of the assignment clause, SDG&E effectively allowed TEP to sell the contract with SDG&E to an independent company without SDG&E's consent. DRA believes that this behavior was imprudent, but recommends no direct disallowance in Phase 3. Rather, DRA thinks the effects of the alteration of the assignment clause were felt during the negotiations of Amendments 4 and 5.

The spin-off of Alamito affected the level of the demand charges during Phase 4, according to DRA. DRA believes that significant cost reductions should have occurred during Phase 4. DRA believes that SDG&E should have asked FERC to review the spin-off and that SDG&E had considerable leverage at this time. In

DRA's opinion, Alamito feared FERC's review because FERC might reduce the cost of capital used in the calculation of the cost of service, FERC might take a jurisdictional interest in Alamito, and FERC's review could delay the management buy-out. DRA believes that SDG&E should have taken advantage of its leverage to negotiate more favorable amendments.

More specifically, DRA faults SDG&E for agreeing to a 70/30 debt-equity ratio without calculating the benefits of a floating ratio or a lower fixed ratio and without trying to bargain for a lower and more favorable ratio. In fact, the actual debt-equity ratio never exceeded 79/21 during Phase 4. DRA recommends a disallowance of \$11.1 million, the difference between the 70/30 ratio that SDG&E agreed to and the 79/21 ratio that would have applied if SDG&E had obtained Alamito's agreement to use a floating ratio.

D. City's Position

The City of San Diego agrees with DRA that SDG&E's primary concern during the negotiations of Amendments 3, 4, and 5 should have been to reduce the contract demand obligation as much as possible. City views SDG&E's claimed reduction of demand to 400 MW during Phase 5 as a hollow victory, since its stated goal was a reduction to around 330 MW. City concurs with DRA that it was imprudent for SDG&E to agree to take 400 MW instead of the 350 MW minimum called for under the original contract. City supports DRA's recommended disallowance of \$24,348,000, the cost of this extra 50 MW during Phase 5.

E. UCAN's Position

UCAN was struck by the inexpert and passive nature of SDG&E's handling of its negotiations with TEP. In UCAN's view, SDG&E was repeatedly outmaneuvered by TEP, which resulted in SDG&E's agreeing to accept the extra 21 MW in Revised Phase 4 and 400 MW rather than 350 MW in Phase 5, even though its own analyses urged reductions in contract demand for these phases.

UCAN is also disturbed by SDG&E's "inexplicable" acceptance of modifications to the assignment clause. It accepted this change even though its own vice president had characterized TEP as "a bunch of crooks." When SDG&E found out about the assignment of the contract to Alamito, it first delayed its investigation and then was satisfied with TEP's oral reassurances. It failed to protest the assignment to FERC or to use the threat of a protest as leverage for further concessions during negotiations, according to UCAN. UCAN believes that disallowances are justified, and UCAN particularly wants to alert the Commission to the passive, inflexible, and unresourceful negotiation practices of SDG&E.

F. Discussion

We have already discussed at length the difficulty of applying our standard of review to the negotiations involved in this case. We also note that this already difficult task has been complicated by the ways in which the parties have chosen to present their cases. Because the prudence of entering into the TEP contract is not an issue in this case, we are not evaluating whether or not the outcomes of the various negotiations were good deals. Rather, our focus is on whether or not a better outcome to a particular negotiation was possible in light of all the circumstances SDG&E faced.

So far as the record reveals, there are many gaps in SDG&E's account of the process of negotiations. SDG&E has placed great emphasis on the benefits it claims resulted from the negotiations. However, some of these benefits are not directly linked to SDG&E's negotiating efforts. DRA, on the other hand, has asserted that SDG&E could have obtained far greater concessions if it had negotiated more skillfully or persistently.

Our difficulty is that both of these approaches require speculation. DRA's approach requires us to speculate about what would have happened if SDG&E had negotiated in the manner recommended by DRA. DRA has not offered its reconstruction of the

negotiations it says should have occurred; rather it has urged various disallowances that presume the complete success of the approach it believes SDG&E should have followed. For its part, SDG&E has forced us to speculate to separate the real concessions that resulted from its negotiating efforts from the benefits that were unrelated to the negotiations and that would have occurred regardless of the level of SDG&E's negotiating skills.

A review of past events is difficult enough under the best of circumstances. The approaches of both DRA and SDG&E make our task even more difficult. We are thus forced to select the course of events that seems most probable to us based on the record presented in the hearings, even when our account may vary substantially from the versions presented by the parties.

1. Amendment 3

a. The 100 MW

DRA has suggested that SDG&E could have avoided the 100 MW increase in the contract demand for Revised Phase 4. We believe that the evidence is strong that this apparent increase resulted from restructuring the contract and was not an actual increase of SDG&E's obligations. SDG&E's responsibility to take 100 MW during the former Extended Phase 3, which was eliminated, was transferred to the new Revised Phase 4. The two obligations are in all respects identical. From the record before us, we are satisfied that SDG&E acted reasonably and was not imprudent in accepting this restructuring and that no real increase in the contract demand occurred. In addition, DRA presented no evidence that an attempt to reduce this obligation would have met with any success.

b. Setting the Contract Demand
at 400 MW for Phase 5

This issue illustrates the difficulties we confront when the parties stake out diametrically opposed positions, and no evidence is presented to illuminate the vast middle ground between their viewpoints. SDG&E claims that it should receive a \$14

million credit for reducing the contract demand during Phase 5 from the 500 MW maximum that applied in the earlier contract. DRA claims that SDG&E should be penalized for not obtaining further reductions, down to the 350 MW minimum that existed at the time of the negotiations of the amendment. From our review of the facts, we conclude that setting the contract demand at 400 MW for Phase 5 involved neither imprudence nor extraordinary bargaining skills.

Three items of evidence undermine SDG&E's claim that only its superior negotiating abilities permitted it to obtain a reduction in the contract demand for Phase 5. First, SDG&E appears to have agreed to the 400 MW level very early in the negotiations and certainly before TEP gave any indication that it intended to exercise its option to set contract demand at the 500 MW maximum. Second, during this period, SDG&E's own written analyses questioned TEP's ability to deliver capacity above the 400 MW level. Third, the sworn testimony of TEP's president in a proceeding before the Arizona Corporation Commission supports the notion that TEP would not have elected to deliver more than 400 MW. In that proceeding, Einar Greve, TEP's president, testified about these negotiations:

"[W]e renegotiated a contract where instead of 500 megawatts, we deliver 400 megawatts in that phase. But we extended the phase into '89. That was very fortunate because we wouldn't have 500 megawatts to give them. But sometimes you are lucky." (Ex. 601, Item 10, pp. 53-54.)

Thus, it is not apparent that setting contract demand at 400 MW represented any concession by TEP.

On the other hand, little evidence supports DRA's position that SDG&E could have obtained greater concessions through harder bargaining. Under the earlier contract, TEP had the exclusive right to designate contract demand for Phase 5 as high as 500 MW, and it was unlikely to relinquish this power without concessions from SDG&E. TEP had every incentive to set the contract demand at as high a level as it could predictably deliver,

and it had already committed itself to deliver at least 350 MW. Even some of SDG&E's preliminary analyses, which are strongly relied on to support DRA's position, estimated that "there are insufficient reserves in the TEP system to provide capacity beyond the upper-300 MW range," a statement that suggests that TEP could deliver up to about 400 MW.

In addition, the immediate negotiating history had demonstrated TEP's unwillingness to consider substantial reduction in the contract demand. In April 1983, SDG&E had proposed to reduce contract demand to 230 MW during Phase 4 and to 350 MW during Phase 5. TEP had flatly rejected that proposal.

The impression that we are left with from the evidence in the record is that the discussions among SDG&E's Tom Page and Ronald Watkins and TEP's then-president and chief executive officer, Theodore M. Welp, that resulted in the agreement to set capacity at 400 MW recognized both TEP's power to set contract demand at up to 500 MW and its difficulty in delivering reliable capacity at higher than the 400 MW level. In a realistic attempt to resolve this issue and other less significant issues so that negotiations could focus on more disputed areas, they agreed to set the contract demand at 400 MW, which is probably about the level TEP would have chosen under its existing option.

This conclusion is supported by incidental materials in the record and by common sense. Curiously, we find ourselves unable to embrace the position of any of the parties. SDG&E relied a great deal on repetition of its belief that it acted reasonably, but we found several logical holes in its arguments. For example, SDG&E repeatedly concluded that it had no leverage in its negotiations with TEP, although the market for capacity in the Southwest at that time was a classic example of a buyer's market, when buyers should have maximum leverage over the crowd of sellers eager to market their products. If SDG&E believed it lacked leverage in a buyer's market, what will it claim and how will it

respond when the market becomes a seller's market? SDG&E's repeated insistence that it had no leverage underscores DRA's argument that SDG&E was locked into a contract that required it to buy too much capacity at too high a price; thus, TEP was unwilling to relinquish much of the good deal it had struck.

We are also sympathetic to DRA's criticism that SDG&E failed even to attempt to negotiate reductions in the contract demand beyond the 400 MW that TEP seemed prepared to agree to. In light of the high price and level of demand in the existing contract, SDG&E should have continued to offer proposals that would have resulted in further reductions, even if TEP continued to reject those proposals. For example, after TEP rejected SDG&E's April 1983 proposal for rather large reductions in contract demand for both Phase 4 and Phase 5, SDG&E seemed to believe that no further attempts to reduce contract demand would bear fruit. It failed even to present other proposals with reductions in demand as an element until its officers agreed with TEP's to set the demand for Phase 5 at 400 MW. We cannot help but be disturbed when the representatives of large and essential public utilities appear to show less creativity and persistence in their negotiations than negotiators of far less important transactions, such as contracts for the transfer of real estate or for the services of professional athletes.

While we have just stated our sympathy with some of the arguments of DRA and UCAN, we are disappointed that these parties have failed to follow through on their recommendations. DRA's position seems to be that since SDG&E was not persistent and aggressive in seeking further reductions in capacity, we should assume that it could have achieved reductions down to the 350 MW minimum and that all costs in excess of those needed to pay for 350 MW should be disallowed. We believe that we cannot make such a disallowance without some indication of what sort of success a utility who had negotiated more creatively would have achieved. If

such a utility would have succeeded only in reducing the contract demand to 395 MW, it would not be appropriate to disallow all amounts above those needed to pay for 350 MW. But DRA and UCAN have presented no evidence on this point. They are like a plaintiff in a personal injury action who has proved liability but has presented no evidence on damages. Although the general burden of proof remains on the applicant, we believe that DRA's and UCAN's approach requires them to bear some responsibility for establishing some baseline measure of the results of the prudent behavior they advocate.

In this context, we have concluded that the outcome of this portion of Amendment 3, which appears to have resulted from the discussion among the officers of the two companies, is at about the level that could have been achieved by a prudent utility under the circumstances. The evidence suggests that TEP was prepared to exercise its option to set the contract demand at about 400 MW, as demonstrated by both SDG&E's contemporaneous analysis and Greve's later testimony. The evidence further shows that, although SDG&E did not persistently and creatively present further proposals to reduce the contract demand to TEP, it was unlikely that further reductions could have been obtained without additional valuable concessions by SDG&E. Therefore, we will allow SDG&E to recover its expenditures connected with this issue.

c. The Five-Month Extension of Phase 5

DRA has criticized SDG&E for agreeing to an extension of Phase 5 from 19 months to 24 months during a period when SDG&E's forecast showed no need for additional capacity. DRA cites an analysis in which one of SDG&E's negotiators pointed out that it made no sense to agree to an extension that ended SDG&E's purchases from TEP in May 1989, just at the start of the summer peak period.

From our review of the record, we conclude that the extension was closely tied to the reduction in contract capacity. In combination, the reduction of contract demand and the extension

of the term of Phase 5 paralleled earlier proposals by SDG&E. It is a logical linkage that allows one party to secure demand reductions while lessening the effect on the selling party's overall revenues.

In addition, SDG&E's contemporaneous analyses showed that a 24-month Phase 5 with a demand of 400 MW was more beneficial than a 19-month Phase 5 at 500 MW, as called for before the amendment. We also believe that it was reasonable, in light of projections of capacity in the Southwest, for SDG&E to fear that TEP would purchase capacity from other utilities, at prices less than the price they would receive from SDG&E, to make up for any inability of its system to supply the maximum 500 MW that its existing option allowed.

We conclude that no disallowance should result from the extension of Phase 5.

We should note, however, that a cloud is cast over this conclusion by SDG&E's argument that its contemporaneous analysis calculated that the five-month extension of Phase 5 would provide energy and capacity for \$11 million less than SDG&E's long-term avoided cost, which was based on on-system oil and gas generation and economy energy purchases from the Northwest and Southwest. SDG&E cites testimony to the effect that reserve margins in the Southwest were expected to be between 37% and 90% in 1988 and 1989. With expected reserve margins of that magnitude, SDG&E could reasonably rely on economy energy and short-term purchases during the five months of the extension, since substantial energy would appear to be available even during peak hours. And since the extension did not cover SDG&E's summer peak in any event, SDG&E's ability to meet its highest demand would be unaffected by this strategy. As SDG&E stated in its Opening Brief (at 99), "Had a capacity deficiency occurred on Tucson's system during Phase 5, it would have been for short periods which could easily have been made

up by purchases from other utilities." The same logic would apply to SDG&E's system during this period.

Thus, SDG&E's original calculation and continuing claim of an \$11 million benefit from the extension contradicts its primary argument for accepting the extension. This contradiction does nothing to assuage our existing doubts about the quality and soundness of SDG&E's thinking and analyses in its negotiations during this period.

d. The Additional 21 MW in Phase 4

SDG&E concedes that it accepted the redefinition of the net reliable capability of Springerville Unit 1, and that it did so despite the fact that it did not need additional capacity and despite the cost that the redefinition would place on SDG&E. SDG&E states that it accepted the redefinition as part of a package of alterations, most of which were beneficial, which resulted in a net savings of \$23 million, according to SDG&E's calculations.

In exchange for accepting the redefinition, SDG&E claims that it received access to coal energy that was much less expensive than the likely alternative of oil- and gas-fired generation and economy energy purchases. Taking into account the lower cost of coal energy reduced the net cost of the additional 21 MW to \$6 million. It also received the other benefits of Amendment 3: the extension of Phase 5 and the reduction of the contract demand to 400 MW, the securing of additional transmission rights for 106 MW, and the removal of a contingent obligation to reimburse TEP for 170 MW of firm transmission charges paid to other utilities during Phase 5.

We can accept SDG&E's point that the 21 MW was a concession that was part of the total Amendment 3 package, but we do not accept the assumptions underlying the calculation it has offered to support this portion of the bargain. Nevertheless, the record demonstrates that SDG&E performed contemporaneous analyses of the value of the various proposals that were involved in the

negotiation of Amendment 3. Those analyses show that SDG&E believed that there were substantial benefits to be gained from the package of changes in Amendment 3, and that the overall benefit of these changes outweighed the cost of accepting an additional 21 MW by a substantial margin. Just the transmission agreements, to choose one of the less controversial examples, were calculated to be worth about \$15 million, or about twice the net cost of the additional 21 MW. Under these circumstances, we conclude that SDG&E made an informed and reasonable decision to accept the burden and cost of the additional 21 MW to gain the benefits that accompanied this proposal. No disallowance is appropriate for this decision.

e. The Amendment of the Assignment Clause

The evidence on this element of Amendment 3 is quite damning to SDG&E. Not only did SDG&E fail to appreciate the significance of its agreement to alter the assignment clause at the time of the negotiations, but it appears, so far as the record reflects, that SDG&E even today does not appreciate precisely what it did when it acceded to TEP's request to change the clause.

TEP requested changes to the assignment clause, which originally provided that neither party could assign the contract without the written consent of the other party to the contract. The clause also contained the usual provision that such consent could not be unreasonably withheld. The change that TEP requested would have eliminated the requirement of consent for assignments to wholly owned subsidiaries of the parties.

The stated reason for TEP's request was that the change was needed for financing purposes. SDG&E's testimony was very unclear about its understanding of the reasons for the change, and SDG&E appears not to have attempted to determine more specifically why the changes were being requested. SDG&E's contemporaneous analysis focused on the implications of an assignment to a wholly

owned subsidiary, and concluded that such an assignment would not affect SDG&E.

From the start, SDG&E apparently did not comprehend what was being requested of it, and its analysis thus focused on the wrong questions. SDG&E's analysis considered the effects it could foresee from a generic assignment to a TEP subsidiary. When compared to the wording of the existing contract, SDG&E was in essence being asked to waive its right to investigate specific assignments in circumstances SDG&E might not be able to foresee, to waive its right to assure itself that these assignments were reasonable, and, more importantly, to waive its right to object to unreasonable assignments to subsidiaries of TEP. The analysis should have focused on the implications of the waiver and the reasons TEP requested it. We believe that the right not to consent to unreasonable assignments to TEP's subsidiaries was a valuable right that SDG&E should not have relinquished without corresponding concessions from TEP.

It is ironic that SDG&E apparently unknowingly gave up a valuable right (and one that perhaps had even greater value to TEP than to SDG&E) during a period during which it still insists it had no bargaining leverage. On one issue where SDG&E clearly had leverage, it waived its right without obtaining any concessions from TEP.

SDG&E apparently agreed to this change as an accommodation to TEP. It is unexplained why such an accommodation should have been granted gratis to a company which had apparently taken a rather hard line in the negotiations, at least with regard to SDG&E's desires to reduce contract demand.

Thus, SDG&E waived a valuable right without obtaining counterbalancing concessions from TEP. Moreover, SDG&E appears to have failed even to appreciate the nature of its waiver. Under these circumstances, we conclude that SDG&E acted imprudently in agreeing to the changes in the assignment clause. We will discuss

the consequences of this imprudence in a later section of this decision.

2. The Assignment and Spin-off of Alamito

The first consequence of the revision of the assignment clause of the contract came shortly after the negotiations for Amendment 3. In late 1983, TEP received the Arizona Corporation Commission's permission to transfer two of its coal-fired generating units, including Springerville Unit 1, to its subsidiary, Alamito. On June 1, 1984, TEP transferred Springerville Unit 1 and its 50% share in San Juan Unit 3 to Alamito. At the same time, TEP assigned its contract with SDG&E to Alamito. Because at that time Alamito was still a wholly owned subsidiary of TEP, and because of the change in the assignment clause agreed to five months earlier, TEP did not need to obtain SDG&E's consent to the assignment. FERC later found that the contract had been assigned "to enable Alamito to finance some \$387 million and so that the proposed spin-off of Alamito would not be taxable to Tucson's shareholders." (See Ex. 600, p. II-12.)

On June 8, TEP's then-executive vice president Greve informed SDG&E of the assignment. On July 6, TEP filed for FERC's approval of the assignment and requested an effective date for the assignment of November 1, 1984. SDG&E did not become aware of this filing until the notice of the filing appeared in the Federal Register of July 23, 1984. The notice stated that petitions to intervene or protest should be filed by July 27, 1984.

SDG&E appears to have done little between June 8 and the appearance of the notice on July 23 to investigate the assignment's effect on SDG&E. The notice in the Federal Register apparently spurred SDG&E to investigate the implications of the assignment, but SDG&E did not file a protest or a petition to intervene in the FERC proceeding.

So far as the record reveals, SDG&E's investigation led to a series of questions about the assignment. SDG&E turned to TEP

for answers to those questions. A telephone call in late July resulted in a reassurance that the assignment would not affect SDG&E, but little detailed information was conveyed. The next apparent contact with TEP was on August 31. This was a telephone call to arrange a meeting to answer the specific questions that SDG&E had developed. During this call, TEP again reassured SDG&E that the assignment would not affect SDG&E, and some specific information was exchanged. SDG&E posed some of its questions to TEP in a letter of September 27, and the meeting with TEP took place on October 5. In the meantime, however, FERC had approved the assignment on October 1, with an effective date of November 1. TEP addressed the questions raised in SDG&E's September 27 letter at the meeting of October 5, and apparently SDG&E was satisfied with the responses.

The assignment took effect on November 1, 1984. In December 1984, TEP's Board of Directors agreed to spin-off Alamito as an independent company.

We have two serious reservations about SDG&E's actions during this sequence of events.

First, many of the questions raised during SDG&E's consideration of the effects of the assignment underscore the significance of the loss that SDG&E had suffered when it agreed to alter the assignment clause. Within a few months of that agreement, SDG&E was raising the types of questions that it should have considered before it waived its right to object to unreasonable assignments to subsidiaries. For example, the memo of August 15 raises several concerns about the capital structure of Alamito and closes with the question, "Are we absolutely sure that Tucson doesn't have to get our permission to do the assignment?" (Ex. 601, Item 13.) If SDG&E concluded at the time of the change in the assignment clause that such an assignment would not affect it, by the time it confronted an actual assignment several months later, it had developed a long list of the assignment's possible

effects on its costs under the contract. (See Ex. 601, Items 13 and 14; Ex. 617.)

Second, we agree with DRA that SDG&E was remarkably relaxed in pursuing information on the effects of the assignment. After it was first informed of the assignment, it did nothing for nearly seven weeks when FERC's notice came to its attention. Even then, it failed to protest or intervene in the FERC proceeding, although it apparently hoped somehow to obtain information from FERC (Ex. 601, Item 13). By the time it actually met with TEP, FERC had already approved the assignment, and SDG&E had lost much of the power it had to object to any unfavorable aspects to the assignment that it may have uncovered.

SDG&E also relied heavily on the reassurances and information it received from TEP in its evaluation of the assignment, although by this time SDG&E had ample reason to be suspicious of the accuracy or completeness of TEP's responses. Because of this overreliance on TEP for its information, SDG&E failed even to suspect the possibility that the assignment was a preliminary maneuver to the eventual spin-off of Alamito.

The spin-off shortly after the effective date of the assignment had immediate consequences for SDG&E. Because Alamito's capitalization relied heavily on debt, SDG&E would be paying more than Alamito's true cost of service under the capitalization formula in the contract, which assumed a higher proportion of more costly equity financing. SDG&E recognized the implications of the spin-off, and on January 23, 1985, one of its vice presidents authorized "an investigation of this matter for the purpose of preparing to initiate litigation or any other legal proceedings arising out of this transfer of control." He also recognized that the "transfer may place contract performance to SDG&E in jeopardy" and stated the need for the company promptly to evaluate whether the transfer amounted to a breach of the contract (Ex. 601, Item 16).

Under the terms of FERC's 1979 order approving the original contract, Alamito had to file a justification of its rates for Phase 4 and the costs supporting those rates by April 1, 1985. Because FERC was unlikely to approve rates based on TEP's, rather than Alamito's, capital structure, SDG&E and Alamito began negotiating for amendments to the contract.

3. Amendments 4 and 5

The issues raised by Amendments 4 and 5 are closely related and will be addressed together.

a. Alamito's Capital Structure

The primary element of Amendment 4 was a revision of Alamito's assumed capital structure for purposes of calculating the cost of service that formed the basis for the demand charge to SDG&E. After the spin-off, Alamito's capitalization was weighted heavily toward debt, and payments based on TEP's more balanced capital structure would effectively overpay Alamito. The negotiations resulted in an agreement to set the capital structure, for purposes of the contract, at 70% debt and 30% common equity.

DRA believes that this ratio was unnecessarily high, and that SDG&E's failure to achieve reductions in the level of contract demand and in the equity portion of the capitalization directly resulted from SDG&E's waiver of its rights under the assignment clause. According to DRA's line of argument, because SDG&E unreasonably gave up its right to investigate the assignment of the contract to Alamito before the assignment occurred, the assignment went through quickly, easily, and without SDG&E's influence. Once the assignment was approved, the stage was set for the spin-off. Even in the negotiations following the spin-off, SDG&E's attitude was that it had no leverage to effect changes in the contract. SDG&E passively accepted Alamito's representations about its future capitalization, DRA asserts, even though its capital structure at the time was 20% equity and 80% debt. If SDG&E had bargained more effectively and if it had retained the leverage provided by the

original assignment clause, DRA argues, it could have obtained greater concessions on contract demand and capital structure. Even during the negotiations, SDG&E apparently failed to recognize that it had leverage arising from Alamito's strong desire to avoid FERC's review of the contract. DRA recommends a disallowance, and estimates that this disallowance may be measured by the difference between the agreed 70/30 capital structure and the 21/79 ratio that was the highest proportion of equity that actually occurred during Phase 4. This amounts to \$11.1 million.

SDG&E argues that it acted prudently in fixing the capital structure. Compared to the existing contract, SDG&E benefited greatly from the revised capital ratios. Moreover, it was wise at the time to fix the ratio, since any increase in equity above the agreed levels or any downgrading of Alamito's debt would have increased SDG&E's demand charges under the contract. Furthermore, FERC had indicated that it would not approve a contract with prices that floated to reflect actual capitalization.

As we have indicated, we agree with DRA that SDG&E acted imprudently in waiving its rights under the assignment clause without obtaining concessions from TEP. We are also persuaded that this waiver eventually influenced negotiations for Amendment 4. There is little doubt that SDG&E would have been in a much stronger position if it had retained its right to consent to proposed assignments, a right which it could have parlayed into more complete disclosures by TEP. We hope that SDG&E would not have consented to the proposed assignment to Alamito without a thoughtful consideration of the consequences. We are convinced that somewhere along the line, most likely during the negotiations for Amendment 4, retaining the right to withhold its consent to unreasonable assignments to subsidiaries would have resulted in direct benefits to SDG&E, benefits that were lost because of the waiver.

For example, retaining the right to withhold its consent to unreasonable assignments would have given SDG&E additional leverage in obtaining information about the reasons for the assignment of the contract from TEP to Alamito. In light of the fact that Alamito's management began considering a buy-out as early as Spring 1984 (Ex. 641; see Tr. 69:7929), more complete information might have led SDG&E to consider the implications of a leveraged buy-out for its contract with TEP. SDG&E's witness testified on what the company's negotiators would have done with such information:

"Q: If you had known about the undisclosed plans or consideration of a leveraged buyout, would you have negotiated for an actual capital structure as opposed to the 70-30 structure that you did agree to?

"A: . . . I would have negotiated something that would have given us the full benefits of the--of their expected plans. If they expected a leveraged buyout, they would have a 99 percent debt-1 percent equity, then we would have worked something that would have reflected those costs to Alamito and reduced costs to SDG&E. Whether it would have been actual capitalization or not I can't say today....

"Q: Well, would it be fair to say if you had known about their undisclosed leveraged buyout that you would have either negotiated an actual capital structure or hypothetical capital structure that had a higher percentage of debt to equity?

"A: It could have been something like that. I think the main point was that the costs would have been lower if we had known that a leveraged buyout was planned. The costs we would have eventually settled on for the demand charge would have been lower than what they are now." (Tr. 62:7063-7064.)

Although SDG&E has argued that the leverage buy-out of a utility was unprecedented and therefore completely unforeseeable,

we note that the bond counsel who mentioned the possibility of a leveraged buy-out to Alamito's management also advised SDG&E during the same period (Tr. 69:7949, 7951). This suggests that SDG&E was capable of anticipating the possibility of a leveraged buy-out if it had retained a reason for conducting a thorough investigation of the implications of the assignment. But since it had waived its right to object to assignments, it had no reason to pursue the implications of acts that it was powerless to influence.

DRA has attempted to quantify the results of SDG&E's imprudence by comparing the agreed and actual capital ratios. While DRA suggests that further reductions in demand levels for Phase 4 could have been obtained, it has not attempted to quantify that reduction, and it had focused entirely on the capital ratios. While we agree that some benefits could have been obtained, we dislike DRA's comparison to actual, historical equity levels. This approach relies on hindsight, ignores the legitimate benefits of having fixed capital ratios, and overlooks FERC's indication that it would not approve a floating capital ratio.

Nevertheless, we believe that DRA's estimate bears some relation to SDG&E's foregone benefits. We agree with DRA that it would have been possible for SDG&E to use the leverage it had in the original assignment clause to negotiate a higher debt/equity ratio than it did, or a comparable concession. We have already stated our disagreement with DRA's calculation. From the sparse information available in the record, our sense is that SDG&E could have negotiated a ratio of 75/25 or roughly equivalent concessions if it had retained its right to withhold consent to unreasonable assignments. This ratio is half of the difference between Alamito's actual capitalization at the time of Amendment 4 (80/20) and the agreed ratio (70/30).

Using the method shown in Ex. 523, we calculate the difference between the agreed 70/30 ratio and our assumed 75/25 ratio to be \$5.9 million. Appropriate interest at the ECAC rate

should also accrue on this amount. As shown in Appendix B, the total amounts to about \$7.1 million as of December 31, 1988. We will therefore disallow recovery of this amount. This figure is roughly half of DRA's recommendation; thus, it recognizes some of the benefits of the fixed capital ratio that DRA ignored, and it comports with our general sense of the cost of relinquishing the right to consent to the assignment. ✓

b. Other Agreements

SDG&E points out that it received other benefits from Amendment 4. Specifically, it obtained the right to have its commercial operation date consultant present at the Springerville Unit 1 construction site, and the capacity factor of Springerville Unit 1 was increased from 60% to 65% for purposes of SDG&E's entitlement to energy associated with the capacity it had purchased.

Although we agree that these items provide some benefits to SDG&E, we do not think that the benefits outweigh the capitalization element of Amendment 4. SDG&E had encountered no difficulties with access to the Springerville site up to that time, so the added benefit of having its consultant present at the site is small. The increase in capacity factor would be beneficial only if SDG&E actually needed the added energy made available to it by the increase. SDG&E did not expect to need the energy, so this portion of the amendment operated like an insurance policy against unexpected events. Again, we conclude that the benefit is real, but small.

Although we acknowledge that these small benefits were obtained, we are not persuaded to modify the disallowance we have adopted in connection with the capital structure.

**V. The Transactions with Comision
Federal de Electricidad (CFE)**

A. Background

On November 12, 1980, SDG&E entered into a contract for the purchase of capacity and energy from CFE. The contract's term was 10 years, starting on the commercial operation date of the last of three geothermal units CFE would construct at Cerra Prieto, and the contract demand was set at 150 MW. After a tremendous devaluation of the Mexican peso, the contract was amended. According to both SDG&E and DRA, this amendment resulted in savings to SDG&E of \$550 million as compared to the original contract.

Purchases under the contract began on February 1, 1986, and through April 30, 1986, the end of the period under review in this case, CFE supplied power to SDG&E with an availability of more than 99%.

In a related development, from 1984 through 1986, CFE was unable to pay its vendors, including SDG&E, in dollars for purchases of equipment and energy. For its sales to CFE, SDG&E created a dollar banking arrangement. Under this arrangement, the amount CFE owed SDG&E was recorded in an interest-bearing account, and CFE was given the option of repaying its debt in either dollars or energy. As a further precaution, SDG&E obtained an insurance policy to guarantee repayment, and CFE paid the premium. Energy repayments from November 1984 through April 1985 were credited on the basis of SDG&E's hourly decremental cost, and repayments from May 1985 through January 1986 were based on 90% of SDG&E's hourly decremental cost. ✓

Although DRA, apparently joined by City, found SDG&E's dealings with CFE during the review period to be reasonable, UCAN raised several issues about these transactions.

B. UCAN's Position

UCAN raises three concerns about the energy-for-energy transactions. First, UCAN wonders whether the Commission was

notified of these transactions. Second, UCAN notes that purchases from the Western Area Power Administration (WAPA) are at 85% of decremental cost and UCAN questions why CFE received more favorable terms. Third, UCAN asserts that SDG&E was unable to verify that the repayment insurance existed before 1986.

UCAN is also concerned about procedures for purchasing economy energy. A single transaction scheduler is responsible for arranging for purchases from and sales to up to 35 other utilities during a 40-minute period each hour. This scheduler must work 12-hour shifts. UCAN questions whether these working conditions give the scheduler a reasonable opportunity to purchase the cheapest energy available. Moreover, UCAN asserts that the scheduler's supervisors have no way of determining whether the scheduler has bought the cheapest possible energy. Finally, UCAN argues that the present system may prevent SDG&E from purchasing low-cost economy energy that has to be transmitted through the territories of other utilities.

C. SDG&E's Position

SDG&E responds to UCAN's query about whether the Commission was aware of the exchanges with CFE by pointing out that this proceeding is the appropriate time for the Commission to review these exchanges, and SDG&E asserts that the Commission's auditors have in fact reviewed these transactions in connection with this case.

As for the comparison with purchases from WAPA, SDG&E believes that UCAN has misunderstood the use of decremental cost in the CFE transactions. In this context, "decremental cost" means "the lowest estimated expense it would otherwise have incurred had it generated or purchased the energy from other sources." Thus, according to SDG&E, energy returned under the dollar banking arrangement gave SDG&E energy as cheap as or cheaper than any other available economy energy, including WAPA energy.

SDG&E also asserts that the record contains clear testimony that the insurance was in effect before 1986 and that all economy energy transactions are well-documented.

In response to UCAN's assertions about energy purchasing procedures, SDG&E notes that its schedulers are assisted by automatic phone systems available for contacting other utilities and by a transaction evaluation computer program. Moreover, SDG&E argues that voluminous records are maintained of all of SDG&E's hourly transactions.

As for the problem of purchasing energy that must be transported through the territories of other utilities, SDG&E points out that SWPL is in part designed to avoid just such problems by giving SDG&E direct access to the energy available from several Southwestern utilities.

D. Discussion

Although UCAN has raised many concerns about the transactions with CFE, it has not demonstrated that SDG&E has acted in anything other than a reasonable and prudent fashion. It is acknowledged that amendments have saved SDG&E and its ratepayers over half a billion dollars compared to the original contract. SDG&E has demonstrated to our satisfaction that its definition of decremental cost for repayment of the dollar banking account balance ensured that energy repayments were the cheapest source of energy at the time of the repayment. UCAN has also failed to demonstrate that SDG&E's practices for securing economy energy were unreasonable or resulted in any lost opportunities for purchasing the cheapest possible energy.

We conclude that SDG&E's purchases from CFE during the period we are concerned with in this case were reasonable and prudent.

VI. The 1979 Contract With PNM

SDG&E agreed to purchase up to 236 MW of capacity and associated energy from PNM in a contract signed on October 30, 1979. The purchases commenced on the commercial operation date of the San Juan Unit 4 plant and terminated on April 30, 1988.

Although DRA criticized the level of the demand charges under this contract, it believes that SDG&E was very fortunate that Units 1 and 2 of the Palo Verde nuclear power plant were delayed. Provisions in the contract tied the level of SDG&E's capacity obligation to the completion date of those units, and DRA calculates that the delays saved SDG&E over \$143 million in charges for unneeded capacity. Apparently because of the reduced capacity obligation under the contract, DRA finds SDG&E's administration of the contract during the record period to be reasonable.

We conclude that the evidence in this proceeding supports a finding that SDG&E's administration of this contract during the record period was reasonable.

VII. The 1985 Contract With PNM

A. Background

In 1984, SDG&E began taking steps to respond to the expiration of three purchased power contracts amounting to over 600 MW, or about 20% of SDG&E's total capacity, before the 1989 summer peak. These expiring contracts included all of SDG&E's capacity from coal and hydroelectric plants.

In 1984, SDG&E commissioned Charles River Associates to perform a study of the bulk power market. This market study found it useful to divide the bulk power market into one group of existing resources able to supply power by 1989 and another group of resources planned to be completed in the 1990s, which were subject to uncertain prices and completion dates. The market study concluded that purchases from existing baseload resources were likely to be cheaper than purchases from baseload resources planned for the 1990s.

Among the near-term resources identified by the market study was a power purchase from PNM. Most of the power would come from coal plants, fulfilling SDG&E's goal of diversifying the fuel sources of the plants that generate electricity for use in its system, and PNM's estimated price was among the lowest identified in the market study. The primary obstacle seen in the study was the need for arranging transmission from PNM's system to SWPL's terminus at Palo Verde.

The contract was signed by SDG&E on November 4 and by PNM on November 5, 1985. SDG&E agreed to purchase 100 MW of capacity and associated energy from May 1, 1988, through April 30, 2001.

Because the contract was signed during the period of the reasonableness review, it is appropriate in this proceeding to consider the reasonableness and prudence of SDG&E's decision to enter into the contract with PNM.

The challenges to the reasonableness of the PNM contract fall into four general areas. First, did SDG&E really need the additional capacity represented by the contract? Second, was the PNM agreement a reasonable choice for meeting any need for additional capacity? Third, are the terms of the contract reasonable? And fourth, has SDG&E acted reasonably in administering the contract?

SDG&E's answer to all these questions is yes. DRA, City, and UCAN question the logic of SDG&E's conclusion that it needed additional capacity and believes that other, cheaper alternatives were available for meeting the system's needs. UCAN, in particular, believes that SDG&E unreasonably failed to consider the availability of conservation and load management to reduce demand and eliminate the need for the contract. DRA also challenges the reasonableness of several of the terms of the contract and concludes that SDG&E has missed several opportunities to cancel or renegotiate a contract that now appears to be more expensive than many other options.

We will summarize each party's answer to these four questions.

B. The Need for Additional Capacity

1. SDG&E's Position

In 1984, facing the expiration by 1989 of over 600 MW of existing purchased capacity, SDG&E commissioned the market study. As a follow-up to the market study in 1985, SDG&E decided to revise its resource plan to determine more precisely how much capacity it needed to have available in the future. This revision took place under the direction of its Resource and Operating Committee (ROC) and will be referred to as the ROC plan. SDG&E was also guided by a strategy that called for limiting long lead-time commitments to approximately 50% of expected need. When this strategy was applied to the 600 MW of the expiring contracts, SDG&E concluded that it should attempt to secure about 300 MW of long lead-time

commitments. Long-lead time commitments were defined as resources that would not deliver power for four or more years. SDG&E also set a goal of developing a diversified resource mix.

The ROC plan, as adopted in June 1985, set out forecasts of SDG&E's loads and resources from 1985 through 2004. According to the ROC plan, even with the PNM purchase, SDG&E would still be 39 MW short of its 20% target reserve margin in 1988. SDG&E could have met its projected 1988 need without the PNM purchase by restarting its Encina 1 or South Bay 3 plants, but SDG&E preferred to keep these plants in reserve to meet short-term needs and unexpected shortages.

The demand forecast of the ROC plan was essentially the same one SDG&E had submitted to the California Energy Commission as part of the Energy Commission's sixth Common Forecasting Methodology (CFM-6) proceeding. The single major change was that SDG&E had revised its proposed CFM-6 demand forecast to reflect more recent estimates of self-generation. SDG&E did not rely on the Energy Commission's adopted demand forecasts in its 1985 Electricity Report (1985 ER), which was issued on April 29, 1985, because SDG&E believed that the forecasts were outdated, a belief that was supported by the fact that SDG&E's actual peak in both 1984 and 1985 substantially exceeded the 1985 ER's forecasted peak load for those years. SDG&E considered the 1985 ER forecast, but it did not rely exclusively on that forecast, because it appeared to be about 100 MW too low at its starting point. SDG&E believes that it was reasonable under those circumstances to use the ROC plan, which was based on its submission to the CFM-6 proceeding and was adjusted for more recent information on the extent of self-generation.

2. DRA's Position

DRA believes that the demand forecast in SDG&E's ROC plan was flawed in many respects, and as a result SDG&E contracted to purchase capacity it did not need.

First, DRA notes that the need for 39 MW of additional capacity in 1988 shown in the ROC plan ignores the plan's assumption that 598 MW of existing generating plants would be put in reserve shutdown status. If these existing plants are taken into account, DRA argues, SDG&E's own plan showed that it had substantial excess capacity through at least 1988. DRA supports its argument by referring to two of SDG&E's internal memos, which questioned the need for additional capacity in 1988 (Exs. 655 & 658, Item 2).

Second, DRA compares the ROC load and resource forecast with the forecast submitted in late 1984 as part of SDG&E's General Rate Case (GRC) for test year 1986 and suspects that the ROC plan manipulated its forecast to fit the PNM contract. The GRC resource plan showed the Encina 1 plant returning to service in 1988; in the ROC plan the return is delayed until 1989. In the GRC plan, two Silver Gate units are returned to service in 1990 and 1995; the ROC plan does not include their return. DRA notes that with Encina 1, South Bay 3, and the Silver Gate plants in the resource plan, SDG&E would need only 82 MW of capacity in 1989, and under its strategy of limiting long lead-time commitments to half of projected need, SDG&E would need to secure only 40 MW of capacity in 1989. DRA also notes that, compared to the GRC resource plan, the ROC plan projects higher demand levels and about 40% less conservation and load management.

Third, DRA argues that if SDG&E had used the official State demand forecast adopted by the Energy Commission in the 1985 ER and had included the existing capacity represented by the shut plants that it intended to return to service, it would have realized that it did not need additional capacity until 1994.

Fourth, DRA responds to SDG&E's belief that the 1985 ER forecast was out of date, as demonstrated by the fact that actual peak demand exceeded the 1985 ER's forecast for both 1984 and 1985,

by noting that the ROC plan's forecast of peak demand in 1985 exceeded actual peak demand by 89 MW.

From these points DRA concludes that SDG&E was unreasonable to rely solely on the ROC forecast to determine the need for additional capacity, a need which was eventually filled by the PNM contract.

3. UCAN's Position

UCAN asserts that SDG&E knew in 1985 that it would not need additional power in 1988 and that existing units could meet projected demand for 1988. The evidence in this case, according to UCAN, suggests that SDG&E agreed to take capacity earlier than it needed it as a concession to PNM. UCAN believes that such a concession was not necessary in the buyer's market that existed at that time.

4. SDG&E's Response

SDG&E asserts that it was prudent in relying on the demand forecast of the ROC plan. In SDG&E's opinion, the demand forecast of the 1985 ER, although it had been recently adopted, was the result of a long proceeding and was unavoidably out of date. The ROC plan was based on SDG&E's filing in CFM-6, which was SDG&E's most recent forecast. SDG&E asserts that it was reasonable and prudent for it to use the most recent information available when it had to decide whether to contract for the purchase of additional capacity.

SDG&E also argues that it acted prudently in placing Encina 1 and South Bay 3 in reserve shutdown until 1989. Its strategy was to try to obtain cost-effective coal capacity and to reserve Encina 1 and South Bay 3 as short lead-time options. Its strategy of limiting long lead-time commitments to about 50% of the expected need for capacity required it to maintain some short lead-time flexibility.

Furthermore, SDG&E thinks it was prudent to leave the Silver Gate plants mothballed. In keeping with its goal of fuel

diversification, SDG&E believed that it should not restart Silver Gate until it had exhausted all competitive options that did not rely on oil or gas.

Finally, SDG&E disputes DRA's suggestion that it doctored its ROC plan to fit the PNM contract.

C. The Selection of the PNM Contract to Fill the Expected Need

1. The Timing of the Start of the Contract

It is now undisputed that the PNM contract would have been more beneficial if it had begun in 1989, rather than in 1988. Even the economic analysis SDG&E performed in September 1985 showed that the contract would be more expensive than avoided cost in 1988 and 1989 in the expected case. The timing of the start of the contract drew comments from the parties.

a. SDG&E's Position

For SDG&E, the timing issue arose out of some of the findings and recommendations of the 1984 market study. The market study (Ex. 530) surveyed the market for several forms of power in the Western United States, Canada, and Mexico from the mid-1980s through the turn of the century. For the capacity market, the study found that SDG&E's opportunities fell into two groups.

One group consisted of purchases from existing or nearly completed resources. The capacity from this group was expected to be available by 1989. Because of these resources existed or were nearly completed, the timing and price of these options were more certain, and compared with the second group, the prices were noticeably lower.

The second group consisted of opportunities, primarily co-ownership opportunities, for obtaining capacity from planned resources. These resources were expected to come on line in the mid-to-late 1990s. However, the market study found that the start-up of these plants could be delayed by various circumstances. Few opportunities existed from 1990 through 1993. In addition, the

prices in the second group were projected to be substantially higher than the pre-1990 group.

According to SDG&E, the market study also indicated that SDG&E faced some competition for the least expensive opportunities and urged SDG&E to begin preliminary negotiations for the most desirable options. Among the best choices identified by the market study was the PNM contract.

Thus, SDG&E was aware that it might have to accept an earlier than desired start for its capacity purchase in order to secure long-term low prices. Therefore, SDG&E urges the Commission to consider the overall cost-effectiveness of the contract over its full 13-year term, and not just the economics of the first two years.

In addition, SDG&E responds to some of the other parties' criticisms by noting that it attempted to negotiate for a delay in the commencement date until 1989. However, PNM rebuffed this attempt. SDG&E was aware that PNM needed revenues in 1988 because it had agreed with New Mexico regulators to remove part of its excess capacity from its rate base. The details of this capacity inventory arrangement gave PNM a strong incentive to make sales from its excess capacity. (See Tr. 74:8408-8410.)

b. DRA's Position

To a large extent, DRA's approach to the timing issue is to accept SDG&E's challenge to evaluate the cost-effectiveness of the contract over its entire term. However, DRA believes that SDG&E incorrectly counted as a benefit the availability of capacity that it did not need. As was previously discussed, DRA further believes that the period during which SDG&E will pay for unneeded capacity will extend considerably beyond June 1989. This portion of DRA's treatment of this issue will be discussed in connection with the economic analysis of the contract in a subsequent section of the decision.

In addition, DRA faults SDG&E for not bargaining more persistently for a later start date for the contract. In DRA's opinion, merely asking one time for a later commencement and accepting without further discussion or protest the other party's refusal, as DRA believes SDG&E did, are not the negotiating practices of a prudent utility. DRA believes that SDG&E should have pressed its leverage as a buyer in a buyer's market and its knowledge of the financial squeeze that PNM's capacity inventory arrangement had put it in to obtain a valuable and logical concession on the start of the contract.

DRA also finds no evidence that SDG&E had calculated the price it would pay for agreeing to accept unneeded capacity when it was negotiating with PNM. DRA believes that at a minimum, a prudent utility would be aware of the cost of any concessions it made during the course of negotiations. DRA finds that SDG&E was unreasonable for negotiating without even a rough estimate of the cost of the unneeded capacity.

c. City's Position

City argues that SDG&E was imprudent to agree to pay for capacity when it knew it would not need the capacity. City therefore recommends that all demand charges that SDG&E will pay for capacity between May 1, 1988 and June 1, 1989, should not be allowed for recovery from ratepayers.

d. UCAN's Position

On this issue, UCAN largely echoes DRA's point that it was unnecessary, in a buyer's market, for SDG&E to accede to PNM's insistence on an early commencement of the contract.

2. The Economic Analysis of the Contract

a. SDG&E's Position

SDG&E states that it performed a comprehensive cost-effectiveness analysis of the PNM contract. This analysis took place in August and September, 1985, and the results were presented

to management in October 1985. For convenience, this analysis will be referred to as the September analysis.

The September analysis compared the expected cost of the PNM contract with the forecasted costs for purchases from qualifying facilities (QFs), cogenerators and small independent power producers qualifying for certain benefits under the federal Public Utility Regulatory Policies Act of 1978 (PURPA). Under PURPA, QFs are to be paid prices equivalent to the utility's avoided cost, or the costs that the utility avoids by purchasing power from the QF rather than generating an equivalent amount of power itself. The analysis used the capacity prices authorized for QFs selling firm capacity for a term of 13 years beginning in 1988 under Standard Offer Number 2 (SO2). Because the contract guaranteed a 95% capacity factor, and because QFs with high capacity factors could earn bonuses under SO2, these bonus payments were imputed to the PNM contract. The analysis also used a range of forecasts of oil and gas prices to test the sensitivity of the results to changes in fuel prices.

The analysis concluded that the PNM would be cheaper than avoided cost by about \$7.5 million when the expected costs of oil and gas were used in the comparison. The PNM contract would be cheaper than avoided cost in every year of the contract term except 1988 and 1989. When the comparison used a high forecast of oil and gas price forecast, the PNM saved \$88 million compared to avoided cost, but when a low forecast of oil and gas prices was used, the contract was \$51 million more expensive than avoided cost. When the probabilities of various events occurring were taken into account, the expected savings from the PNM contract was \$5 million. The analysis concluded that there was a 65% probability that the contract would be cheaper than avoided cost.

Because the level of capacity values had been controversial in the years preceding the contract signing, the analysis used the capacity prices for SO2 SDG&E proposed in its

1986 general rate case. The capacity prices were adjusted to reflect the probability of need based on its annual loss of load probability. The Commission had approved this general approach, according to SDG&E, although the specific prices SDG&E used in its analysis had not received the Commission's approval.

SDG&E believes that the capacity prices it used in its analysis were conservative. The actual capacity prices for S02 that the Commission later approved in the GRC decision were slightly higher than the prices used in the analysis. In addition, the analysis used Schedule G-61 gas rates, rather than the Schedule GN-5 rates that were applied at that time. The result was that the avoided cost used in the analysis was about 7 mills per kilowatt-hour lower than if GN-5 gas rates had been used. ✓

b. DRA'S Position

DRA faults SDG&E's economic analysis on several grounds.

First, DRA argues that SDG&E did not use any economic analysis to guide it in its negotiations with PNM. SDG&E performed three preliminary analyses that considered only hypothetical purchases under terms not directly related to the actual terms of the PNM purchase. The fourth analysis, the September analysis, was the only analysis that considered the actual terms of the contract, and it was performed only after the terms of the contract had been agreed on. Thus, the only concrete analysis did not guide the negotiations to allow SDG&E to obtain the maximum economic benefit from the contract; it came at a time when its only function could be to aid in the decision whether to accept or reject the proposed contract. ✓

Second, DRA argues that the results of the September analysis were far from compelling. The analysis projected a savings of only \$5 million over avoided cost, or less than 2% of the total costs of the contract. DRA points out that the margin of error in PROMOD, the computerized production simulation model that SDG&E used in its analysis, is plus or minus 1% and that SDG&E's

projected benefits are within the margin of error of the PROMOD model. Thus, DRA argues that SDG&E could not be certain that its analysis showed any benefit from the PNM contract. The analysis showed that the contract's costs exceeded avoided cost in the first two years of its term, and there was a 35% probability that the contract would exceed avoided cost over the entire life of the contract. In DRA's view, no prudent utility would agree to such a marginally cost-effective contract.

Third, DRA believes that the assumptions of the analysis were flawed. DRA asserts that the analysis used too high of a capacity value for the years when no capacity will be needed. DRA presented two ways of adjusting capacity prices to reflect the lower value of additional capacity when a utility has adequate reserve margins.

DRA's first method for adjusting capacity value is to set the capacity value at \$0 when no additional capacity is needed to meet target reserve margins. According to DRA, if the value of capacity is set at \$0 through May 1989, when a 400 MW purchase from TEP expires, the contract would cost \$5.6 million more than avoided cost. If a \$0 capacity value is assigned until 1993, when DRA's suggested resource plan indicated that capacity would first be needed, the contract would cost \$44 million more than avoided cost.

DRA's second method is to apply an Energy Reliability Index (ERI), which calculates a shortage value for additional capacity. When the ERI method is applied to the addition of the 100 MW of the PNM contract to DRA's modified resource plan, the result is that the cost of the PNM contract is expected to exceed avoided cost by \$20.1 million.

Thus, DRA believes that if the value of the contract's capacity had been accurately set, either SDG&E's or DRA's analysis would have shown that the contract would be more costly than avoided cost.

Fourth, DRA questions whether use of a capacity value based on SO₂ in SDG&E's analysis made sense in light of the many differences between the obligations contained in SO₂ and those of the PNM contract. Under SO₂, the producer is paid only for energy actually delivered; under the PNM contract, SDG&E is obligated under certain circumstances to pay even when deliveries are curtailed. Under SO₂, energy prices float to reflect changes in the price of the marginal fuel, usually gas or oil; the energy price for the PNM deliveries is fixed. The base capacity price under SO₂ is \$120 per kilowatt per year; the payment under the PNM contract is \$280 per kilowatt per year. SO₂ prices are based on the value to SDG&E; the contract's pricing scheme focuses on PNM's cost. SO₂ allows SDG&E to curtail QFs at certain times; the PNM contract is a take-or-pay agreement. If a QF is unable to live up to its agreement to provide a specified level of capacity, SDG&E is entitled to collect any overpayments it has made for capacity; the PNM agreement allows no such recovery.

DRA summarizes the support for its conclusion that a prudent utility would not have agreed to the PNM contract as follows:

"SDG&E knew that it did not need to make any new purchases in 1988 and that it needed very little, if any, new capacity into the 1990's. SDG&E entered into a contract to buy unneeded capacity in these early years at prices above avoided costs in those years, with the hope that, over the long run, the contract would be cost-effective.

"But SDG&E's estimates of savings from this contract were rapidly shrinking, from an estimated \$100 million savings in May 1985 to a paltry \$5 million savings in September 1985. The estimated savings represented less than 2% of the total production costs over the life of the contract. In fact, the margin of error of PROMOD was greater than the estimated savings. Moreover, if SDG&E had properly accounted for the cost of power it did not need in even one year, 1988, it would have found the agreement

not to be cost-effective in the expected case."
(Opening Brief, pp. 112-113.)

c. UCAN's Position

UCAN argues that it was unreasonable for SDG&E to enter into a long-term commitment in the circumstances that existed in 1985, particularly when SDG&E's own economic analysis showed that the contract was only marginally cost-effective.

d. SDG&E's Reply

SDG&E believes that it has correctly valued the capacity of the PNM purchases by using its proposed SO2 capacity prices from its 1986 GRC filing. SDG&E notes that these proposed prices, which were used in its economic analysis of the PNM contract, were lower than the adopted SO2 capacity prices in both its 1984 and 1986 general rate cases.

According to SDG&E, DRA's suggestion that capacity should be valued at \$0 for some years is contrary to the Commission's position that capacity always has some value. In fact, during the rate case portion of this proceeding, DRA had proposed to value capacity at \$0 when reserve margins were adequate. The Commission rejected this proposal because it was contrary to several earlier decisions. (D.85-12-108, mimeo. pp. 84-86.)

In addition, SDG&E argues that the ERI method DRA uses for adjusting capacity prices grew out of the suspension of Standard Offer 4 (SO4), and the Commission never adopted this method. The method DRA recommends was used to make calculations for adjusting capacity for Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (Edison) to guide the Commission in deciding whether to continue its partial suspension of SO4, but no such calculations were applied to SDG&E's circumstances. Moreover, the interim decision that proposed the adjusted capacity prices used the 1984 GRC SO2 prices for SDG&E, and these prices were higher than those used in SDG&E's economic analysis of the PNM contract. Finally, Commission suspended SO4,

so the modified prices were never put into effect. For DRA to suggest that SDG&E should have used a method that was never applied to it and never endorsed by the Commission is unreasonable, in SDG&E's view.

In fact, SDG&E continues, in the 1986 GRC decision the Commission endorsed a method very similar to the probability of need factor method that SDG&E used to adjust the capacity prices in its economic analysis. SDG&E argues that it is unreasonable to expect SDG&E to choose a method proposed by DRA but never accepted by the Commission over a method that has been approved by the Commission.

3. The Contract's Other Costs and Benefits

a. SDG&E's Position

SDG&E argues that the contract carried many other benefits beyond its economic value.

(1) Fuel Diversity

One of the foremost benefits of the contract, in SDG&E's view, is that it furthered SDG&E's efforts to diversify its resource base. SDG&E's heavy reliance on generation plants fueled by oil and gas had combined with the oil price increases of the 1970s to drive up SDG&E's rates to among the highest in the nation. SDG&E has since then attempted to diversify its resource base to avoid overreliance on any single fuel source or technology. It now owns part of Units 2 & 3 of the San Onofre Nuclear Generating Station, and it has contracted to purchase power from systems with hydroelectric and coal-fired resources.

In addition, SDG&E had been instructed by the California Energy Commission to decrease its reliance on plants using oil and gas.

Part of the impetus behind SDG&E's contracting for the market study in 1984 was the realization that all of its purchases from hydroelectric and coal plants were going to expire by 1989. It needed to replace these purchases with some other

resources, and it strongly desired to replace them with resources that would continue its efforts toward diversification.

To summarize, SDG&E believes the PNM contract offered the additional benefit of diversification. Diversification in turn offered the benefits of softening the disruptions that could affect a single fuel or technology and of moderating the rate effects of such disruptions.

(2) The PNM Contract Was the Best Option

SDG&E also argues that the PNM contract was the best of the available options. It detailed its consideration of six other resources that were options to the PNM purchase.

First, unlike PG&E and Edison, SDG&E did not receive an overwhelming response to its standard offers to QFs. Accordingly, QFs were not expected to reduce demand or increase supply enough to displace the need for additional resources. The ROC plan's demand forecast included the most recent forecasts of demand-reducing cogeneration, and at that point only three QFs had entered into contracts to deliver firm capacity to SDG&E.

Second, the possibility of developing a coal plant, probably in conjunction with another utility, was explored but rejected because of several problems. Building a plant in California would likely face environmental opposition, and estimating fuel costs was complicated by the uncertainty of rail transportation rates. Building near the mine avoided some of these problems, but for SDG&E it added another problem because of its lack of a transmission line to the proposed sites for Western coal plants. Ownership carried additional responsibilities and risks that were not present in the PNM contract, according to SDG&E.

Third, although DRA suggested that SDG&E could have purchased capacity on favorable terms from Edison or PG&E, neither of those companies had entered the sellers' market. In SDG&E's view, DRA seems to rely on reports indicating that both utilities had excess capacity into the 1990s. However, those capacity

figures resulted largely from the "Gold Rush" of QFs signing standard offers in anticipation of the suspension of S02 and S04, and neither utility felt confident enough about this paper capacity to commit to sell to others.

Fourth, although UCAN suggested that SDG&E could have met its need for additional capacity through increased conservation and load management, SDG&E asserts that demand reductions from mandated and cost-effective conservation and load management programs were already included in the ROC plan's demand forecast. The forecasts were based on SDG&E's proposals in the 1986 GRC, and in fact the Commission authorized \$4 million less than SDG&E requested for conservation and load management. Furthermore, the test of cost-effectiveness for the programs proposed by SDG&E was based on the much higher projections of long-term fuel prices that existed when SDG&E filed its GRC application in December 1984, rather than on comparable forecasts in October 1985, when it needed to make its decision on the PNM contract. SDG&E also views UCAN's and DRA's positions as attempts to relitigate the conservation and load management aspects of the rate case phase of this proceeding.

Fifth, SDG&E believes that DRA's suggestion that it should have relied on its mothballed plants and on purchases of economy energy for its expected capacity requirements would have been a foolish strategy. Since the mothballed plants burned oil and gas, DRA's suggestion would have been a bad goal for all the reasons that fuel diversity is a good goal, as discussed previously. In addition, the availability of economy energy in the 1990s was projected to be primarily during off-peak periods and not when energy would be needed most. Also, without the PNM contract, SDG&E would not have a transmission path to the Four Corners area, where much of the Southwest's economy energy would originate.

Sixth, SDG&E investigated but rejected possible purchases from Modesto-Santa Clara-Redding (MSR) and El Paso

Electric Company (El Paso). MSR was a short-term offer which could fairly be compared to the PNM offer only if the cost of purchasing a follow-up resource was considered. When this comparison was made, PNM emerged as the cheaper long-term resource in SDG&E's analysis. Furthermore, MSR did not have a firm transmission path to Palo Verde, the terminus of SWPL. As for El Paso, it had not made a firm offer, and it also did not have a firm transmission path to Palo Verde. In addition, its system relied heavily on plants fueled by oil and gas, so a purchase from El Paso would not further SDG&E's goal of increased fuel diversity.

(3) Price Stability

A third benefit of the PNM contract in SDG&E's eyes was the stability of its price. The demand rate was fixed for the first four years of the contract, and could then increase only with increases in an index that was not sensitive to changes in oil and gas prices. In addition, increases could occur no more often than once a year.

(4) Transmission Rights

The PNM contract carried with it two valuable transmission rights, according to SDG&E.

First, SDG&E obtained an opportunity to purchase, at cost-based rates and when available, up to 100 MW of backup transmission between Palo Verde and PNM's system. According to SDG&E, this opportunity gave it access to the Four Corners region, a major source of economy energy in the Southwest.

(5) Reliability

SDG&E points out that the PNM contract is a purchase from the PNM system and is not linked to the operation (or outage) of a single unit. In addition, the contract guarantees a 95% capacity factor, an extremely high level of reliability.

(6) Price

SDG&E asserts that the price of the PNM contract was the best price obtainable under the circumstances and at the time

the contract was negotiated. The contract price is 19% lower than a comparable offer from PNM only 14 months earlier. According to both PNM's representations and SDG&E's own analysis, it was less than 80% of the projected cost of PNM's wholesale service during the term of the agreement. Because of PNM's unique capacity inventory arrangement, SDG&E's negotiator concluded that this was the lowest price that PNM could offer. That conclusion was confirmed during negotiations by PNM's rejections of various offers by SDG&E that had the effect of reducing the price.

(7) The Start Date Was Firm

A final benefit of the PNM contract was that the commencement of purchases under the contract was firmly set. Other options contained uncertainties that made it unclear that the resource would be ready when SDG&E needed it.

b. DRA's Position

DRA disputes some of the benefits listed by SDG&E and emphasizes that the contract also carried many risks.

(1) Early Commitment

DRA's points on the adequacy of the demand forecast seem to argue that SDG&E committed to the PNM contract earlier than it had to. This early commitment required SDG&E to forego later and presumably better information on its system demand, fuel prices, and other purchase opportunities. As things turned out, of course, a delay of a few months would have considerably revised the fuel price forecasts, since shortly after the contract was signed oil markets took a plunge to much lower price levels that continue to this day. The commitment to a long-term take-or-pay contract, DRA argues, carried the risk that such changes in the fundamental elements of the contract could occur.

(2) The Contract Had No Escape Hatches

In a similar vein, DRA notes that the contract had no provisions for altering its terms or terminating the contract in the event that circumstances changed substantially from those

contemplated in the agreement. From the moment SDG&E signed the contract, it was committed to purchase capacity until 2001, with one exception that will be addressed later. If the contract turned out to be a bad one, as DRA believes it has, SDG&E would be stuck with a considerable expense until the next century.

(3) The Demand Charge Never Decreases

One of the contract's provisions singled out for special criticism by DRA is the application of the index to the demand charge. Even if the index decreases, the contract provides that the demand charge will not decrease; if the index decreases so that a decrease in the demand charge would otherwise be called for, the demand charge remains at a fixed level until the index has increased enough to justify another increase in the demand charge. Thus, the contract is biased in favor of PNM, in DRA's opinion. SDG&E bears much of the risk of inflation of the index, but PNM bears none of the risk of a decline. If in fact such a decline occurs, the contract would in effect become even more costly. In DRA's view, SDG&E needlessly accepted an asymmetrical risk when it agreed to this provision.

(4) SDG&E Must Pay the Demand Charges Under A Wide Range of Circumstances

DRA criticizes the provision that requires SDG&E to continue to pay demand charges even if delivery of contract energy is curtailed or interrupted. If deliveries are curtailed or interrupted by more than 5% in any month, then the demand charge is reduced by half of the percentage of additional curtailment or interruptions. Although SDG&E compliments itself for negotiating a provision that encourages the seller to perform, DRA notes that this provision could have the effect of requiring SDG&E to pay 55% of the demand charge even when no energy is delivered. (See Tr. 75:8535-8538.) DRA believes that there was no reason for SDG&E to agree to such a provision in light of PNM's strong desire to make a sale.

(5) The Risk of Fuel Price Escalation

DRA notes that the price of fuel is tied to the fuel mix of PNM's system. Thus, if the fuel mix of PNM's system changes due to problems at Palo Verde, San Juan, or Four Corners, the fuel costs under the contract would increase. A sale of PNM's interest in Palo Verde would trigger a provision in the contract that allows the parties to negotiate a satisfactory revision. DRA is concerned that the contract is silent as to what happens if the parties are unable to agree on a revision.

(6) The Risk of Exceeding Avoided Cost

As mentioned previously, SDG&E's economic analysis of the contract concluded that there was a 35% chance that the costs under the contract would exceed avoided cost over the term of the contract. DRA feels that this was too great of a risk to take for this contract, especially in light of DRA's criticisms of the details of SDG&E's analysis.

c. UCAN's Position

UCAN's primary contribution to the weighing of the costs and benefits of the contract is its assertion that SDG&E failed adequately to consider conservation and load management as an alternative to the contract.

UCAN believes that SDG&E has failed to meet its burden of proof and has made no showing that the PNM contract was cheaper than conservation and load management. According to UCAN, SDG&E never attempted to analyze the demand-reducing potential for conservation and load management past 1988. Moreover, SDG&E's forecast illogically showed marginal cost decreasing while average cost increased; this anomaly created a bias against conservation. SDG&E's analysis also made an unfair comparison between conservation and the PNM contract. The strict nonparticipant test was applied to conservation programs, while the looser societal test was the measure of the contract's benefits. UCAN agrees with the Commission, which found in the 1986 GRC decision that SDG&E had

placed too much reliance on the nonparticipant test and which criticized SDG&E for its lack of success in its conservation programs.

UCAN cites several reasons in support of its contention that conservation and load management could have displaced the need for the PNM contract. It points out that in the 1986 GRC decision the Commission ordered SDG&E to conduct conservation programs that SDG&E had not requested, a fact that UCAN says indicates the SDG&E's conservation programs were not a complete as SDG&E claims. Further, UCAN states that SDG&E's forecast of conservation did not anticipate improvements in the technology of conservation and load management. In addition, UCAN's witness gave several examples of programs that were cost-effective in 1985 and will be cost-effective in 1988 that were not pursued by SDG&E. UCAN believes that if SDG&E had done a fair assessment of the true potential for conservation and load management, it would have recognized that the PNM contract was not needed.

UCAN recommends that the Commission not allow recovery from ratepayers of the difference between the cost of the PNM contract and the cost of conservation and load management programs. UCAN's witness identified many programs with estimated costs of conserved energy of between one and five cents. For simplicity, UCAN recommends that the Commission disallow recovery of the two cent per kilowatt-hour difference between conservation programs costing five cents per kilowatt-hour and the expected seven cents per kilowatt-hour cost of the PNM contract. Over the term of the contract, UCAN estimates that this difference will amount to \$216 million.

UCAN also questions SDG&E's contention that fuel diversity justified the contract. UCAN notes the lack of testimony on how SDG&E placed a value on diversity. SDG&E has used the concept of diversity to justify uneconomical contracts, which impede the flexible use of SWPL, in UCAN's opinion.

UCAN joins other parties in criticizing SDG&E for agreeing to an escalation clause that allows rates to go up but never to decline.

d. City's Position

City has concerns similar to those raised by DRA. In particular, City believes that SDG&E committed itself to the contract earlier than necessary. City also finds unreasonable the provision that requires SDG&E to continue to pay a disproportionate share of the full demand charge when deliveries are curtailed or interrupted to less than the 95% level of availability. City further argues that SDG&E should have been more cautious in entering into such a marginally cost-effective long-term contract after its SWPL purchases had received strong criticism during the GRC hearings. Finally, City believes that SDG&E was unreasonable to agree to an index for the demand charge that goes up but never goes down.

D. Discussion of the Terms of the Contract

The primary question for our resolution is whether the decision to enter into the PNM contract was reasonable and prudent, in light of the information that SDG&E's decision makers knew or should have known at the time they made the decision. Our current knowledge of the course of fuel prices and the resulting expectation that the contract will cost more than avoided cost should not have any bearing on our assessment of the decision makers' actions at the time the decision was made.

The contract was approved by SDG&E's Board of Directors on November 1, 1985 and was signed by SDG&E on November 4, 1985. Thus, the only information we may properly consider in assessing the prudence of SDG&E's decision is the information that was available to SDG&E before November 1985 and that was accepted in evidence during this proceeding.

In reviewing this information, we are persuaded that SDG&E was imprudent in entering into the PNM contract when it did,

and that its failure to consider, give proper weight to, and quickly respond to several available facts will result in unreasonable costs for SDG&E and its ratepayers.

1. The Need for Additional Capacity

a. SDG&E Overestimated its Need for Additional Capacity

SDG&E initially began the search for new resources that led to the PNM contract because it believed in 1984 that it needed 600 MW of new resources by 1989 to replace between 600 and 750 MW of expiring contracts. Under its new strategy toward acquiring resources, it hoped to secure roughly 300 MW of its expected need through long lead-time commitments, or those commitments that had to be made four years before the delivery of power.

SDG&E's strategy of limiting its commitment to long lead-time resources to half of its expected need was a reasonable approach in the period we are considering. This approach recognized that demand growth patterns were changing, that good opportunities to obtain capacity might arise in the future, that since 1981 oil prices had first declined and then stabilized, and that flexibility was appropriate under the circumstances.

However, this strategy emphasized the importance of an accurate demand forecast and an accurate estimate of expected need for additional resources. The strategy was only as good as the estimate of expected need that it was applied to. SDG&E's strategy made it particularly important to assess the need for additional resources and to scrutinize the underlying demand forecast carefully and thoughtfully. To the extent that the estimate of need for additional resources was too high or too low, application of the strategy to such an inaccurate estimate would lead SDG&E either to purchase unneeded resources or to fail to secure enough new resources to meet customers' demands.

Even when the fact that several of SDG&E's large contracts would expire in 1988-89 is taken into account, SDG&E

seems to have overestimated its need for replacement capacity. According to the GRC resource plan of November 8, 1984, SDG&E expected to have enough capacity to sell 100 MW to Arizona Public Service Company in 1985 and to take the Encina 1 and South Bay 3 plants, totalling 298 MW, out of service in 1986. Rather than a need for 600 MW in 1989, the GRC resource plan (Ex. 45) shows additional purchases of only 215 MW from 1988 through 1990.

Thus the need for capacity shown by SDG&E's resource plan of November 1984 was considerably less than the 600 MW that SDG&E believed it needed to secure when it began its search for new resources earlier that year. This dramatic change in an assumption underlying SDG&E's resource acquisitions strategy did not seem to affect its pursuit of a contract with PNM.

b. The Contract's Important Terms Were Established Before SDG&E Analyzed Them

SDG&E began the negotiations leading to the PNM contract in the fall of 1984 by requesting PNM to develop principles for a sale to SDG&E. PNM responded in a meeting in November 1984 with a proposal for a contract for sales of 100 to 200 MW for eight years beginning in 1988. PNM also proposed a 100 MW contingent sale with an additional 100 MW to be shaped to fit SDG&E's load patterns. SDG&E told PNM that it could not make a final commitment until July 1, 1985, one month after the expected completion of the ROC plan. ✓

PNM followed up this meeting with a draft letter of understanding of November 29, 1984 (see Ex. 531, Item 2). What is noteworthy about the draft letter of understanding is that it proposed many of the terms that were eventually incorporated into the final PNM contract. For example, the draft stated that the contract was to begin on May 1, 1988. Contract demand was set at 100 MW with an option for an additional 100 MW. The price for capacity was set at \$23.40 per kilowatt-month, with no increase in the first four years.

SDG&E responded with a revised letter of understanding. The revised letter did not commit SDG&E to a purchase of energy and capacity but stated that the parties were working toward an agreement.

Nevertheless, many of the terms of the draft letter of understanding soon became assumed points of agreement for the eventual contract, and further negotiations focused on other topics. For example, SDG&E states that after it received the draft letter of understanding, it compared the contract demand price with PNM's costs and concluded that the price was reasonable. (Ex. 529, pp. IV-7 - IV-8.) There were no further negotiations on the price term.

Negotiations on the contract's other terms continued, but meanwhile a final letter of understanding was executed on January 15, 1985 (Ex.531, Item 3). Although the language of the final letter of understanding was intentionally broad, it repeated the parties' apparent assumption that the purchases would begin in 1988. The letter mentioned that the parties were discussing purchases during 1988-2003 and were negotiating a contingent capacity purchase of between 100 and 200 MW for about 15 years beginning in the late 1980s. More specifically, the letter referred to a post-1987 power transaction. The letter also stated that agreement was expected by July 1.

What is striking about these early negotiations is how many of the important terms were essentially set at an early date, with little or no analysis by SDG&E and little consideration of SDG&E's requirements. So far as SDG&E's testimony reveals, the only analysis of the proposed capacity charge was a comparison with PNM's estimated costs. SDG&E apparently did not compare these proposed charges with other options or with the value that this capacity represented for SDG&E.

Moreover, as SDG&E employees pointed out on December 12, 1984, and in May 1985 (Ex. 655; Ex. 658, Items 2 & 3), SDG&E's

resource plans at this time showed that SDG&E did not need 100 MW of capacity in 1988 and perhaps not in 1989. The resource plan filed with its GRC application was developed on November 8, 1984 (Ex. 45) and showed an expected reserve margin of 22.2% in 1988 without the PNM purchase. (SDG&E's target reserve margin at this time was 20%.) The slot the PNM purchase eventually assumed in the resource plan, an "undetermined resource" of 100 MW, did not emerge in the GRC plan until 1989. Moreover, this purchase could be deferred until 1990 if necessary by accelerating by one year the planned return of two of the Silver Gate units.

Despite these concerns, SDG&E proceeded to negotiate many other terms of the proposed agreement without altering its negotiating posture to reflect these important questions of need and value.

So far as the record reveals, SDG&E never attempted to negotiate a lower demand charge; PNM's initial proposal in the draft letter of understanding became the demand charge term of the final agreement. The question of delaying the start of the contract until 1989, when the GRC resource plan first showed a need for additional capacity, was not raised in the negotiations with PNM until a meeting on May 21, 1985, over six months after negotiations began and after the contract had already been through several drafts. Not surprisingly, PNM rejected this late proposal, and SDG&E thereafter dropped its request. A proposal to reduce the contract demand to 50 MW, still more than the resource plan showed was needed in 1988, was not made until April 25, 1985. PNM rejected this proposal, and SDG&E did not pursue a demand reduction again.

Thus, as late as May 1985, SDG&E was negotiating the details of a contract whose essential terms PNM had established at the outset, for a purchase of capacity SDG&E could not show it needed, at a price it could not demonstrate was in line with the value to SDG&E. Although SDG&E has asserted that the PNM contract

was justified by the ROC plan, many of the crucial points of the agreement were essentially established well before the ROC plan was approved.

c. The ROC Plan Did Not Show a Need For Additional Capacity in 1988

As we have just mentioned, the GRC plan of November 8, 1984, did not show a need for additional capacity in 1988, when deliveries under the PNM contract were proposed to begin. SDG&E asserts, however, that its revised resource plan, the ROC plan, justified the commencement of the PNM purchase in 1988.

When the ROC plan was released and adopted in late June, it showed a need for an undetermined capacity purchase of 100 MW in 1988. But SDG&E's argument that the ROC plan justified the PNM contract is misleading. The need for the purchase in 1988 was accomplished by a juggling of resources and not by just an increase in demand. For example, the chief way that a need for purchased power was created in the ROC plan was to delay the return of 100 MW from the Encina 1 plant. The GRC resource plan had shown a 100 MW undetermined purchase in 1989 and the return of Encina 1's 100 MW in 1988. The ROC plan accelerated the undetermined purchase to 1988 and kept Encina 1's 100 MW out of service an additional year until 1989.

There is little question that the real effect of the ROC plan was to accommodate, not to justify, the beginning of the PNM purchase in 1988. This is clear from Table I-1 of the ROC plan (Ex. 529, p. I-13), which identifies the 100 MW PNM purchase as the only resource planned to be added in 1988. The developers of the ROC plan assumed that the PNM purchase would begin in 1988, included that purchase in the plan, and adjusted the return of Encina 1 accordingly. Moreover, the ROC plan completely removes the Silver Gate plants from the resource plan, although just seven months earlier the GRC plan showed 128 MW from the Silver Gate plants returning in 1990 and another 102 MW returning in 1995. ✓

d. SDG&E Failed to Give Adequate Consideration to the Effect of Oil and Gas Price Variation on the Contract's Benefits

In the early stages of the negotiations with PNM, SDG&E's analyses showed that the transmission arrangements, which were then uncertain, could have a dramatic effect on the range of expected benefits under the contract. SDG&E accordingly made a special effort to have PNM solidify the transmission path to Palo Verde, the terminus of SWPL. These efforts were successful.

By May 16, 1985, however, an analysis revealed that uncertainty in the forecasts of the prices of oil and gas had become the variable that had the greatest effect on whether the contract was beneficial. Although this analysis did not use the specific terms of the PNM contract, it purported to test the sensitivity of the contract's benefits to oil and gas prices. One result of this sensitivity testing showed that when it was assumed that oil and gas prices would not increase from 1985 levels over the term of the contract, the PNM contract and all other purchase options were expected to cost more than oil and gas generation. In other words, if oil and gas prices continued to stay level, SDG&E would be economically better off relying on generation fueled by oil and gas than purchasing under the contract.

SDG&E's reaction to this possibility was extremely muted. The possibility that oil and gas prices would stay level or decrease was assigned a 5% probability; the probability that fuel prices would increase was set at 95%. The chance that fuel costs would not increase "was considered very unlikely" (Ex. 529, p. V-6).

SDG&E has not explained why it considered flat fuel prices to be so unlikely. At that time, oil prices had not increased for nearly five years, not since January 1981. The Organization of Petroleum Exporting Countries (OPEC) had not been very successful in enforcing production quotas that were key to

maintaining artificially high prices. Some experts were predicting higher prices, including a forecasting service relied on by SDG&E. However, many other experts, including some services that SDG&E subscribed to, were predicting a collapse of OPEC and an emergence of market-determined prices at a much lower level than existed under OPEC's dominance. For example, DRA introduced into evidence three articles that appeared either in the popular press or in one of SDG&E's forecasting service subscriptions in the year preceding the signing of the contract. (Ex. 648, 649, 650.) The articles suggested that most experts expected oil prices to decline, to prices as low as \$10 per barrel.

The conclusion of the May analysis that oil and gas prices would increase contradicted SDG&E management's judgment of just a few months earlier. In January 1985, SDG&E's managers with expertise in energy demand were unanimous in their views that "gas prices will move down for three to five years." A majority of these managers also believed that "OPEC has lost its dominant control over the market and that for the next few years there will be a leveling or decrease in oil prices." (Ex. 664, p. 3.) SDG&E has not explained what happened in the intervening four months to change its managers' forecast of fuel prices so completely.

SDG&E has thus failed to explain why it gave so little consideration to the possibility that oil prices would decline or remain flat, at least for the early years of the contract. Because SDG&E knew by May 1985 that the PNM contract did not make economic sense if fuel prices continued to be stable, there was ample time to reconsider or reexamine the fuel forecasts before committing to the contract. As far as the record reveals, SDG&E did not reevaluate its fuel forecasts until around early November 1985, about the time the contract was signed, and clearly too late to influence the contract's terms. (Tr. 72:8162.) SDG&E's failure to pursue this weak link in its support for the PNM contract led it to overlook some of the options it still had. At a minimum, the

results of a reconsideration of the effect of fuel prices on the desirability of the PNM contract would have given SDG&E valuable ammunition in its efforts to negotiate a better deal with PNM. It was unreasonable for SDG&E's decision makers to give so little weight to the effect of fuel price forecasts on the cost-effectiveness of the PNM contract.

e. SDG&E's Economic Analyses Did Not Support the Contract

SDG&E conducted four economic analyses of the PNM contract, with results presented on January 9, April 5, May 16, and in September and October 1985. (Ex. 529, pp. IV-7 - IV-8, Tr. 74:8412-8414; Ex. 532, Items 1, 2, & 3.) For several reasons, we find the results of these analyses to be much less persuasive than they apparently were for SDG&E's decision makers.

The first analysis was merely a comparison of the demand charge of PNM's offer, as reflected in the draft letter of understanding of November 29, 1984, with PNM's costs. The analysis concluded that the price was not out of line with PNM's costs. As we have already discussed, this analysis did not compare PNM's proposed demand charges with SDG&E's other options or with the value of the capacity to SDG&E. The purpose of this analysis was only to see if the demand charge was excessive in relation to PNM's costs.

The second and third analyses assumed different terms from those that were actually being considered for the contract. Some of these differences, such as the assumption that the contract demand would be 50 MW (rather than the actual contract demand of 100 MW), were insignificant and were justified to allow comparability with other options.

But unlike the size assumption, other simplifying assumptions could and probably did influence the results of the analyses. For example, both of these analyses assumed that the term of the contract would be 20 years and that the contracts would

begin in 1989. As we have discussed, at the time of these analyses SDG&E expected that the PNM contract and payment of the contract's demand charges would begin in 1988, even though SDG&E's latest resource plan, the GRC plan, showed that SDG&E would not need additional capacity until at least 1989. In terms of the economic analyses, 1988 would therefore probably have a large net cost. Because the contract was structured to reflect the costs of a baseload plant and because the demand charge was proposed to be fixed for the first four years of the contract, the contract was expected to be particularly beneficial in its later years. But since benefits were expected to accrue primarily in the later years, the analyses were further distorted by the assumption of a 20-year term, as opposed to the 13- to 15-year term that was the focus of the negotiations. The analyses essentially eliminated a year that was expected to provide few or no benefits and extended the PNM contract into years when benefits were very likely to accrue. Thus, the analyses were almost certain to come up with results that overstated the actual benefits of the PNM contract.

The analysis undertaken in August and September, which we will refer to as the September analysis, was the first to use the actual terms of the PNM agreement. This analysis used a production cost model, PROMOD, to simulate the effect of the various purchase options on the entire SDG&E system. The approach of the analysis was to compare purchases under the PNM contract, using different sets of assumptions, with SDG&E's avoided cost, as defined for SO2. The analysis also incorporated the risk analyses used in the earlier studies.

The September analysis found that when high oil and gas prices were assumed to be in effect over the term of the contract, the PNM contract's net benefit was about \$88 million. When low oil and gas prices were assumed, however, costs under the PNM contract exceeded avoided costs by more than \$51 million. When a probabilistic weighting was applied to the various forecasts of oil ✓

and gas prices, purchases under the contract were expected to save about \$5 million compared to avoided cost. ✓

DRA argues that the analysis should have valued capacity at \$0, rather than SO2's avoided capacity cost, for the years when no capacity was needed to meet target reserve margins. DRA also asserts that SDG&E should have used the ERI to adjust capacity values in its analysis.

We do not agree with DRA's argument that SDG&E was unreasonable to use the capacity values it did in the September analysis. As SDG&E pointed out, at that time the Commission had not specifically approved use of a \$0 capacity value nor the ERI method staff presented. SDG&E testified that the capacity values it used in its analysis had been adjusted to reflect its probability of need, and to this extent the concerns of DRA were considered.

DRA's concern seems to be grounded in a mismatch between the lack of a need for capacity in the early years of the contract, which DRA argues should be reflected in a capacity value of zero, and the higher level of need for capacity that corresponds to the sizeable capacity payments SDG&E has used in its analysis. However, SO2 provides for a levelized capacity payment to QFs who are willing to commit to supply capacity to the utility's system over a set period of years. In a specific year, those levelized payments may exceed the shortage value of the supplied capacity for that year, just as the comparable amounts that the utility collects from ratepayers for its generating plants (annual depreciation plus a return on the undepreciated capital costs) may exceed the one-year shortage value for a specific year.

In addition, if QFs had accepted SDG&E's SO2 at that time (SO2 was not suspended until March 1986) and had committed to supply 100 MW of capacity for 13 years beginning in 1988, they would have received levelized capacity payments for 1988 and 1989

that are higher than the capacity prices used in the analysis of the PNM contract.

Also, we note that in December 1985 in SDG&E's GRC, we concluded that, based on the record in that case, "the value of additional QF capacity will be based on the full cost of a CT [combustion turbine]," unmodified to reflect the utility's varying need for additional capacity. (D.85-12-108, mimeo. p. 88.) (The cost of a combustion turbine provided the basis for avoided capacity costs during this period.) Thus, SDG&E actually made more of an adjustment in its analysis of the PNM contract than we were willing to make at roughly the same time. We cannot agree with DRA that SDG&E was unreasonable to go even further in adjusting avoided capacity costs.

As we understand the September analysis, it was intended to test whether the PNM contract was expected to be cheaper than the utility's expected avoided cost. And the analysis was adequate to provide an answer to this narrow question.

We agree with DRA, however, that the results of SDG&E's analysis should not have automatically determined SDG&E's decision whether or not to sign the PNM contract. The slim margin of cost-effectiveness that resulted in the expected case should have alerted management that a closer scrutiny of the assumptions of the analysis was needed before a decision on the contract could be made with confidence.

DRA has suggested that a elimination of the capacity value attributed to the contract for just a one-year period was sufficient to reverse the analysis's conclusion that purchases under the contract would probably be cheaper than expected avoided costs. Although we have not found fault with the capacity values used in the analysis, DRA's example illustrates just how inconclusive the analysis was.

The inconclusive result of the economic analysis, which showed only a \$5 million expected benefit over the term of the contract, leads to two points.

First, the narrow margin of benefit should have induced SDG&E's management to examine the details of the analysis. Although we have not faulted the way in which the analysis valued capacity, an alert decision maker would have been wise to scrutinize this element of the analysis, since only a small change in the valuation of capacity was capable of reversing the conclusion of the analysis.

The September analysis highlighted the importance of the forecasts of oil and gas prices to the economics of the PNM contract. The contract's charges were based on PNM's costs, which reflected the PNM system's emphasis on coal plants. Baseload coal plants have high capacity costs and low energy costs compared to plants fired by oil and gas, and the contract called for a relatively high demand charge and a low energy rate. As might be expected, the September analysis showed that the contract's demand charges always exceeded avoided capacity costs of SDG&E's oil- and gas-based system. Any savings resulting from the contract occurred only because the contract had lower energy costs than plants using oil and gas and only when the price of oil and gas was high enough to create enough of an advantage for the contract's energy costs to outweigh its higher capacity costs. The September analysis showed that, as a rough estimate, only when the cost of oil approached \$30 per barrel in nominal dollars and the cost of gas approached \$5 per MMBTU did the contract begin to become cheaper than generation from oil and gas plants. (SDG&E now estimates that the contract would become cost-effective when the price oil reaches \$25 per barrel and the price of gas reaches \$4.20 per million BTU (Tr. 73:8347).) At prices lower than this level, the contract was not cheaper than avoided cost. Furthermore, there was considerable speculation that oil prices could fall dramatically, as shown by the articles from

1984 and 1985 that were introduced in evidence. The range of prices foreseen at this time was considerably broader than the range considered in the September economic analysis.

A prudent manager would have questioned the basis for the oil and gas price forecasts, would have considered the effect of larger variations in oil prices than those used in the analysis, and would have closely examined the soundness of the \$5 million projected net benefit. Because the expected benefit was so small, even a slight change in some of the important variables would be sufficient to convert the result of the analysis from a net benefit to a net cost.

The record in this case does not reveal whether SDG&E's management scrutinized the September analysis to this degree in deciding to execute the contract. So far as the record reveals, the result of the economic analysis was accepted at face value, with no further questioning or consideration of the assumptions that went into the analysis. If this was in fact what happened, the decision to proceed with the contract was extremely questionable.

Our second point ignores these troublesome questions and assumes that the \$5 million expected benefit was a solid estimate that resulted from the best analysis possible under the circumstances. Even if SDG&E's management asked all the proper questions about the analysis and the decision to enter into the agreement with PNM was fully informed, it does not seem to us that a \$5 million benefit, approximately 1.5% of the total cost of the contract, is a sufficient benefit on its face to justify entering into such a long-term agreement. The loss of flexibility that is inherent in any long-term agreement in itself is a sufficient reason to have outweighed the result of the economic analysis.

Thus, we cannot conclude that entering into the contract was a prudent decision merely from the economic analysis. Indeed, SDG&E seems to agree with this conclusion when it argues in its

reply brief that even when the economic projections for the contract turned sour, it would not automatically have terminated the contract if an opportunity for termination arose.

The trend of the results of SDG&E's economic analyses should have also disturbed its decision makers. The May 16 analysis projected that the PNM contract would cost about \$100 million less than avoided cost over its assumed 20-year term. By the time of the September analysis, however, the expected savings (this time based on the actual terms of the contract) had fallen to just \$5 million.

At this point, we believe a prudent manager should have questioned whether the risks of the PNM contract continued to be outweighed by this \$5 million savings and other less quantifiable benefits. SDG&E's own economic analysis had concluded that the quantifiable economic benefits from the contract were negligible. This is the time when a thorough reexamination of the risks and benefits of the contract should have occurred. Up to this point, SDG&E's emphasis seems to have been on the benefits of the contract, but the May analysis's finding that the contract's expected benefits disappeared unless fuel prices increased and the ambiguous results of the September analysis should have alerted SDG&E to the very real possibility that the contract could have substantial costs. In our view, after the September analysis SDG&E's managers should have been questioning whether a long-term commitment to a contract that carried substantial economic risks was appropriate at that time. The record does not show that the September analysis led to any reconsideration of the risks of the contract.

Another fact makes this failure to reconsider the contract even more striking. As DRA has pointed out, the expected savings of about \$5 million amount to about 1.5% of the total costs of the contract over its term. But even under the best of circumstances, PROMOD has a margin of error of plus or minus 1% to

1.54 (Tr. 73:8357; Ex. 115, p. 38). Thus, at this point SDG&E had no real assurance from its analysis that any substantial economic advantage would result from the PNM contract.

The September analysis also revealed another fact that should have entered into SDG&E's thinking about the contract. In all of the cases used in the analysis--including low, medium, and high projections of oil and gas prices--the PNM contract was more expensive than avoided cost for 1988. Marginal generation from SDG&E's units fueled by oil and gas or purchases from QFs at avoided cost prices would be cheaper than purchases from PNM in 1988, even if oil and gas prices increased considerably from 1985 levels.

Thus, not only did SDG&E's resource plans show that it did not need the PNM purchase in 1988, but its analysis showed that it would be more expensive in 1988 to purchase power under the contract than to generate an equivalent amount of power from its existing plants.

For all of these reasons, we conclude that neither the GRC plan nor the ROC plan nor SDG&E's economic analyses justified the purchase of 100 MW from PNM beginning in 1988.

f. Other Considerations Did Not Outweigh the Contract's Risks

Although neither SDG&E's resource plans nor its economic analyses justified entering into the contract when SDG&E did, other considerations could have led a rational decision maker to execute the contract despite this lack of apparent justification. For example, the purchase could have made sense if it displaced more expensive sources of power, if the total benefits over the term of the contract clearly outweighed the contract's costs in its early years, if it met a new projected increase in peak demand for 1988 that SDG&E had no cheaper way of meeting, or if the contract's other benefits outweighed its risks. The parties addressed some of these considerations.

(1) Increased Demand

The issue of increased demand arises because the ROC plan forecasted a considerable increase in peak demand for 1988. The ROC plan forecasted a peak demand of 2,609 MW; comparable figures for the GRC resource plan of November 1984 and for the 1985 ER released in April 1985 were 2,524 MW and 2,456 MW, respectively.

The ROC plan's projected increase of 85 MW and 153 MW over the respective forecasts of 1988 peak demand of the GRC plan and the 1985 ER could provide a justification for beginning the PNM purchases in 1988. SDG&E argues that it was reasonable to rely on the ROC demand forecast rather than the Energy Commission's 1985 ER forecast because the 1985 ER forecast was the culmination of a long process, and more recent information showed its demand projections to be low. We agree that, in light of the importance of the demand forecast to SDG&E's new strategy, it was reasonable to consider the most up-to-date information available. It does not follow, however, that SDG&E's reliance on the ROC forecast was completely reasonable.

Even if SDG&E considered the 1985 ER forecast to be outdated, it should not have entirely disregarded the forecast. The Energy Commission's forecast still was the official state forecast of expected demand for SDG&E. By law, if SDG&E had proposed to build a 100 MW generating plant in California rather than to purchase 100 MW from PNM, it would have had to demonstrate that the 100 MW was needed to meet the expected demand for 1988 as projected by the Energy Commission's forecast. (See Public Resources Code Sections 25305-25308, 25502, 25523(f), 25524(a).) The process leading to the ER weighs the opinions and expectations of a variety of experts, and SDG&E should have carefully considered the results of that process, even if it eventually decided to rely on its own forecast.

A further cause for examining the ROC forecast and its assumptions should have been the wide discrepancy between the

1985 ER forecast and the ROC forecast for later years. The difference between the two forecasts for 1988 was 153 MW, but by 1996 the difference grew to 476 MW. The large gap between these two forecasts should have led SDG&E to review thoughtfully the reasons for this difference.

In support of its choice of the ROC forecast over the 1985 ER forecast, SDG&E points out that the actual peak demands for 1984 and 1985 were higher than the 1985 ER forecast for those years by 89 MW and 100 MW, after adjustments for weather variations (Tr. 79:9133-9134). However, at the time the ROC forecast was adopted in June 1985, the peak for 1985, which according to the record was reached in the summer (Tr. 79:9134), was unlikely to have yet occurred. Thus, the discrepancy between actual and forecasted peak demand for 1985 could not have entered into SDG&E's initial reasons for choosing the ROC forecast over the 1985 ER forecast, since SDG&E almost certainly adopted and relied on the ROC forecast before information on 1985 peak demand was available.

(2) The Timing of the Need for Capacity

The urgency that SDG&E seemed to feel to conclude the PNM agreement before the end of 1985 was grounded in the ROC demand forecast and the findings of the market study on the availability of options after 1989. As we have discussed, however, the ROC plan did not show a real need for additional resources until 1989 at the earliest. In addition, some of the conclusions of the market study had not been emphasized.

In formulating its strategy, SDG&E had relied heavily on the market study's division of baseload resources into existing resources that could supply power before 1990 and planned resources that could supply power after 1990. The market study concluded that opportunities for baseload purchases before 1990 were expected to be cheaper and more predictable in price and start of operations than the choices in the 1990s (Ex. 530, pp. 1-2, 1-7). Because of the potential for delay in planned resources and

because of a current and expected capacity surplus in the West, the market study concluded that the availability of baseload resources after 1990 was speculative and prices were uncertain. Because of the uncertainties identified by the market study, SDG&E set a goal in 1984 to try to secure additional baseload power before 1990 from existing resources. Pursuit of this goal seemed to make SDG&E particularly eager to secure the power represented by the PNM contract.

However, although the market study was cautious and conservative about its projections of the availability of baseload resources in the 1990s, it noted that this caution arose to some extent because of a lack of information. The market study pointed out, for example, that "the identified alternatives [for baseload power in the 1990s] do not include all the opportunities that will arise or, more importantly, SDG&E may be able to develop" (Ex. 530, p. 1-7). The study also concluded that "it is clear that SDG&E initiative is likely to be needed to convert the more attractive indications of interest into tangible opportunities" (Ex. 530, p. 1-10). Similarly the study stated that "the nature of the alternatives identified, and the responses we received in utility interviews, underscore the importance of being open to new opportunities not now identified and the value of initiative in attempting to generate new opportunities" (Ex. 530, p. 2-20). Although the study noted that few opportunities for baseload purchases in 1990-1995 existed at the time of the study, it emphasized that the key to the availability of resources during this period was whether demand grew faster or more slowly than projected at that time (Ex. 530, p. 2-32).

Thus, the market study was not as gloomy about opportunities beyond 1990 as SDG&E seemed to regard it. The fact that SDG&E's own need for capacity before 1990 had come under question should have led SDG&E to reconsider whether early commitment to a long-term contract was still its only practical

option. The market study acknowledged that other options would open up in response to SDG&E's initiative and other events.

(3) The Alternatives to the PNM Contract

Another possible justification for signing the PNM contract, despite the ambiguous results of the September economic analysis, would be if the PNM purchases allowed SDG&E to displace more expensive resources, either immediately or when it needed additional capacity. SDG&E's other options should also have been considered when SDG&E's decision makers deliberated on whether or not to sign the contract. Short-term options would become important if SDG&E decided to postpone purchases from PNM. In addition, if SDG&E decided to reject the terms of PNM's offer, long-term options would eventually be required to meet growing need when reserve margin fell below target levels. The parties focused on several such options.

At the outset of this discussion, we note that before SDG&E began to search in earnest for the capacity it believed it needed, it commissioned the market study to survey the opportunities that could arise through the end of the century. We believe that SDG&E's commissioning of the market study before it made any decisions about future capacity choices was not only reasonable but commendable. While it may not always be necessary to hire an outside consultant to perform this analysis, we think that a utility is wise to survey its long- and short-term opportunities and to consider the risks and benefits of the most likely choices before it decides on a major resource acquisition. Assuming that the market study was thorough, competent, and not unduly expensive, we think that SDG&E's decision to make this overview of power markets through the end of the century was reasonable.

Qualifying Facilities We agree with SDG&E's general position that QFs did not offer a reasonable chance of providing the needed capacity that the ROC plan's demand forecast identified.

SDG&E's high retail rates made it more likely that independent generation would be used to offset retail purchases from SDG&E, rather than to produce power to be sold to the utility. SDG&E's resource plan attempted to forecast this demand-reducing cogeneration.

A related consideration is that SDG&E's high retail rates make self-generation economically competitive for many smaller industrial and commercial customers, and developments in cogeneration technology are making smaller self-generation units increasingly more feasible. The record is unclear on whether SDG&E's projections of demand-reducing cogeneration included a consideration of these technological developments.

Purchases from Edison or PG&E We agree with SDG&E that the existence of large projected reserve margins for PG&E and Edison resulted to a great degree from a rush to sign standard offers before the suspensions of SO2 and SO4. Because of the nature of these capacity additions, Edison and PG&E did not attempt to sell their expected surpluses during the period when SDG&E was shopping for additional resources. Instead, the evidence is that Edison itself was inquiring about purchases. We conclude that the PNM contract was preferable to potential purchases from either Edison or PG&E at this time.

Conservation We find it difficult to fault SDG&E for not relying on conservation and load management to reduce enough demand to displace the need for the PNM contract. During this period, we had announced our intention to "stay the course" for conservation expenditures in a general rate case of another utility. This policy was a reaction to declining oil and gas prices that rendered many conservation programs uneconomic. Staying the course meant that we would continue to allow sufficient funds to keep essential conservation programs going, but that we were reluctant to increase expenditures for conservation. In this regulatory climate, to rely on conservation to displace the PNM

contract, SDG&E would either have had to flout our directions or to make a special and persuasive showing of the soundness of its strategy. We cannot approve of the first course of action and, judging from the results in the GRC, where we trimmed SDG&E's requested conservation expenditures by nearly one-quarter, we doubt that the second course of action would have succeeded.

This does not mean that SDG&E should have neglected the potential of targeted conservation programs for reducing peak demand. In the GRC decision, for example, we eventually found that commercial demand reduction, thermal energy storage, and other programs were particularly cost-effective. Since much of the justification for the PNM contract was to provide capacity to meet increasing peak demand, efforts to reduce peak demand would have been particularly effective.

Coal Plants SDG&E claimed that it investigated several possible arrangements for purchases from or ownership in coal plants. We agree that most of the possibilities were not desirable because the price was too high or because transmission arrangements were unclear or expensive, among other reasons. However, the market study identified at least some arrangements that were not only possible but at least as beneficial as PNM. The record does not explain why these plants were rejected from further consideration.

SDG&E notes that there were additional responsibilities associated with ownership of a coal plant. We agree, but SDG&E should also have considered the benefits of ownership, including the substantial benefit of receiving very cheap power in the later years of the plant's useful life, when the capital costs have largely been depreciated.

In a similar vein, SDG&E criticizes DRA's suggestion that constructing or buying part of a coal plant may be cheaper than purchasing under the PNM contract. SDG&E says that the seven cent per kilowatt-hour figure DRA used in its comparison was

expressed in 1984 dollars, rather than real dollars, and when this comparison was made in equivalent terms, PNM was cheaper. For a fair and accurate comparison, however, SDG&E should have also factored in the cost of replacing the PNM contract when it expires, since ownership of a coal plant would provide energy throughout the plant's useful life of about 40 years.

While we agree with SDG&E that many of the coal options were not worth pursuing, several appear to be competitive with the PNM contract. In addition, it is unclear if SDG&E's cost comparisons fairly reflected the full benefits of ownership of a coal plant.

DRA's Proposal DRA has argued that SDG&E's mothballed plants gave it a practical short-term alternative to the PNM purchase. Under DRA's proposal, SDG&E would meet any initial capacity needs by returning existing but idle plants to service. In particular, Encina 1, the Silver Gate plants, and South Bay 3 were available. Although SDG&E had earlier declared its desire to keep these plants in reserve to meet unexpected short-term variations in demand, these plants provided SDG&E with a cushion and gave SDG&E the luxury of additional time in making its decision on the PNM contract. Even if delaying meant the withdrawal of PNM's offer, the worst possible outcome of a delay, use of the mothballed plants would give SDG&E time to pursue other resources. Even if the ROC plan's demand forecast proved to be accurate, SDG&E would not need any more capacity until 1989. Furthermore, the continued availability of economy energy projected by the market study meant that SDG&E would not have to operate these plants as baseload units; they could be used to follow load so that the system could take advantage of cheaper economy energy.

Thus, SDG&E could delay committing to purchase additional firm capacity, and gain the benefit of the knowledge of later circumstances. Rather than relying on the 1984 market study's assessment of the market, SDG&E could review the state of

this complex and evolving market from a point nearer to the time it actually needed capacity. And if demand did not grow at the rate projected in the ROC study, SDG&E would have even more time to restudy the timing of its need for more capacity and the availability of the needed resources. At this time, negotiations of purchases from Portland General Electric (PGE) and Pacific Power and Light Company (PP&L) had not yet reached the stage of a final decision; those negotiations could continue and if fuel markets turned upward or if demand grew at a higher than expected rate, these companies could help meet a more certain need for additional capacity.

In addition, SDG&E would have a better assessment of the effect of its newer conservation and load management programs, and it would have the possibility of tailoring those programs better to fit its needs, for example, by targeting peak shaving and load shifting to delay the onset of additional capacity requirements.

The existing plants were also a cheap source of capacity with no uncertainties about transmission paths, start dates, or unconventional technologies that were associated with other proposed plants. If additional capacity was needed in the near term, the MSR offer, among others, could be accepted to meet those needs. And other opportunities could arise, especially in light of the widespread excess capacity in the Southwest, as time went on.

Thus, one of the prime virtues of DRA's proposal is that it would buy time for SDG&E. DRA has made a strong case that SDG&E could have postponed its decision on acquiring additional baseload capacity for at least a year. Moreover, we conclude that such a delay in its commitment would have been a prudent course of action at this time.

g. Other Benefits and Risks

(1) Diversity

Diversity of fuel sources and technologies is unquestionably a good policy to follow, all other things being equal. But since other things are rarely equal, we believe that the goal of diversity must be carefully considered in a specific situation.

The unstated assumption in the discussion of diversity in this case is that diversity is a way of guarding against unexpected shortages or cost increases associated with a particular fuel or technology. All current sources of electricity are susceptible to either occasional interruptions or to increases in the price of an important input. In the 1970s SDG&E learned hard lessons about the risks of excessive reliance on a single fuel source.

The two risks that diversity is designed to guard against--interruptions or price increases--are of a somewhat different nature, although they sometimes overlap. Interruptions--created, for example, by an extended drought in the case of hydroelectric power or by a technical flaw in a particular type of nuclear plant--bring a threat of interruption of supply to customers, with all the attendant hardships. For example, SDG&E has shied away from purchases tied to the operation of the Palo Verde nuclear plants, because the plants are of a similar design to the two San Onofre plants, which are partly owned by SDG&E. If a problem arose with that design that required the plants to shut down, overreliance on that particular design could result in supply interruptions.

Price increases, on the other hand, do not necessarily result in interruptions; electricity is available to customers, but at a higher than expected price. Although the hardships are considerable in such circumstances, they are less severe than when electricity is unavailable at any price.

As a practical matter, the likelihood of an extended interruption to a single utility is extremely slight. Even if that utility experiences a shortage, it can probably purchase electricity from other utilities, although the price of the purchase may be high.

In the case of the PNM contract, the risk that diversity mitigated was primarily the risk of price increases, in our opinion. Although SDG&E's reliance on oil and gas was still very high, it seemed unlikely in 1985 that an oil embargo, like the embargo of the early 1970s, would actually threaten SDG&E's ability to obtain fuel for its fossil fuel plants. The change in the world market, the changes in the United States' regulation of oil, and in particular the changes in the regulation of domestic natural gas made it unlikely that SDG&E would suffer a fuel shortage. Even if such a shortage occurred, moreover, the abundance of capacity in the Southwest increased the probability that SDG&E would still be able to purchase power to meet its needs.

Thus, the primary value of diversification at this time was to guard against the risk of increases in oil and gas prices. This conclusion is supported by SDG&E's economic analysis, which compared the cost of the PNM contract with projected avoided cost, which at that time was based on the capacity costs of a combustion turbine and on projected oil and gas prices.

The economic analysis gives us an estimate of the potential benefits of diversification. In SDG&E's high oil and gas price scenario, the PNM contract is expected to provide a cumulative present value of \$88 million compared to avoided cost. Thus, if SDG&E's assumptions accurately reflect the upper range of reasonably likely fuel prices, the PNM contract may be seen as insurance against a potential \$88 million loss if SDG&E was forced to rely on combustion turbines fueled by oil or gas to produce electricity instead of relying on the PNM purchase. Of course, to the extent that SDG&E could generate or purchase energy more

cheaply than the estimated avoided cost, the \$88 million figure would decline.

The other side of the coin is that the PNM contract locked SDG&E into making substantial demand payments for 13 years. If oil and gas prices decline, the contract could easily exceed the costs of generating electricity by using oil and gas. Even the relatively small decline in prices described in the low oil and gas price case of SDG&E's economic analysis would result in payments exceeding avoided cost by over \$51 million. Lower prices would increase this cost.

On balance, we conclude that SDG&E acted reasonably in recognizing that the fuel diversity represented by the PNM contract provided SDG&E's system with insurance against dramatic rate increases prompted by high oil and gas prices. At the time, between one-half and two-thirds of SDG&E's generating resources were fueled by oil or gas. If oil and gas prices increased, the system's fuel costs would increase proportionately, and purchases with prices that were not based on oil and gas, such as the PNM purchases, would moderate the price rise's effect on rates. On the other hand, if oil and gas prices decreased, the effect on rates of the somewhat higher priced PNM purchases would be overwhelmed by the larger price decreases for electricity produced by the oil and gas units. Thus, the strategy seemed to be designed to minimize the effect on rates of variations in the price of oil and gas.

However, the value of this insurance depended on the forecast for the course of oil and gas prices. As we have discussed, SDG&E erred in not giving enough weight to the possibility that fuel prices would remain stable or decrease. In addition, for purposes of estimating a value for this diversity, the range selected for the economic analysis of the PNM contract was too narrow; actual prices soon jumped the bounds of the analysis.

Although it may be a distinction with no practical meaning, we should point out that the PNM contract in itself did not diversify SDG&E's resource base. The contract was not tied to any particular resource, technology, or fuel. PNM was free under the contract to provide the necessary capacity and energy from an oil- or gas-fired plant, if it chose to. The diversifying effect of the contract resulted from several elements, chiefly PNM's obligation to provide a high capacity factor, and the way in which the structure of payments mimicked the costs of a coal plant: demand charges were high, energy charges were low and not closely linked to changes in oil and gas prices. If SDG&E had obtained similar terms from a system reliant on oil and gas, the diversifying effect would have been identical.

(2) Other Benefits

We find the other benefits SDG&E claims for the contract to be relatively insignificant.

SDG&E cites the stability of the demand charge as a benefit. However, the level of the demand charge is fairly high, composing roughly two-thirds of the total expected cost of the contract in the base case of SDG&E's September economic analysis. Since these demand charges mimic capacity costs, which are sunk costs that are annualized to develop yearly cost equivalents, we would expect them to be relatively stable. In addition, as the other parties have pointed out, the charge could rise but never fall, even if the indices that make up the escalator should decline. Furthermore, the contract requires SDG&E to continue to pay the demand charge proportionately when the availability of power under the contract falls below 95%. This may be an improvement on some contracts, but in the extreme case it still may obligate SDG&E to pay considerable sums for nothing.

The other benefit pointed out by SDG&E, the rights to 100 MW of nonfirm transmission to the Four Corners area, may turn out to be more valuable. However, the use of the rights is

dependent on several contingencies: PNM must not need the line, SDG&E must need economy energy at the time that the line is not otherwise in use, and, since the rights are from Four Corners to Palo Verde, there must be capacity available on SWPL. We suspect that SDG&E could have readily quantified the value of these rights if that value was substantial. As the record stands, however, we have no information that quantifies the value of these rights or that tells us how likely it is that SDG&E will be able to take advantage of this benefit.

(3) The Risks and Benefits of Delay

We have already discussed how several elements of the decision on the PNM contract were greatly affected by changing circumstances. We have concluded that SDG&E should not have signed the PNM contract when it did without further analysis, that it should not have purchased capacity it did not need without countervailing benefits, and that it had the ability to meet its customers' requirements even if it delayed the PNM contract for at least a year. We have also concluded that the marginal benefits shown by SDG&E's analysis of the PNM contract did not outweigh the loss of flexibility and other risks attached to the contract.

A full consideration of the effects of delay, however, should also address whether the value of the additional time outweighed the risks of postponing taking action to meet expected capacity needs. The market study had concluded that baseload purchases before 1990 were cheaper and more readily available than purchases in the 1990s, and the study found that no baseload purchases were then known to be available from 1990-1993. In part, the risk that SDG&E perceived, based on the market study, was that its need for capacity would arrive at a time when no capacity would be available or at a time when only much more expensive capacity was available. But signing the PNM contract carried the risk that later developments would substantially affect the desirability of the contract. Later information would be of

value to SDG&E only if it led to an option that was cheaper than the PNM contract over the term of the contract.

A rational decision maker might judge that a delay would be valuable if postponing a decision would allow unsettled and uncertain circumstances to resolve themselves. There is little value in delaying a decision from a time of uncertainty to a later time of equal uncertainty; the value of delay derives from the ability to make a better decision because of better information. Viewed from the perspective of late 1985, what uncertainties or instabilities affecting the decision to accept PNM's offer were likely to clarify themselves over the next few years?

Demand growth patterns had been somewhat unpredictable, as shown by the variations among the Energy Commission's projections in the 1985 ER, actual peak demand for 1984 and 1985, and SDG&E's projections in 1985. The primary influences were changes in the economy and the influence of conservation and load management. It seems likely that a delay would yield better estimates of peak demand for 1989, for example, but it is not clear that SDG&E's ability to forecast demand four or five years into the future would improve significantly. Mid- to long-term demand projections would probably remain about as uncertain as they were in 1985.

Oil prices had been relatively stable, although the underlying support for this stability, the operation of a shaky cartel, was unstable. Even with the historical success of the cartel, oil prices had declined from \$35.50 a barrel in March 1981 to \$27 per barrel in 1985 (Ex. 647). A delay in the decision may have resulted in better information about whether the cartel was going to collapse or regroup. We have earlier discussed the wide range of the experts' opinions about future oil prices. SDG&E knew that this was an important variable in evaluating the benefits of the PNM contract. It had known since April 1985 that level oil prices would make the purchases from PNM economically undesirable.

The September analysis showed that under the low range of SDG&E's predicted oil and gas prices, the PNM contract would cost \$51 million more than avoided cost. Any clarification of the expected course of oil prices would have been extremely valuable to SDG&E.

There was some uncertainty concerning the availability of generating resources in the future, but it was unclear at that time that many of these uncertainties would be resolved in the next few years. Many utilities were postponing decisions on constructing new resources because of the same uncertainties SDG&E faced--uncertainties about demand growth, the economy, and oil prices. On the other hand, the market study had concluded that SDG&E's initiative could rouse some of these other utilities into action and could create opportunities for acquisition of baseload capacity that were not foreseen by the market report.

After weighing all of these concerns, we cannot agree with the parties' recommendations that would disproportionately penalize SDG&E for favoring long-term considerations over short-term considerations. SDG&E was attempting to secure capacity to get beyond a period when it appeared that little capacity would be available for purchase. The strategy proposed by DRA is a logical and attractive alternative that should have been seriously considered by SDG&E, but it is a strategy that involves a procurement of a series of short-term resources until the early to mid-1990s when, even according to DRA's current projections, some additional capacity would be needed. SDG&E's strategy was to attempt to secure a long-term resource that would extend beyond the uncertainties of the mid-1990s. Although we have concluded that a delay in committing to a long-term contract was appropriate at the time we are concerned with, we do not conclude that a long-term commitment was imprudent at all times.

The advantage of a short-term strategy is the flexibility to respond to changing conditions. The advantage of a long-term strategy is certainty and security during a time of uncertainty. We are reluctant to criticize our utilities for taking a long view; indeed, we believe that greater problems are created by short-sightedness. But long-term decisions must be made with an appreciation of the lack of flexibility to respond to changing conditions that accompany such commitments. Long-term commitments are desirable when good opportunities arise. The utilities' responsibility is to ensure that the commitment is sufficiently valuable to outweigh the lack of flexibility that the commitment entails.

2. Conclusion

By the end of October 1985, when negotiations with PNM had reached the point of a final decision, SDG&E knew or should have known the following facts. It knew that it would not need additional capacity until 1989 at the earliest. It knew that purchases under the PNM contract would begin in May 1988 and that therefore SDG&E would be paying demand charges for unneeded capacity for at least a year. It knew that the contract's costs would exceed avoided cost for at least one year and probably two years. It knew that declining or even stable oil prices would make the contract uneconomic for its entire 13-year term. It knew that the expected economic benefits of the PNM contract over avoided cost were negligible at best, and it should have known that its analysis could not demonstrate that any economic benefit could reasonably be expected from the contract. It knew that there was at least a 35% chance, under SDG&E's own analysis, that the PNM contract would cost more than the avoided cost prices the Commission had authorized for SO2. It knew it had over 500 MW of mothballed plants that could be put into operation, if necessary, to meet the needs of SDG&E's customers. It knew that the market study had concluded that large amounts of economy energy would be

available into the 1990s and that SDG&E's initiative could open up resource possibilities not uncovered by the market study.

Under these circumstances, we believe that a prudent manager would have sought to reassess the PNM contract and the assumptions that had led SDG&E to the brink of signing the contract. SDG&E had no compelling need, other than pressure from PNM, to enter into the contract at this time in light of all the uncertainties that had developed. At best, SDG&E either would have avoided an expensive long-term commitment or it would have obtained additional concessions from PNM. At worst, SDG&E would have lost the opportunity represented by the PNM contract and would have been forced to rely on the mothballed plants and economy energy while it pursued other possibilities. But we are left with the impression that SDG&E was swayed too much by the previous negotiations and by its earlier, rough analyses and not enough by the changing circumstances that related directly to the desirability of the contract.

Thus, we have found SDG&E to be imprudent in several related respects. SDG&E commenced negotiations for a purchase of capacity beginning in a year when it knew it did not need additional capacity. As we have seen, this commencement date was eventually incorporated into the agreement. SDG&E proceeded with the negotiations of important terms of the contract without the benefit of an analysis of those terms. It failed to give adequate consideration to the possibility that oil and gas prices would not increase as much as expected or that the variation in fuel prices would be wider than predicted. SDG&E signed the contract when its economic analysis showed that the benefits were marginal at best, under circumstances that strongly suggested that even that analysis was optimistic.

3. Disallowance

The parties who argue that SDG&E was imprudent suggest various penalties. DRA recommends that SDG&E should not be allowed to recover the cost of the demand charges for capacity that it should have known in 1985 that it would not need. According to DRA, SDG&E should have known in 1985 that it would not need additional capacity until 1994, and DRA calculates a corresponding disallowance to be \$174,001,000.

City recommends disallowance of all demand charges SDG&E will incur under the contract from May 1, 1988, the start of the contract, until June 1, 1989. In addition, City recommends disallowance of all costs exceeding avoided costs from June 1, 1989, through April 30, 2001.

UCAN bases its recommendation on its contention that conservation and load management could have supplied the equivalent of the 100 MW SDG&E purchased from PNM. It suggests that the difference between available conservation improvements and the costs of the PNM contract will amount to nearly \$217 million over the life of the contract. Its recommendation, however, seems to be that the Commission should disallow, on an annual basis, the difference between the costs of reasonable conservation and load management programs and the cost of the PNM contract.

Our consideration of an appropriate disallowance for SDG&E's imprudent actions in relation to the PNM contract is tempered by our recognition of the benefits of the contract and the many prudent actions and decisions SDG&E took in its negotiation and evaluation of this contract, as we have already discussed.

Our criticism of SDG&E's actions with regard to the PNM contract is directed to its failure to consider and analyze carefully several of the important terms of the contract and its failure to react appropriately to changing circumstances and information that affected key terms of the contract and that had the potential to completely reverse the economic desirability of

the contract. Although these failures were significant and will result in SDG&E incurring unreasonable costs, we have also recognized the many benefits of the contract and the many laudable acts of SDG&E's negotiators and management.

Under these circumstances, we believe that disallowance of all of the contract's demand charges from May 1, 1988 through April 30, 1989, would be justified. We have previously concluded that SDG&E should have delayed its decision for about one year, that its own resource plans could not demonstrate a need for capacity in 1988, and that the September economic analysis showed the contract to have a net cost in both 1988 and 1989. A delay of one year would have placed the purchase in line with SDG&E's resource plans and would have greatly improved the economic benefits of the contract. The additional year would have given SDG&E the benefit of another year's information before the contract was signed, and this delay would have benefited SDG&E greatly.

We will temper this disallowance somewhat, however. In our calculations of avoided cost for payment to QFs, we have consistently recognized that capacity always has some value, even if that value is merely insurance against an outage that is very unlikely to occur. In recognition of the fact that the PNM contract will be supplying capacity to SDG&E's system starting in 1988, we believe that SDG&E should receive credit for the value of that capacity, as measured by comparable payments to QFs under S02, for the one year that it will not recover the full costs of its demand charges under the contract.

We calculate the amount of the demand charges under the PNM contract from May 1, 1988, through April 30, 1989, to be \$28,080,000. Under SDG&E's currently authorized capacity payments under S02, a one-year contract for 100 MW beginning in 1988 would be paid \$65 per kilowatt per year. (See SDG&E's filing of April 22, 1988, in compliance with D.87-12-056 and D.88-03-079, Ex. C-1 and C-2.) For one year, this amounts to \$6.5 million. In

addition, a QF who supplied power during specified peak periods at the 95% capacity factor called for in the PNM contract would qualify for bonus capacity payments. Addition of the bonus would increase the capacity credit to over \$6.9 million, as shown in Appendix C.

The contract may also make it possible for SDG&E to purchase energy at less than the prevailing market price for certain hours in this period. Such purchases will benefit ratepayers, and it is fair to reduce the effect of the disallowance by reflecting any such energy savings in the ECAC account. SDG&E will have the opportunity to prove the existence and amount of these energy savings in the ECAC proceedings reviewing power purchases from May 1, 1988 through April 30, 1989. To make its showing, SDG&E must demonstrate that the prices of its purchases under the PNM contract were less than the cheapest comparable purchases available in the market at the same time. At certain times, this comparison will have to be made on an hourly basis; at other times, a longer period of comparison may be appropriate.

Since the calculation of any energy credit will be performed in future ECAC proceedings and will be reflected in future adjustments to the ECAC account, we cannot currently make an adjustment in our disallowance.

Thus, the amount of our disallowance is \$21,134,000. This amount would ordinarily be recovered through the operation of the ECAC account. SDG&E shall reduce the amount it records for the demand charges incurred under the PNM contract from May 1, 1988, through April 30, 1989, in its ECAC account by this amount, with appropriate interests adjustments for both the payments and credits from May 1, 1988 to the effective date of this decision.

E. The Administration of the Contract

Apart from the question whether SDG&E should have entered into the contract with PNM, two issues emerged concerning SDG&E's administration of the contract during the record period. The first question is whether SDG&E should have acted on an apparent opportunity to terminate the agreement. The second issue has to do with SDG&E's reaction to a possibility that PNM has not met its obligations under the contract.

1. The Agreement to Extend the Deadline

SDG&E signed the PNM contract on November 4, 1985. In the months that followed, OPEC lost its coherence and oil prices fell precipitously from \$27.60 per barrel in November 1985 to \$12.65 per barrel in April 1986. As a result of this decline, SDG&E revised its forecast of fuel prices and compared its revised forecast of avoided costs to the contract's costs. The results were summarized in a memorandum of April 8, 1986, and, as might be expected, the analysis showed that the contract was no longer cost-effective over its term, that the contract had an expected present-value cost of \$33.7 million, and that under revised fuel price forecasts, no benefits would result from the contract until 1998. (Ex. 531, Item 17.)

A possible ground for termination that emerged during this period concerned PNM's contractual obligation to provide SDG&E with proof by May 1, 1986, that it had obtained the transmission capability to provide at least 50 MW of power to SDG&E. The contract specified that the transmission service had to meet a certain level of firmness. If PNM failed to provide such proof by May, either party had a right under the contract to terminate the contract on June 1, 1986.

On March 21, 1986, PNM notified SDG&E that it would not be able to have a final transmission agreement demonstrating the required capability by May 1. PNM supplied a letter of understanding for SDG&E's review, and the parties considered extending the May 1 date. On April 29, the parties signed a letter agreement that granted PNM an extension of time to deliver an executed transmission contract to SDG&E. The transmission agreement, in which the Salt River Project (SRP) agreed to supply PNM with the necessary transmission capability, was executed on May 5, 1986.

a. DRA's Position

DRA argues that SDG&E's April 1985 fuel forecast and reassessment of the PNM contract confirmed what SDG&E should have suspected all along--that the contract was not cost-effective. After the April study showed that the contract was expected to cost \$33 million over its life, DRA believes that SDG&E should have taken all steps and seized all opportunities to terminate or renegotiate the agreement. DRA notes that under the revised fuel forecasts, activating the Silver Gate plants became SDG&E's cheapest option for additional capacity, and that gas prices would have to escalate 40% above the forecasts' expected prices before the cost of energy would overcome the capacity savings made possible by Silver Gate.

DRA also points out that D.85-12-108, issued in December 1985, after the contract was signed, directed SDG&E to go below the

threshold of cost-effectiveness and to provide inframarginal resources whenever possible. This decision should have strengthened SDG&E's resolve to modify or terminate the contract.

DRA finds it incomprehensible that SDG&E's negotiator, when he was informed of PNM's difficulties in developing a final contract with SRP, volunteered that "SDG&E would consider an extension of the cancellation date." He also invited PNM to "draft a letter agreement extending the date to whatever PNM believes sufficient." (Ex. 658, Item 13, p. 1.)

Under these circumstances, DRA believes that SDG&E's negotiators were completely wrong to volunteer to extend the May 1 deadline when PNM notified them of its problems in making firm transmission arrangements. SDG&E's own attorneys indicated that no concessions should be given without some counterbalancing benefit (see Tr. 75:8580-8582), yet SDG&E's negotiator offered the extension without any discussion of concessions by PNM, even though PNM's representative seemed to expect to have to offer some price concessions to get the extension (see Ex. 658, Item 13). Although DRA doesn't speculate about the course of events in the absence of this offer of an extension, it finds that SDG&E was imprudent in failing to take advantage of the leverage that even PNM acknowledged it had.

b. SDG&E's Position

SDG&E believes that its actions in agreeing to the extension were reasonable under the circumstances. After SDG&E balked at PNM's suggestion for an extension, PNM made special efforts to put the transmission agreement with SRP in its final form. On April 24, a committee that included a majority of SRP's Board of Directors approved the transmission agreement with PNM. It was clear to SDG&E at this time that the contract would be approved by SRP's Board. The next regularly scheduled meeting of the Board was May 5, and SDG&E concluded that withholding consent to an extension would have only the senseless effect of forcing a

special meeting of the Board and arousing the ill will of PNM and SRP. Accordingly, SDG&E agreed to the extension.

In addition, SDG&E notes that its contract with PNM did not contain a clause stating that time was of the essence. Under New Mexico law, which governed the interpretation of the contract, in the absence of such a clause a party's substantial compliance with contractual deadlines qualified as adequate performance. Since SDG&E believed that it would be unable to demonstrate that it had been harmed by a five-day delay in providing the proof of transmission capability, SDG&E concluded that a court would find that PNM had substantially met the guideline, and if SDG&E attempted to terminate the contract, it would find itself in breach of the contract and potentially liable for damages.

SDG&E rejects DRA's contention that its handling of the extension should have been influenced by the issuance of D.85-12-108. SDG&E disputes DRA's reading that the decision directed SDG&E to purchase only resources that are inframarginal. First, SDG&E argues that the Commission has never endorsed a policy that called for purchasing only inframarginal resources. Second, since the Commission has defined inframarginal to mean purchases that are so cheap that they would be made despite the presence of QFs, a policy of purchasing only inframarginal resources would force SDG&E to pass up many opportunities to purchase cheap power that does not meet the stringent test of inframarginality. Third, the Commission has indicated that avoided cost should act as a ceiling price for purchases, and that utilities should not make purchases that exceed avoided cost. SDG&E believes that it has complied with this policy in signing the PNM contract, since the overall cost of purchases under this contract was expected, when the contract was signed, to be less than avoided cost.

SDG&E believes that its actions were reasonable under these circumstances.

2. Did the Transmission Arrangements with SRP Meet the Requirements of the Contract?

a. DRA's Position

DRA also asserts that the eventual transmission arrangements between PNM and SRP did not meet the requirements of the PNM contract with SDG&E in three ways.

First, DRA argues that SDG&E had an opportunity to terminate the PNM contract because the transmission agreement was not as firm as required by the PNM contract. More specifically, Section 5.3 allowed for termination

"...if prior to May 1, 1986, PNM has not obtained transmission capability or other back-up service to provide at least 50 MW of System power at the Point of Delivery for the term of this Agreement, irrespective of the operational status of the ANPP generating units [the Palo Verde nuclear plants]. Such transmission contract(s) shall provide transmission service on a basis at least as firm as is set forth in Appendix B." (Ex. 531, Item 15, p. 6.)

Appendix B defines firm transmission service for the purposes of the agreement and provides that such transmission may not be interrupted or curtailed except when technical difficulties affecting the portion of the transmission system used to provide the service limit the transmitter's ability to provide firm service and to provide service to its firm customers.

DRA points out that Section 1.2.2 of the transmission agreement terminates the firm back-up transmission service "when PNM no longer has entitlement to any generation at ANPP" (Ex. 531, Item 19, p. 3). But since Section 13.9 of the PNM contract expressly requires SDG&E to continue purchasing capacity under the contract even if PNM relinquishes its entitlement to ANPP's generation (Ex. 531, Item 15, pp. 33-34), it is clear that the transmission may terminate before the end of the full term of the PNM contract. Thus, DRA reasons, the PNM-SRP transmission

agreement did not meet the requirements of Section 5.3 of the PNM contract, and SDG&E had an opportunity to terminate that contract.

Second, DRA notes another combination of events that could result in termination of the transmission agreement before the end of the term of the PNM contract. Section 4.1.1 of the transmission agreement allows the transmission service to be curtailed or interrupted at SRP's sole discretion if it needs the transmission facilities to serve its firm system requirements with generation from its Coronado plants, including future Coronado plants and substitute units. Under Section 4.1.3, PNM has the right to ask SRP to find an alternative transmission path for the firm back-up transmission service over the facilities of neighboring utilities when SRP's facilities are interrupted or curtailed under Section 4.1.1. But if all of SRP's transmission facilities are needed to transmit Coronado generation to serve SRP's firm system requirements, PNM has a right under Section 1.2.3 of the transmission agreement to terminate the agreement. Thus, DRA argues that this set of circumstances could result in the transmission service terminating before the end of the PNM contract. Again, the requirements of Section 5.3 of the PNM contract have not been met, and, according to DRA, SDG&E had another ground for terminating the PNM contract.

Third, Section 6.1 of the transmission agreement allows for possible modification to the transmission facilities if certain problems arise. But work on any such modifications is not required to begin until January 1, 1989. Since the PNM agreement begins on May 1, 1988, DRA argues that the required firm back-up transmission service may not be available for the full term of the PNM contract if these modifications are required.

DRA further faults SDG&E for failing to have an attorney review the transmission agreement to see if it met the requirements of Appendix B of the PNM contract. SDG&E's review was apparently limited to a technical review of the capability of the transmission

path proposed by the transmission agreement. Thus, according to DRA, SDG&E wasted a valuable opportunity either to terminate the PNM contract or to use the threat of termination to get concessions from PNM.

DRA further criticizes SDG&E for then going out of its way to cure the defects of the transmission agreement when it agreed to a letter agreement with PNM on June 18, 1986. This letter agreement gave SDG&E the option of terminating the PNM contract if PNM terminates the transmission agreement under Section 1.2.3, if PNM is unable to find back-up transmission from another source, and if PNM's proposed service alternatives are not acceptable to SDG&E. But DRA notes that the letter agreement did not cover termination under Section 1.1.2 of the transmission agreement (the ANPP contingency). In addition, although SDG&E retained its right to terminate the contract, exercise of this right would come at a severe financial penalty to SDG&E, since the PNM contract was expensive in its early years. Under SDG&E's forecast of April 1986, the PNM contract was not expected to become cost-effective until 1998. The earlier the contract was terminated, the more the contract's cost would exceed avoided cost. If SDG&E terminated before 1998, it would lose the opportunity for any benefit to result from the contract.

Thus, DRA concludes that SDG&E was imprudent for not taking advantage of its opportunities to terminate the PNM agreement. DRA argues that this imprudence adds further support to its recommendation that SDG&E should not be allowed to recover the costs of the excess capacity under the contract. DRA believes that SDG&E should have known in 1985, based on available information, that it would not need capacity until 1994. Thus, DRA recommends that the demand charges from May 1988 through May 1994, amounting to \$174,001,000, should not be recovered from ratepayers.

b. SDG&E's Position

SDG&E believes that its review of the transmission agreement was thorough and that its conclusions were sound.

First, SDG&E addresses what DRA refers to as the ANPP contingency. DRA has suggested that the transmission agreement might be terminated if PNM disposed of its entitlement to ANPP, even though SDG&E's obligation to purchase capacity under the PNM contract would continue. SDG&E points out that any such disposition by PNM of its rights to ANPP generation would also violate the provisions of Section 5.4 of the PNM contract:

"PNM shall make good faith efforts to obtain transmission capability or other back-up service adequate to provide service under this Agreement, and once so obtained, shall maintain such capability or service for the remaining term of this Agreement." (Ex. 531, Item 15, p. 7.)

SDG&E asserts that the event that would trigger a termination of the transmission agreement--PNM's disposition of its entitlements to ANPP--would also be a material breach of the PNM contract. The act that would cause termination of the transmission agreement is entirely within the control of PNM, and this provision is exactly like a host of other actions PNM might take to breach the transmission agreement. Thus, SDG&E argues that DRA has demonstrated only that PNM could take actions that would be a material breach of the PNM contract and that would also result in termination of the transmission agreement.

Second, SDG&E states that it analyzed the firmness of the transmission services provided in the transmission agreement and concluded that they met the requirements of Appendix B. A later probabilistic analysis demonstrated that the minimum expected availability for 100 MW of service (twice the amount required by the PNM contract) was greater than 99.5%. SDG&E viewed SRP's reservation of the firm path for its firm resources as merely

shifting the burden to PNM to pay for additional upgrades to expand the path's capacity.

Third, the stated date, January 1, 1989, for the start of any necessary upgrades did not in any way relieve SRP of its contractual obligation to provide firm transmission back-up service beginning May 1, 1988, as set forth in Section 2.1 of the transmission agreement (Ex. 531, Item 19, p. 4).

Finally, SDG&E disagrees with DRA's premise that it should have seized any opportunity to cancel the contract. In light of the high volatility of the oil market, SDG&E was reluctant to act only on the projections of its latest forecast and to reject a decision based on previous forecasts. The benefits of the PNM contract were still substantial, and the decision to terminate, even if an opportunity had presented itself, would not have been automatic.

c. DRA's Response

DRA questions whether SDG&E's analysis was as thorough as asserted by SDG&E. DRA points out that SDG&E's witness, the person who performed much of the review, admitted that the Transmission Planning Section did not review all of the requirements of the contract, and that he assumed that several important provisions would be reviewed by someone else. In addition, DRA notes that the quantitative analysis cited by SDG&E was performed in August 1987, well after the time when SDG&E was required to assert the failure of PNM to obtain the required transmission rights.

DRA also challenges SDG&E's reliance on Section 5.4 by noting that the language of that section requires only that PNM maintain the back-up service "it has obtained." If the service that it has obtained does not meet the explicit requirements of Section 5.3 and Appendix B, Section 5.4 does not place any greater responsibility on PNM to obtain firmer service.

DRA also cites New Mexico law and legal treatises in support of its contention that by not objecting to PNM's failure to

obtain the required transmission service, SDG&E waived the defective performance, so that SDG&E would be barred from raising its objection to the transmission service at a later time, presumably when that defect affected deliveries under the PNM contract.

Moreover, DRA points out that if SDG&E really believed in May 1986 that PNM had an absolute obligation to provide firm back-up transmission service, it could have asserted that duty in the letter agreement of June 18, rather than removing PNM's absolute obligation and substituting a lesser "good faith" obligation to provide alternatives.

Finally, DRA rejects SDG&E's assertion that it may not have terminated the PNM contract even if it felt it had an opportunity to terminate in May 1986. DRA points out that the Commission in December 1985 had stated that avoided cost was the ceiling price that should be paid for purchases over the SWPL (D.85-12-108, p. 120h). In response to SDG&E's fear that its April 1986 forecast might prove to be too low, DRA reasserts its earlier criticisms of the forecasts that supported the PNM contract and the extremely small benefits that those forecasts projected for the PNM contract.

3. Discussion

a. The Agreement to Extend the Deadline

We agree with DRA that once SDG&E realized the strong possibility the the PNM contract would turn out to be a poor bargain, it should have taken advantage of every opportunity to renegotiate or terminate the contract. We find it inexplicable in these circumstances that SDG&E would voluntarily offer to extend the May 1 deadline. SDG&E would have been completely within its rights under the contract and within the bounds of acceptable business behavior to insist that PNM live up to the obligations it agreed to in entering into the agreement. SDG&E was under no legal or moral obligation to assist PNM in meeting its obligations. We

find it difficult to give credence to SDG&E's repeated assertion that it had no bargaining leverage in many negotiating situations when it failed to recognize the leverage that circumstances presented it.

Viewed in isolation, SDG&E's decision to agree to an extension after SRP's committee, which included a majority of SRP's Board, approved the transmission agreement does not appear unreasonable, but we think that this incident should not be viewed in isolation. PNM knew from the moment it signed the contract on November 4, 1985, that it was bound to provide SDG&E with proof of firm transmission arrangements by May 1. It would not have been SDG&E's stubbornness that would have forced a special meeting of the SRP Board (if SDG&E had not consented to the extension), it would have been PNM's failure to make the necessary arrangements early enough so that they could be considered at a regular meeting of the Board before May 1. Yet SDG&E stated that it feared that it would only annoy PNM and SRP if it withheld its consent to the extension. But any annoyance should have been directed at PNM, and if necessary SDG&E could have aided SRP and PNM in recognizing the true source of the delay.

Moreover, we strongly suspect that SDG&E's unnecessary, inappropriate, and apparently unsolicited offer to extend the deadline led PNM to believe that SDG&E would cooperate in solving PNM's problem. Thus, SDG&E itself may have created the setting for the annoyance that SDG&E then felt necessary to avoid.

We conclude that SDG&E acted imprudently in not informing PNM when the transmission difficulties were first mentioned that SDG&E intended fully to enforce its rights under the contract, including the right to terminate if PNM did not produce the required proof of transmission arrangements on time. If SDG&E had done so, at worst the situation would be identical to the one SDG&E faces today. It is very possible that PNM would have offered some price concessions, as its representative had indicated on April 3,

1986. SDG&E may have also had an opportunity to terminate a contract which appeared then as it does now, to be a very expensive resource.

Determining how SDG&E's imprudence has affected its ratepayers presents some difficulties. DRA ties this instance of imprudence to its larger recommendation to disallow all costs of excess capacity, or the demand payments from 1988 through 1994. We have earlier rejected this approach, and we think we should consider the effects of this particular action separately.

No party suggests that this incident would have presented SDG&E with a clear and legitimate opportunity to terminate the contract, but it may have led to offers of price concessions from PNM. In fact, PNM's representative volunteered that PNM would consider such concessions (Ex. 658, Item 13, p. 2).

Any price concessions, however, would have logically been limited by PNM's expectations of the cost of making the extra efforts needed to complete the arrangements and to execute the transmission agreement with SRP. Realistically, PNM was not going to allow the contract with SDG&E to lapse merely because it was difficult to translate its letter of understanding with SRP into a final contract within the time limits called for in the PNM contract. However, PNM may have been willing to reduce SDG&E's costs somewhat so that PNM would not have to incur the extra expenses necessary to get the agreement signed on time. Thus, PNM would have either "bought" SDG&E's concurrence in the extension or it would have incurred the expenses necessary to comply with the strict terms of the contract; PNM would have followed the course of action that it expected to be less expensive.

We can speculate that the extra expenses that capped PNM's potential concessions to SDG&E could have included added attorneys' fees, overtime payments to some workers needed to complete the agreement, compensation for added costs SRP would incur in arranging an extra or emergency meeting of the SRP Board,

and related expenses. However, in light of the absence of any evidence on this topic, only a rough estimate of these expenses is possible, and only a token disallowance is justified.

We estimate that it would have been PNM's expectation that these expenses would not exceed \$20,000; thus, its offer of a rate reduction to SDG&E would not have exceeded \$20,000. Thus, \$20,000 is a reasonable estimate of the maximum effect that SDG&E's imprudence in this instance had on ratepayers. We conclude that SDG&E's imprudence led to its losing the opportunity to reduce its costs under the contract by about \$20,000. We will not allow SDG&E to recover this amount from its ratepayers. Because we acknowledge that this amount is merely an estimate and, in any event, is intended as a nominal disallowance, we will not add interest to the \$20,000 disallowance.

b. The Transmission Arrangements

The first question for our consideration is what SDG&E's attitude should have been toward the PNM contract in May 1986. We agree with DRA that SDG&E should have been seizing every opportunity to reduce its obligations under the PNM contract. By its own forecast of oil and gas prices, SDG&E expected that the contract would cost over \$33 million more than avoided cost, and that the contract would show no benefit until 1998. Even though the soundness of this new forecast could be questioned, the fact that oil prices had already fallen well below the range that SDG&E considered in the low oil and gas price case of its earlier analysis should have raised grave doubts in the minds of SDG&E's managers about the wisdom of the PNM contract. The Commission had indicated that avoided cost should be a ceiling for purchases over the SWPL, and now SDG&E's own analysis indicated that the contract would exceed that ceiling. Any possibility for getting out of the contract or for reducing SDG&E's costs under the contract should have been vigorously pursued.

Both DRA and SDG&E get distracted from this central point somewhat in arguing about the likelihood that SDG&E's possible objections to the transmission agreement would have been sustained. Of the three objections to the transmission agreement raised by DRA, only the third, concerning the timing of transmission upgrades, could be rejected out of hand. The others, concerning the possibility of termination if PNM sold its rights to Palo Verde generation and SRP's rights to curtail or interrupt the transmission path under certain circumstances, are both credible. Even though SDG&E's reviewers seemed to feel that the possibility of termination was slight, under the wording of the contracts there was a credible legal argument that PNM had not met its obligations under Section 5.3 of the contract. SDG&E should have pressed that argument with PNM, if not in hopes of terminating the agreement, then at least in an attempt to get concessions that would lower the costs of the contract. SDG&E had nothing to lose and much to gain by pressing these arguments.

However, it appears that SDG&E's attorneys' review of the transmission agreement did not extend to the issue of whether PNM had met its specific obligations under the PNM contract, and SDG&E forfeited the opportunity of raising any legal objections to the transmission agreement.

Moreover, as DRA has pointed out, it should have been SDG&E's goal either to terminate the agreement or to obtain concessions at the outset. Even if SDG&E preserved its right to terminate the agreement later, as SDG&E's argument on the ANPP entitlement issue seems to suggest, it would have endured the most burdensome period of the contract only to terminate before the contract's benefits started coming in.

We are unable to say at this late date whether SDG&E could have successfully sustained a claim of termination or whether its efforts to get concessions from PNM would have been successful. We feel confident in speculating that the change in oil prices must

have increased PNM's desire to sell capacity to SDG&E even at a reduced price and that SDG&E probably had more bargaining leverage at this time than it believed then or apparently believes now. We cannot know what would have happened with certainty. But we conclude that SDG&E acted imprudently by failing to assess the situation at the time, failing to have its lawyers review the PNM-SRP agreement for compliance with the specific requirements of the PNM contract, failing to set a strategy for administration of the PNM contract, and failing to pursue vigorously every opportunity to obtain concessions. ✓

We are unable to assess how these instances of imprudence will affect ratepayers. The most likely outcome, if SDG&E had pressed its claims, would have been some reduction in the prices called for in the contract, in our opinion. However, we have no basis for estimating or quantifying those concessions. Although we will not make a particular disallowance for these imprudent acts, our conclusion that SDG&E acted imprudently reinforces our previous disallowance of the contract's demand charges for one year.

F. Conclusion on the 1985 PNM Contract

We have now completed our review of the reasonableness of SDG&E's entering into the contract with PNM and of the administration of the contract from its inception through April 30, 1986. Except for the amounts we have disallowed, all other expenses SDG&E incurs under this contract are reasonable. However, SDG&E's administration of the contract after April 30, 1986, will be reviewed for reasonableness in future ECAC cases.

Our estimated total disallowance of SDG&E's expenses under the PNM contract is \$21,154,000; the final disallowance may differ slightly from this amount because of the calculation of interest. ✓

VIII. The Balancing Account

A. Background

The original purpose of this rehearing was to reconsider certain aspects of the balancing account created in D.85-12-108. The decision granting rehearing, D.86-06-026, instructed the parties to address six specific questions. We will examine these questions and the parties' responses in sequence, and we will consider related issues before discussing our overall conclusions.

B. The Balance Through 1988

The first question posed in D.86-06-026 was:

"What would be the difference between the cost of power purchased over the SWPL and avoided cost, measured at a capacity value of \$78/kw/yr and current short-run avoided energy cost for the period January 1, 1986 through December 31, 1988?"

1. SDG&E's Response

SDG&E's answer to this question appears to be set forth in an appendix to its opening brief. The appendix contains a response to a data request from DRA. The response gives three estimates corresponding to three forecasts of oil and gas prices.

SDG&E's most likely forecast of oil and gas prices, as of October 1986, results in the costs of power purchased over SWPL exceeding short-run avoided costs by about \$378 million. Under the low price forecast, this figure increases to \$410 million. Under the high price forecast, the purchased power costs exceed avoided cost by \$164 million.

In its testimony, SDG&E revised its estimates of the excess costs in its most likely case to \$293 million for this period (Ex. 505). This figure includes a capacity credit for economy energy purchases, similar to the capacity payment made to as-available QFs under Standard Offer Number 1 (SO1). If this

capacity credit is removed, the result would be excess costs of about \$313 million.

2. DRA's Response

DRA estimates that the costs of purchases over SWPL will exceed avoided cost by \$313 million. DRA and SDG&E agree on this figure, except that SDG&E includes a capacity credit for economy energy.

DRA argues that including this credit is inappropriate. QFs are geographically and technologically diverse, and the capacity credit of SO1 is based on the probability that many of them will be supplying energy at any given moment, including system peak, despite the diverse outage patterns of individual facilities. In contrast, DRA argues, SWPL is the equivalent of a large resource and represents a large, single contingency. If this single resource fails, both firm and nonfirm power are interrupted, so no capacity credit should be awarded to nonfirm purchases over SWPL.

3. UCAN's Response

UCAN concurs with DRA's estimate. UCAN also believes that no capacity credit should be given for economy energy purchases for four reasons. First, nonfirm purchases are interruptible. Second, the amount of nonfirm power transmitted over SWPL could be large in relation to SDG&E's system. Third, Southwestern utilities selling nonfirm energy have similar load and resource conditions, and their times of energy shortage and surplus are highly correlated, unlike dispersed QFs. Fourth, the availability of nonfirm energy is low during summer periods of heavy load when SDG&E's need is high.

C. The Incentive Created by the Deferral of Cash Flow

The second question raised in D.86-06-026 was:

"Is the deferral of cash flows, by limiting SDG&E's revenue recovery for SWPL energy to the 'value' of that energy, a sufficient incentive to encourage the company to reduce its purchased power costs?"

1. SDG&E's Response

SDG&E's answer to this question seems to be that the deferral of cash flows is more than sufficient, and the balancing account mechanism is not needed to give SDG&E sufficient incentive to reduce its purchased power costs. SDG&E believes that existing ratemaking mechanisms are adequate to provide the required incentive. Throughout the life of a transmission line, the Commission has ample opportunity--in the general rate case that reviews the resource plan, in the Commission's review of the filings required by General Order 131, in the granting of the certificate of public convenience and necessity for the line, in the prudence review of the construction costs, and in ECAC proceedings--to review the construction, operation, and even salvage value of a transmission line. The threat of a disallowance of costs at any stage of the facility's life is a sufficient incentive to encourage SDG&E to keep its purchased power costs down.

2. DRA's Response

DRA believes that the balancing account mechanism is sufficient and necessary to give SDG&E the proper incentive to operate the line efficiently.

DRA disputes SDG&E's contention that more conventional regulatory mechanisms are adequate to ensure the proper operation of SWPL without the addition of the SWPL balancing account. DRA notes that most of the ratemaking mechanisms cited by SDG&E focus on the recovery of the capital cost of the line, but the capital cost is not at issue in this proceeding; rather, the cost-effectiveness of energy transmitted over SWPL is both the issue in this case and the target of the balancing account.

DRA also argues that ECAC reasonableness reviews are not always effective checks on management's actions, especially in the complex area of contract administration, because the utility controls the records of the most important acts. If documents of

important steps in the decision process are not retained, it becomes extremely difficult for the Commission to review the prudence of management's actions. Thus, any incentives that ECAC may provide in theory are eroded in practice.

DRA observes that SDG&E seems to have become more aggressive in its administration of the contracts after the Commission adopted the decision creating the balancing account. DRA sees this as evidence that the incentives created by the balancing account were and are needed to ensure efficient operation of SWPL.

3. UCAN's Response

UCAN also believes that SDG&E's actions since the balancing account was created demonstrate the effectiveness of the incentives created by the account. SDG&E's change in behavior demonstrates that traditional ratemaking mechanisms were not sufficient to produce desirable behavior.

UCAN points out that the balancing account establishes clear price signals for the market and gives SDG&E a clear target, the avoided cost standard, to guide its efforts in securing power purchases.

D. The Standard of Value

The third topic for this rehearing set forth in D.86-06-026 was:

"What is the appropriate standard by which to measure the value of SWPL power to ratepayers? Would pricing SDG&E's SWPL cash flow at current short run avoided cost discourage the utility from making long-term contractual commitments to purchase SWPL power?"

1. SDG&E's Response

SDG&E's short answer to the first of these questions is that SWPL should be evaluated as one resource of SDG&E's integrated system and should not be singled out for special treatment. SDG&E offers several reasons in support of its position.

According to SDG&E, SWPL was planned as a resource to be integrated with the rest of SDG&E's system. At SWPL's inception, SDG&E's overwhelming need was for a way to displace oil and gas from its system. SDG&E's extensive reliance on oil- and gas-fired generation had caused enormous rate increases during the price increases of the 1970s, and SDG&E had set a goal of diversifying its fuel mix. When the Commission rejected SDG&E's proposed Sundesert Nuclear Project, the Commission instructed SDG&E to pursue the possibility of building a transmission line to give SDG&E access to the coal-based generation resources in the Southwest (D.88758, 83 CPUC 707, 734 (1978)). SDG&E pursued SWPL because it offered the benefits of access to coal-fired firm capacity, displacement of oil- and gas-fired generation, improved system reliability, and the reduction of SDG&E's oil consumption. The Commission noted all of these benefits when it granted the certificate of public convenience and necessity for SWPL (D.93785).

In addition, SDG&E argues that its use of SWPL has been demonstrated to be cheaper than feasible alternatives. SDG&E identified four such alternatives: avoided cost (representing the price of purchases from QFs), other available firm power purchases, construction of new generation, and reliance on economy energy.

For its comparison with avoided cost, SDG&E modified the approach suggested in the rehearing decision somewhat to enable it to make a comparison over a longer period of time than contemplated in the decision. SDG&E calculated that from April 1979 through April 1986, SDG&E's purchases from the Southwest resulted in savings with a net present value of \$100.3 million for SDG&E's customers. (SWPL did not enter commercial operation until June 1984; some of the Southwest purchases in this comparison were not carried over SWPL.) For May 1984 through April 1986, the comparison shows a net present-value cost of \$45 million, but even in this period savings result if the levelized capital cost of SWPL is ignored.

SDG&E attributes the net cost of the later years of the comparison to the cost of Springerville Unit 1 demand payments and the drop in the price of oil and gas. SDG&E argues that the balancing account unfairly captures the worst years, the years after the unforeseen drop in oil and gas prices, for comparison against the avoided cost standard and ignores the years when Southwest purchases were clearly beneficial to ratepayers.

SDG&E next compares the cost of Southwest purchases with the only other firm purchases available in 1978-1980, the same time when SDG&E contracted with PNM and CFE. Purchases from Cholla 4 in 1984-85 cost Southern California Edison only about a tenth of a cent per kilowatt-hour less than SDG&E's purchases from PNM for the same time. Purchases for power from Magma Power Company's Niland geothermal plant cost Edison over 8 cents per kilowatt-hour in 1986, while SDG&E's costs under the CFE agreement were just over 4 cents per kilowatt-hour.

SDG&E also cites figures that showed that the installed cost of the plants that formed the basis for the demand charges in the contracts with PNM and TEP were not out of line with the installed costs of similar plants of the same vintage.

SDG&E concludes that the costs of ownership of a new generation plant would have increased SDG&E's revenue requirement by about \$200 million compared to current forecasts of the costs of purchased power transmitted over SWPL.

Finally, SDG&E argues that economy energy is not a feasible substitute for SWPL. Without SDG&E's firm purchases, construction of several plants in the Southwest would have been postponed; as a result, the economy energy market would have been considerably tighter, with correspondingly higher prices. Furthermore, SDG&E argues that the availability of economy energy is the lowest, and its price the highest, precisely during periods of high demand, when SDG&E most needs additional power.

SDG&E also addresses the question of value in an extensive argument against using avoided cost to judge the value of SWPL. SDG&E argues that avoided cost fails to capture the value of SWPL for two general reasons.

First, avoided cost fails to reflect many of the benefits that SWPL offers. The existence of SWPL has enabled SDG&E to cut its reserve margin from 20% to 15%, with an estimated savings of \$90 million. SWPL also gives SDG&E the ability to minimize outages, which saved SDG&E's customers \$70 million, according to SDG&E. Other short-term operational benefits amounted to \$1 million. In addition, avoided cost fails to reflect the value of fuel diversity that SWPL offers a system like SDG&E's. SWPL also gives SDG&E considerable flexibility in planning to meet future needs and establishes SDG&E as a presence in Southwest power markets.

Second, SDG&E argues that the gas turbine proxy used to estimate the avoided cost of capacity does not capture SWPL's long-term value. Gas turbines are designed to provide inexpensive peaking capacity, but they are relatively inefficient. SDG&E believes that it is inappropriate to apply such an expedient, short-run measure to the long-term capacity commitments carried over SWPL. SDG&E notes that the capacity measure used in the long-run standard offer (S04) is substantially higher than capacity prices based on the gas turbine proxy. SDG&E thinks it significant that for the standard offer the Commission found that a projected short-run marginal cost approach fails to equal long-run avoided cost.

Moreover, SDG&E asserts that it is illogical and unfair to judge an individual facility by the short-run avoided cost standard. Logical use of its system may require SDG&E to contract for additional capacity over SWPL so that the Pacific Intertie remains available to transport economy energy from the Pacific Northwest, where economy energy costs are generally cheaper than in the Southwest. This arrangement would be cheaper from the system's

perspective, even though the purchases over SWPL would likely fail the short-run avoided cost test.

Finally, SDG&E observes that the avoided cost test does not recognize a credit for transmission costs that were avoided because of SWPL. By contrast, the Commission has held that valuing long-run avoided cost must include consideration of avoided transmission costs for displaced purchases from outside the service area (D.87-05-060, mimeo. pp. 31, 56). The balancing account as proposed also does not credit SDG&E for the benefits of increased system reliability resulting from the presence of SWPL. SDG&E believes that credits should be taken into account in setting the initial balance of any balancing account.

In answer to the second part of the Commission's question, SDG&E thinks the proposed balancing account would discourage it from committing to long-term purchases over SWPL. As already mentioned, ignoring the most efficient combined use of SWPL and the Pacific Intertie will lead to increased costs, and applying the avoided cost standard to SWPL in isolation will encourage SDG&E to purchase more economy energy over SWPL, even when cheaper energy may be available from the Pacific Northwest. The course suggested by the avoided cost criterion would be for SDG&E to construct gas turbines to meet any need for new capacity, and to keep SWPL in reserve exclusively for purchases of economy energy. SDG&E does not believe that this is a wise direction for its system planning to take.

Furthermore, use of the avoided cost standard creates some incentive for SDG&E not to take steps to reduce its avoided cost, since a higher standard is easier to beat. SDG&E does not think the Commission intended to create such an incentive.

2. DRA's Response

DRA believes that the Commission has already answered its own question:

"With respect to out-of-state power purchases, the Commission fully expects the states' [sic]

utilities to go below the threshold of cost-effectiveness and provide lower cost or inframarginal resources whenever possible." (D.85-12-108, mimeo. p. 120g.)

Based on this quotation, DRA argues that the Commission expects out-of-state purchases to be cheaper than system generation, and that the short-run avoided cost measure is therefore generous to SDG&E.

To answer the Commission's questions more thoroughly, DRA evaluated the value of each of the three separate "products" that SDG&E purchases over SWPL.

First, DRA believes that the value of capacity is a shortage value, and is appropriately estimated by the cost of a combustion turbine. The \$78 per kilowatt per year that the Commission adopted for 1986 logically applies only to utilities that need additional capacity. Since SDG&E does not need capacity in the 1980s, DRA thinks that applying the avoided cost standard to capacity is generous to SDG&E.

Second, DRA views purchased firm energy as essentially displacing generation on SDG&E's system. Therefore, the value of firm energy is the incremental cost of the marginal generation unit. This may be expressed as the price of gas multiplied by the system incremental heat rate, as the Commission has indicated. DRA concurs with the Commission's use of a heat rate of 12,000 BTU per kilowatt-hour.

Third, nonfirm energy is worth less than firm energy, since it is interruptible. The true value should be value of firm energy less about 2 mills per kilowatt-hour, the cost of spinning reserves. By not differentiating between firm and nonfirm energy for purposes of the balancing account, the Commission has again been generous to SDG&E.

DRA concludes that the avoided cost criterion is consistently generous to SDG&E. Thus, DRA believes that the avoided cost standard is sufficient to capture not only the direct

economic value of SWPL but also the indirect benefits that SDG&E has ascribed to the line.

DRA finds fault with SDG&E's evaluation of many of these indirect benefits. Minimization of outages and voltage support results from the addition of any generating resource, including QFs, but the Commission has not increased avoided cost-based prices to reflect these benefits. Thus, it is consistent to perform the comparison without consideration of these factors. DRA further questions whether SWPL should receive sole credit for the reduction of reserve margin by 5%. DRA thinks the revised reserved margin is a byproduct of SDG&E's first study of reserve requirements to be based on expected unserved energy (EUE). DRA believes that a study by the Energy Commission indicates that SWPL reduced reserve margins by only one to two percent. Moreover, problems with the way in which SDG&E ran its PROMOD (a production cost simulation model) runs undermines its estimate of the value of the reduction in reserve margins and its claim that SWPL lowered its cost of capacity and energy.

DRA concludes that SDG&E's purchases over SWPL are more expensive than increased generation from its system, and that avoided cost is a generous measure of the value of SWPL power.

3. UCAN's Response

UCAN believes that avoided cost is a satisfactory standard for evaluating SWPL's costs. UCAN finds support for its position in D.85-12-104, in which the Commission accepted UCAN's argument that a contract between SDG&E and its affiliate should be evaluated by an avoided cost standard, rather than a long-run standard urged by SDG&E. UCAN also notes that SDG&E has asserted that its long-run avoided costs are below its short-run avoided costs. If this statement is true, the short-run avoided cost approach is clearly more favorable to SDG&E.

UCAN also believes that over its life a long-run resource should show a substantial savings over short-run costs to justify the increased risk inherent in a long-run commitment.

UCAN suggests that a long-term purchase could be valued by a short-run standard until such time as it becomes a long-term substitute for a capital addition. The long-run evaluation standard could be either long-run avoided cost or a forecast of short-run avoided cost. UCAN believes that this treatment is consistent with the Commission's policy as expressed in D.86-07-004, which set up the auction approach to selecting new generating resources.

E. SDG&E's Needs

The fourth question posed in D.86-06-026 was "What are SDG&E's energy and capacity needs in the 1986 through 1996 time frame?"

1. SDG&E's Response

In an attachment to its brief, SDG&E presents a table which it labels a "deterministic" resource plan from 1986 through 1998. According to this table, a comparison of expected load with existing, committed, and nondeferrable resources shows a need for additional capacity beginning in 1991 and growing to 392 MW in 1996.

However, SDG&E also includes a related response to a data request that warns, "it would be inappropriate to use this deterministic estimate of energy and capacity needs for planning purposes, or evaluation of the Southwest Powerlink, at this time. Probabilistic analysis must be employed to determine prudent resource choices." SDG&E's answer to this question seems to be no more specific than its statement, "the range of potential energy and capacity requirements for SDG&E over the next 10 years is quite broad."

2. DRA's Response

DRA's opinion is that SDG&E will have significant excess capacity through 1989. A need for new capacity will begin in 1990, according to current demand forecasts and resource plans. DRA believes that SDG&E will be able to meet this need for new capacity by operating existing units and restarting Silver Gate.

Although DRA agrees that the need for energy and capacity will increase through 1995, it disputes SDG&E's plan to add 900 MW. DRA believes that much of this increased need can be met by QFs and cost-effective conservation and load management programs.

3. UCAN's Response

UCAN believes that SDG&E will not have a need for additional capacity until 1992 or later. It also thinks that restarting Silver Gate, in combination with purchases of economy energy, will satisfy much of SDG&E's need through 1994.

F. The Role of SWPL

The fifth topic of D.86-06-026 raised several key questions:

"What role in SDG&E's resource plan should the SWPL play? Should it continue to provide largely firm capacity? Should contracts for the purchases be flexible to enable the deliveries to meet SDG&E's resource needs as determined bi-annually [sic] in the OIR-2 proceeding?"

1. SDG&E's Response

SDG&E believes that SWPL's role should be that of a valuable and flexible resource in an integrated system. As SDG&E states in its brief:

"SWPL can be used to accommodate a vast range of short-term and long-term resources, the mix of which depends entirely on the future environment. For example, if high oil and gas prices return, SWPL would carry coal and hydro-based resources which would cost less than SDG&E's own on-system oil and gas generation.

On the other hand, if oil and gas prices stay relatively low, SWPL would carry a large portion of economy energy which would be backed up by SDG&E's on-system gas turbine capacity. Under this scenario, in the longer run, SWPL would also carry additional capacity, as SDG&E's ability to build and site additional gas turbines wanes." (Opening Brief, p. 51.)

SDG&E notes that its new planning strategy calls for filling only 50% of expected need with long lead-time resources. The key to this strategy is maintaining flexibility, and it asks the Commission to permit it flexibility in operating SWPL.

Accordingly, SDG&E opposes the suggestion in the last part of the question that contracts for purchases of future resources should be limited to two-year terms.

SDG&E believes that it should have the flexibility to operate SWPL in a way that minimizes the total system's costs and not just the costs of purchases carried over a single transmission line.

2. DRA's Response

Since DRA believes that SDG&E will not need additional firm capacity until 1992, it recommends that SWPL should be used to transmit economy energy for the next five years. After 1992, SWPL could be used to carry additional firm resources, if the resources are needed and if they are less expensive than other options, including QFs, conservation, and load management.

DRA believes that any new agreements for firm capacity should be reviewed as part of the biennial OIR-2 process.

DRA finds some inconsistency in SDG&E's plea for flexibility and notes that the lack of flexibility in the use of the line led directly to this proceeding. Between 1984 and 1988, SDG&E loaded the line with firm capacity, leaving no opportunity for other, more flexible uses of the line. DRA points out that when it ordered this rehearing, the Commission found "loading SWPL

with firm purchases has constrained the room available for economy energy transactions" (D.86-06-026, mimeo. p. 4).

3. UCAN's Response

UCAN agrees with the general proposition that flexibility is needed to allow the utility to choose the least-cost option. However, UCAN believes that SDG&E has used this flexible resource in an inflexible manner in loading the line with firm capacity purchases.

UCAN thinks that SWPL will play the role of securing low-cost economy energy through 1996. If inframarginal firm energy is available, SDG&E could also transmit such purchases over the line.

G. Interest

The final question raised in D.86-06-026 was "Should the balance in the SWPL account accrue interest?"

1. SDG&E's Response

SDG&E's response is short and direct: If there is a balancing account, all balances should accrue interest. Otherwise, the balancing account, which was designed as a revenue deferral mechanism, would become punitive.

2. DRA's Response

DRA's response is closely related to its proposals for modifying the balancing account, which will be discussed later in this decision. In short, DRA would exclude interest from the annual excess costs of the PNM and TEP contracts between July 1, 1987 and May 30, 1989. Other SWPL costs in the balancing account would accrue interest.

DRA believes that excluding interest on the balances associated with these two contracts would give SDG&E a strong incentive to take steps to reduce future costs under the contracts. In addition, excluding interest reduces the amount that is deferred and thus lessens the long-term financial burden on SDG&E.

3. UCAN's Response

UCAN agrees with DRA's proposed treatment of interest. In addition to the reasons given by DRA, UCAN thinks excluding interest for a portion of the account's balance is justified as part of a compromise. Under the proposed modifications to the account, shareholders would bear a portion of the interest in exchange for a reduction of risk that results from setting a fixed date for terminating the account. UCAN also believes that SDG&E's potential exposure from excluding interest is relatively small.

H. Proposed Modifications to the Balancing Account

1. DRA's Proposal

DRA proposes four modifications to the balancing account as originally described in D.85-12-108, and its positions on the balancing account issues are related to its proposed modifications.

DRA's modifications stem from a concern about the large potential balance that could accrue in the balancing account. Because of the decline of oil and gas prices, DRA estimates that up to \$570 million in excess costs could accumulate in the account. If a large revenue deferral represented by the account balance requires long-term external financing, SDG&E's cost of capital could rise, to the detriment of both shareholders and ratepayers. DRA's modifications are designed to limit the accumulations in the account while preserving the incentives that were the original purpose of the account.

First, DRA recommends that the account should begin on July 1, 1987, rather than January 1, 1986, as required by D.85-12-108. This later start would reduce the account balance considerably.

Second, DRA proposes that the annual excess costs of the TEP and PNM contracts should be amortized over five years, starting in the year the excess costs are incurred. Under DRA's proposal, the deferred excess costs from these contracts would not receive

interest. Excluding interest would give SDG&E a great incentive to reduce future costs under these contracts. Other costs in the balancing account would receive interest, however.

Third, the balancing account would terminate when the balance reached zero or after ten years, whichever occurs earlier. Any remaining balance after ten years would be amortized over one or two years. Limiting the term of the balancing account would reduce the long-term financial burden on SDG&E and give greater certainty to investors, according to DRA.

Fourth, DRA recommends that the account use base rate revenue requirements associated with SWPL's fixed charges, rather than levelized costs ordered in D.86-06-026. Base rate revenue requirements are actually used in rates and are derived from straight line original cost (SLOC) accounting practices. The front-loaded nature of SWPL's fixed cost recovery was one of the reasons the Commission adopted the balancing account, argues DRA, and use of a levelized fixed charge distorts the yardstick of ratepayers' welfare. DRA's recommended substitution results in a better match of the costs and benefits to ratepayers, according to DRA.

2. UCAN's Proposal

UCAN supports DRA's proposed modifications and proposes an additional change.

If a balance remains in the account after the account is terminated after ten years, UCAN would adjust the amortization period so that rate increases resulting from amortizing the balance would be limited to 5% per year. If necessary, amortization under this proposal could extend beyond the two-year limit of DRA's recommendation.

3. City's Position

City supports DRA's modifications and does not oppose UCAN's additional modification.

4. SDG&E's Position

SDG&E opposes the balancing account in any form, and the proposed modifications do not lessen its opposition. Certain of the arguments SDG&E raises against the balancing account are pertinent to the proposed modifications.

SDG&E views the proposed modifications as a concession by DRA and UCAN of the validity of SDG&E's point that the burden of financing revenue deferrals under the balancing account would raise rates. SDG&E presented testimony that the need for additional financing created by the balancing account could cause SDG&E's debt and commercial paper to be downgraded and could also increase its cost of equity.

The point of the proposed modifications is to prevent the financing burdens from harming ratepayers, according to SDG&E. SDG&E is not convinced that the modifications remove this danger. According to SDG&E, even DRA's witness could not testify that the proposed modifications would ensure that the balancing account would not increase SDG&E's financing costs.

SDG&E also opposes the recommendation that certain portions of the balancing account would not accrue interest. SDG&E thinks that this recommendation is contrary to the Commission's practice for all other balancing accounts. SDG&E argues that this recommendation makes it clear that DRA's primary motive in supporting the balancing account is to reduce SDG&E's revenue requirement arbitrarily and not to create incentives.

I. Financial Accounting Standard 92

Another issue related to the balancing account was raised late in this proceeding with the issuance of Financial Accounting Standard (FAS) 92 by the Financial Accounting Standards Board (FASB). FAS 92 caused SDG&E to petition for reopening of the proceeding, and its petition was granted. An additional day of hearing on FAS 92 was held on December 3, 1987, and supplemental briefs were filed by SDG&E and City on December 14, 1987.

1. SDG&E's Position

SDG&E'S POSITION

SDG&E summarizes FAS 92 as forbidding a utility from booking as assets all revenues deferred under a phase-in plan for recovering expenditures "in connection with a major, newly-completed plant" if any portion of the deferred revenues are not "scheduled for recovery within ten years of the date when deferrals begin."

SDG&E believes that there is a strong possibility that FAS 92 would be applied to the balancing account and that SDG&E would be barred under FASB's accounting principles from booking any of the deferred revenues as assets. The result would completely disrupt SDG&E's financial status.

SDG&E argues that the SWPL balancing account qualifies as "a phase-in plan...ordered by a regulator." Moreover, since the balancing account, as originally stated or as modified by DRA and UCAN, neither "specifies the timing of recovery" of the deferred revenues nor schedules "recovery within 10 years of the date when the deferrals begin," FAS 92 would prohibit booking deferred SWPL revenues as assets.

SDG&E construes the reference to "plant" in FAS 92 to include transmission lines as well as generation plants. It supports its interpretation by referring to a conversation with the FASB's project manager for FAS 92. Similarly, SDG&E argues that the standard's reference to phase-in plans "in connection with a plant" indicates an intention to give the standard a broad application, and FAS 92 would likely apply to system power purchases when the selling utility has major, newly-completed generating plants on its system.

The only hesitation SDG&E appears to have about the application of FAS 92 to the balancing account has to do with whether a comparatively low-cost transmission line like SWPL qualifies as a "major" plant. SDG&E concludes that the potential harm to SDG&E and its ratepayers is so great that the Commission's

should not gamble on whether or not a quarter-of-a-billion-dollar plant is considered major.

SDG&E disagrees with DRA's argument that FAS 92 would not apply to the balancing account because, since the costs of SWPL were included in SDG&E's rate base in 1984, no phase-in plan exists. SDG&E points out that SWPL's investment costs are included in the debit side of the balancing account ledger. Unless those costs are arbitrarily separated from other debit entries, some investment costs would necessarily be deferred. Even with such an arbitrary separation, the balancing account mechanism carries with it the possibility, if avoided costs drop low enough, that some of the segregated investment costs would be deferred.

SDG&E concludes that FAS 92 is likely to exacerbate further the financial harm already present in the balancing account proposals.

2. DRA's Position

DRA believes that FAS 92 does not apply to the SWPL balancing account.

DRA states that the balancing account does not phase SWPL into SDG&E's rate base, so FAS 92 has no application. SWPL was fully included in rate base starting in 1984, according to DRA, and the balancing account acts to defer only a small portion of the cost of energy and capacity transmitted over SWPL in 1987-89. The amounts deferred are costs that would, except for the existence of the balancing account, be charged to the ECAC account. Thus, no phase-in is involved, and FAS 92 does not apply.

Furthermore, the deferred revenues may be capitalized under FAS 92. Although there is no specific reference to the deferral of fuel or purchased power costs in FAS 92, DRA argues that the "probability of recovery" standard applied to investment costs will probably also apply to capitalization of other cost deferrals, judging from the background to the development of FAS 92 and the related FAS 90. DRA's forecasts demonstrate that all

deferrals will be recovered by 1995, well within the ten-year limit. In addition, the ten-year sunset provision that DRA has proposed as a modification to the balancing account would make it more likely that the balancing account would meet the "probability of recovery" standard.

3. City's Position

City joins DRA in concluding that FAS 92 does not apply to the balancing account.

First, City also points out that SWPL was placed in rate base in 1984; thus, no phase-in of SWPL's investment costs is proposed or will occur.

Second, no reference to transmission lines appears in FAS 92. All examples given in the standard refer to electric generating plants.

Third, a reading of Appendix C, which gives background information on the development of FAS 92, leaves the strong impression that FAS 92 was primarily aimed at phase-in proposals for nuclear power plants costing several billion dollars. SWPL, with its \$250 million cost, would not qualify as a major plant in comparison to the nuclear plants.

Fourth, even if the FASB later holds that deferral of purchased power costs associated with a transmission line are subject to FAS 92, the standard provides transition rules that the Commission may use.

City concludes that the Commission should not withhold approval of the balancing account solely because of concerns about financial reporting requirements.

J. Intertemporal Equity

Although the Commission did not specifically call for comments on intertemporal equity in its earlier decision defining this rehearing, several parties addressed this issue.

SDG&E argues that the balancing account does not promote intertemporal equity. SDG&E believes that selecting one particular

resource and deferring the revenue requirements for that resource unfairly shifts costs from today's ratepayers to tomorrow's. Under conventional straight-line original cost depreciation, today's ratepayers benefit from resources, including fully depreciated resources, paid for by previous generations of ratepayers, and today's ratepayers' concomitant responsibility is to pay for resources that come on line during their times. It is equitable, in SDG&E's view, for each generation to receive the flow of benefits from previous generations and to pay its fair share for continuing that flow to future generations. The effect of the balancing account would be to disrupt that flow, and to unfairly force future ratepayers to bear part of the responsibility of today's ratepayers along with the responsibility appropriate to their times.

DRA and UCAN believe that the balancing account fosters intertemporal equity. They believe that there should be a close link between ratepayers' burdens and benefits at all times. The incentive created by the balancing account will cause SDG&E to take steps to make use of SWPL cost-effective in future years. In the meantime, however, the costs of SWPL will continue to be greater than its benefits. The revenue deferral mechanism is merely a way of shifting costs from the line's early years, when costs exceed benefits, to later years when benefits will exceed costs. Intertemporal equity will be served because both groups of ratepayers will pay rates that more accurately reflect the benefits they receive from SWPL.

K. Discussion

As the preceding section has demonstrated, the parties' responses to the questions posed in D.86-06-026 raise issues that extend far beyond the narrow question of how the balancing account should operate. To impose some order on our discussion of these issues, we will first address the effect of FAS 92 on the balancing account. Then we will address the six questions of D.86-06-026 in

sequence, with extensive digressions to consider the implications of the parties' positions. Next, we will react to the modifications to the balancing account proposed by DRA and UCAN. Finally, we will summarize our conclusions on the balancing account issues.

1. FAS 92

We are not persuaded that the issuance of FAS 92 should prevent us from adopting the SWPL balancing account.

First, we agree with City that the standard's intended application is to large electric generating plants. There is no indication that "plant" as used in FAS 92 should be construed to include transmission lines like SWPL. Second, although SWPL's \$250 million cost seems large by almost any standard, it is only a small fraction of the multi-billion dollar costs of the large generating plants that appear to be the focus of FAS 92. Thus, even if "plant" is interpreted as including transmission lines, it is not clear that SWPL qualifies as a "major" plant. Third, the balancing account is not designed to recover SWPL's capital costs. We have already found the costs of constructing SWPL to be prudent, and these costs have been included in SDG&E's rate base since 1984. The only costs that are proposed for deferred recovery are a portion of the energy and capacity costs of purchases that are transmitted over SWPL. Thus, no phase-in plan, as the term is used in FAS 92, is being considered or adopted here. In addition, because of the vagueness of the standard, we think it likely that even if the FASB concludes that the balancing account is covered by FAS 92, some provision would be made to avoid the financial consequences feared by SDG&E.

We conclude that FAS 92 should not prevent the Commission from applying the balancing account to the costs of purchased power transmitted over SWPL.

2. The Balance Through 1988

The parties are in essential agreement in their answers to the first question of D.86-06-026. They estimate that the difference between the costs of purchased power and avoided cost between January 1, 1986, and December 31, 1988, is \$313 million.

The only dispute is whether economy energy purchases should receive a \$20 million capacity credit. We rejected this argument in our response to SDG&E's application for rehearing of D.85-12-108, and we again reject the argument.

SDG&E argues that purchases from multiple sources in the Southwest are analogous to purchases under SO1 from multiple QFs, who receive a capacity payment based on their actual production. However, it is obvious that economy energy purchases do not possess the characteristics of such QFs. We agreed to allow capacity payments to as-available QFs because these independent generators were viewed as a large group of small, geographically dispersed facilities using diverse technologies. Because of their diversity, these generators carried a high probability that a proportion of them would be operating on-peak, when the utility needs capacity, even if individual units were out of operation. Thus, the utility could rely on a peak-period contribution by QFs as a group for planning purposes. By contrast, Southwest economy energy would be completely curtailed by an outage of SWPL. More important, in its discussion of alternatives to SWPL, SDG&E itself argues that, unlike QFs, Southwestern economy energy cannot be relied on to meet peak demand. Thus, SDG&E supplied the most persuasive argument against its position.

We conclude that no capacity credit should be awarded for economy energy purchases, and the balance from 1986-88 will be \$313 million.

3. Incentives

Our original question focused on incentives to reduce purchased power costs over SWPL. We still think that the

incentives provided by the balancing account are adequate to encourage SDG&E to minimize the cost of power transmitted over SWPL. However, we are less certain that minimizing SWPL's costs should be the only goal of our system of incentives.

We are concerned that both the Commission and SDG&E have been considering SWPL in conventional terms, which are proving to be too narrow. The construction of SWPL, the abandonment of the Sundesert nuclear plant, and the policy of reducing reliance on oil- and gas-fueled resources have essentially committed SDG&E to meet its additional generating requirements--whether by means of constructing a plant, owning part of a plant, or purchases from other utilities--from generating resources outside of its geographical service area. To a greater extent than other transmission lines, SWPL should accordingly be viewed as part of the generating resource, whether that generation is represented by ownership of a plant or by contracts for firm capacity. Therefore, the costs of SWPL cannot be separated from the costs of the generation unit, and both costs should be evaluated together.

Although the decision that granted the certificate of public convenience and necessity for the construction of SWPL projected that the savings from energy purchases justified the construction of the line (D.93785, mimeo. p. 83), it is now apparent that we have tended to view SWPL and sources of generation as two separate elements of the system, when in fact they are intertwined. We believe that one of the virtues of the balancing account is that it includes a consideration of the capital costs of SWPL and requires SDG&E to operate SWPL in a way that offsets some of those costs.

At the same time, we think we have been mistaken in viewing the Southwestern purchases separately from the rest of SDG&E's system. SDG&E's most pointed criticisms of the SWPL balancing account are that it could lead to inefficient operation of the utility's system and that the balancing account creates

incentives to reduce the costs of Southwestern purchases at the expense of the lowest cost operation of the system as a whole.

This criticism is illustrated by reference to the Pacific Intertie. SDG&E points out that the cheapest available economy energy is often from the Pacific Northwest, not from the Southwest. If the balancing account encourages SDG&E to load SWPL with economy energy, the utility may be forced to meet new capacity needs by contracting with Northwest utilities. But as increased capacity purchases from the Northwest take up a larger portion of SDG&E's share of the Pacific Intertie, less of the line's capacity will be available for economy energy purchases. Thus, the incentives of the balancing account may lead to a replacement of cheaper economy energy over the Pacific Intertie by comparatively more expensive economy energy over SWPL, with the result that overall costs to the system will be higher, although the balance in the SWPL account may decline. Reducing the costs of power transmitted over SWPL may not lower the system's overall costs. And under some circumstances it would be a rational least-cost strategy for SDG&E to fill SWPL with firm capacity in order to use the Intertie for the cheapest available economy energy, although this course of action would violate the incentives established by the balancing account.

SDG&E has assured us that it would not ignore cheap purchases from the Pacific Northwest merely to reduce the balance in the SWPL account, but we believe that we should try to align our regulatory incentives with the behavior we are trying to encourage. The goal of both our regulation and SDG&E's operation should be to meet customers' needs for electricity at the lowest possible price. To the extent that the SWPL balancing account gives different signals or encourages different goals, it should be altered.

One possible modification suggested by SDG&E's example would be to include purchases transmitted over the Pacific Intertie in the balancing account. This modification would permit the utility the freedom to operate its two major transmission lines for

out-of-state purchases in the most efficient manner. If efficient operation dictated purchasing capacity over SWPL and economy energy over the Pacific Intertie, this modification would not stand as a barrier to such an arrangement.

On the other hand, even this modification would tend to encourage SDG&E to regard its system in a segmented fashion that we do not believe is appropriate. We would prefer to have SDG&E devote its efforts to operating its entire system in the most efficient manner possible. Even singling out two major transmission lines might tend to distract SDG&E from this goal. SDG&E should view all of its facilities and purchases as an integrated system, with the paramount goal of meeting customers' electricity needs at the lowest possible price.

The bland way in which we have stated this goal should not obscure the important implications that accompany this concept. Several of these implications deserve further elaboration.

If SDG&E continues to rely on firm capacity contracts in combination with its major transmission facilities to meet rising demand, then this combination should at some point become the avoided unit that establishes avoided cost. We developed the concept of the combustion turbine as a proxy for the avoided generation unit to enable us to quantify avoided capacity costs at a time when none of our major utilities was planning new generation units. Since we could not identify a specific avoided plant, we were forced to estimate avoided capacity costs by reference to the proxy. But if firm capacity contracts are SDG&E's choice for meeting increased demand, then the cost of these contracts, with an appropriate portion of the associated transmission line's costs, should assume the role of the avoided plant and serve as the benchmark for long-term avoided cost.

This notion gains credence because of the way in which SDG&E has in fact used SWPL. As we noted in D.85-12-108, SDG&E has

filled the line's capacity with firm capacity contracts, which were pursued to meet expected shortfalls in peak generation.

If the combination of purchased energy and transmission lines has become SDG&E's avoided unit, then the costs of this "unit" should also be considered in making offers to QFs and in evaluating conservation and load management opportunities. If QFs can provide needed capacity at less cost than the combination of purchases and the transmission line, then SDG&E should contract with them before turning to Southwestern utilities. If conservation and load management can avoid the need for purchasing new capacity and can beat the price of available contracts, then SDG&E should pursue those programs before contracting with Southwestern utilities.

In fact, the very considerations that motivated the construction of SWPL--SDG&E's geographical location in a corner of the country, in what SDG&E describes as an "energy desert," with few opportunities for generation other than oil and gas; its desire to become less reliant on oil and gas; its rapidly growing population and inevitable increase in demand for electricity-- should also lead SDG&E to be diligent, creative, and innovative in pursuing conservation and load management. SDG&E's limited ability to construct additional generating facilities in its service area has left it largely unable to control its future sources of generation. The more it can do to slow load growth through conservation, load management, and more efficient use of energy, the more control over its destiny it retains. In our view, because of its situation SDG&E should become one of the most innovative and aggressive utilities in pursuing conservation and load management.

Moreover, SDG&E's decision not to own generation units in the near future removes one of the barriers to promoting conservation. When a utility has a prospect of owning a generating unit, it may have a slight incentive to favor increasing generation over controlling load growth, since it earns a return on its

prudent investment in generating units. However, when a utility relies on purchases for additional capacity, as SDG&E appears to have done, its costs are recovered through its ECAC, and it earns no return on its expenditures. If SDG&E recovers its investment in conservation on a current basis, it should be economically indifferent to whether it increases its purchases to meet rising demand or limits the rise of that demand through conservation expenditures.

For similar reasons, we believe that SDG&E should view QFs with new eyes. QFs represent a diversified source of generation, and SDG&E should pursue contracts with all projects that can help it to meet its capacity needs at less than the cost of alternatives. Furthermore, SDG&E should consider using SWPL as a means of expanding its ability to purchase power from QFs. Although it may not be required to make such purchases under federal law, and although our standard offers do not require such purchases, nothing prevents SDG&E from contracting with QFs outside of its service territory. We note with approval that SDG&E's ROC plan was considering purchases from out-of-territory QFs as early as 1985. QFs not fueled by oil or gas, in particular, could help SDG&E meet its goal of diversification. If such QFs can provide power to SDG&E at competitive rates and if they can interconnect with SWPL, SDG&E could use SWPL to broaden the pool of potential QFs that can supply power to it, again furthering the overall goal of meeting its customers' needs at the lowest possible cost.

We have digressed considerably from our original consideration of the incentives created by the balancing account. We have agreed with SDG&E's primary point that SWPL should not be viewed in isolation but should be considered and operated as part of an integrated system. We have not agreed with SDG&E's apparent conclusion that operation of an integrated system means a return to business as usual. We have followed the implications of SDG&E's arguments far beyond the purpose for which they were advanced and

found that they suggested a better way to view SDG&E's system and its operations. We may abandon the balancing account because of its failure to offer the proper incentives, but SDG&E should not view this as a return to the regulation of the recent past. We intend to pursue ways to create new incentives to encourage the efficient operation of SDG&E's integrated system.

4. The Standard of Value

The purpose of examining this issue is generally obviated by our finding earlier in this decision that the SWPL balancing account provides inappropriate incentives for utility operations. However, this is a subject that the Commission explicitly asked to have addressed when it called for the rehearing in D.86-06-026. Given the importance of this general topic, its usefulness for future guidance, and the comments provided by the parties, some discussion of this issue is necessary.

The parties have spent a great deal of time arguing about whether the contracts in question are short-run or long-run contracts and what standard of value should be used to evaluate decisions to enter into the contracts. In order to address these two conflicts, a discussion of resource planning concepts and policies is helpful. This discussion will rely on the concepts that the Commission has outlined in its decisions on Qualifying Facility standard offer methodologies.

Generally, a utility resource planner evaluates resource commitments that may be made by the utility by comparing the costs of the resource against a utility's projection of short-run avoided costs.² Over time, short-run avoided costs will generally

² We use "short-run avoided costs" in this discussion to define costs avoidable at the margin, before adding a resource. The term is, thus, equivalent to short-run marginal costs. Any equivalence of this term to our standard offers is unintended.

information to judge past resource decisions.⁴ The Commission has developed a standard which judges a decision based on information available at the time a resource decision is made. Any other standard involves the inequitable use of hindsight reviews.

The implication is that, in examining the reasonableness of a resource such as a power purchase or QF contract that defers or avoids the need for additional utility investment, long-run avoided costs are the preferable standard. Long-run avoided costs are best represented by the costs of the utility resource that was avoided by the addition of the long-term resource in question. This is the long-run avoided cost standard that we have used in designing and implementing our final long-run standard offer 4. However, absent a long-run deferred or avoided resource for comparison, the projection of short-run avoided costs that was in effect at the time the long-run resource investment decision was made may also be appropriate, as it would be used to decide that additional capacity is not needed or cost-effective.

The key to using a projection of short-run avoided costs in evaluating a long-run resource investment decision is that the projection must be based on planning conditions and assumptions in place at the time utility managers made their decision. If regulators use current projections to evaluate past decisions,

⁴ This standard was most recently discussed in the Final Report to the Legislature on Joint CEC/CPUC Hearings on Excess Electrical Generating Capacity (SB 1970 Report), p. 63.

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increase to a point that justifies the addition of a new resource. If the costs of a resource, after appropriate consideration of uncertainty, are less than the projection of short-run avoided costs, utilities can and should add the resource in order to lower total system costs. If the costs of a resource are greater than the projection of short-run avoided costs, the resource should not be added because it would result in an increase in total utility costs. In this case, it would be less expensive to run the system as it currently exists than to run the system with the resource in question added.³

It is important to note that in this evaluation the utility system is assumed to consist of all current and committed resources. The projection of short-run avoided costs is from a single point in time. While short-run avoided costs are dynamic, constantly changing to reflect prevailing fuel prices, system efficiencies and capacity needs, the evaluation of a resource addition demands that the best information available at the time of the evaluation be used. Otherwise, resource decision-makers are constantly subject to second-guessing should conditions change and make past decisions look unwise. The essence of the Commission's decision in past reasonableness reviews is to avoid using recent

³ See D.85-07-022 and D.86-07-004 for a general discussion of avoided cost methodologies and resource planning.

information to judge past resource decisions.⁴ The Commission has developed a standard which judges a decision based on information available at the time a resource decision is made. Any other standard involves the inequitable use of hindsight reviews.

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utilities may be unjustly penalized for changing conditions that could not have been anticipated. Using current short-run avoided costs creates an incentive for utilities to add only combustion turbine-based resources (i.e., resources with a high proportion of variable costs). Other resources which save ratepayers fuel expenses would be subject to post-investment disallowances if the fuel prices which justified the investment declined dramatically, as occurred earlier in this decade. Such a disincentive is not consistent with this Commission's interest in seeing a well-diversified, non-oil and gas dependent resource mix.

Whether the SWPL contracts under review in this decision were or were not long-run resources is a moot question - we have already decided to abolish the SWPL balancing account and have used our prudent manager standards in evaluating the contracts earlier in this decision. However, it does appear that using current short-run avoided costs to evaluate resources which avoid or defer long-run alternatives is inappropriate.

5. SDG&E's Needs for Energy and Capacity

The parties seem united in concluding that SDG&E has no need for additional capacity until at 1990 at the earliest. Future capacity appears to be SDG&E's most important need, and no party has commented on the system's need for energy.

DRA has argued that when a need for capacity arises, SDG&E should restart its Silver Gate units to meet part of the need. As load grows, DRA believes that conservation and the contributions of QFs will be sufficient to meet need through at least 1995.

We do not agree with the specifics of DRA's program. As we have discussed, SDG&E should fill any expected need with the

resources that provide for the lowest costs over the planning horizon. Obviously, restarting Silver Gate is a cheap possibility, but we will not assume that SDG&E will be unable to find even cheaper options. Our point here is not to emphasize specific options but to encourage SDG&E constantly to undergo the process of surveying all potential sources to meet need and all possible options to reduce need.

SDG&E's response to this question was not particularly thorough, but we find it encouraging that it is using a probabilistic process and looking at a range of outcomes rather than relying too heavily on a single forecast. We see the primary value of a probabilistic approach as forcing the utility's planners to consider a variety of possible events that could influence the forecast. Consideration of the wide range of circumstances that can affect the forecast should encourage a healthy flexibility and should help SDG&E develop strategies to reduce large risks. Like any forecasting approach, of course, the probabilistic approach requires an enormous amount of informed judgment and should not be applied mechanically. An intelligent and experienced consideration of the many factors that can influence a forecast's outcome should lead to more accurate forecasts.

The contracts under consideration in this case illustrate the importance of accuracy in all aspects of a utility's forecasts of its needs. A utility that forecasts a need for capacity too early will waste considerable sums in securing capacity in advance that, under the provisions of many contracts, must be paid for even if it is not needed. While foretelling the future will never be entirely accurate, in the electric utility industry, even slight improvements in accuracy can save a utility and its ratepayers hundreds of millions of dollars.

6. The Role of SWPL

As we have already indicated, we believe that SWPL is best used as part of SDG&E's integrated system, as one of a set of

tools SDG&E may use in its efforts to minimize the system's costs. As such, we are reluctant to prescribe a specified use for the line; it should be used to take advantage of sources of energy that are likely to lead to the lowest costs over a reasonable planning horizon. These sources of energy should include not only Southwestern utilities, but also QFs who are capable of interconnecting with SWPL.

Recent experience should teach some lessons about the sort of contracts that are likely to render SWPL cost-effective. Long-term contracts are only as good as the forecasts that support them, and recent experiences with demand and fuel price forecasts have not been comforting. Although we will not require all contracts to be specifically tied to the biennial determination of need in what is referred to as the OIR-2 proceeding, past experience and especially the large variances in fuel prices suggest that some flexibility is a desirable feature of long-term contracts. Again, the intelligent exercise of informed judgment should guide SDG&E in determining the proper degree of flexibility that is needed in a particular contract. If a particular offer is clearly a good deal, then SDG&E should seek to lock in the benefits for as long a period as possible. But in the more common situation when a proposed contract offers not a near certainty but only a reasonable probability of turning out well, SDG&E should attempt to build some flexibility into the contract.

We recognize that a more flexible approach may mean that the chance for some outstanding outcomes may be sacrificed for the assurance of merely good results, but we think that SDG&E will be able to develop the best overall results with contracts that relinquish some chances for very large benefits in exchange for an opportunity to avoid very large losses. This approach seems particularly appropriate when SDG&E's own analysis shows only marginal benefits are likely under the contract under consideration.

7. Interest on the Account Balance

The discussion of whether or not the balancing account should accrue interest on its balance focused on one of DRA's proposed modifications. DRA proposed that deferred revenues associated with the Tucson and PNM contracts should not receive interest.

We disagree with DRA's position. Although DRA argues that barring recovery of interest on the amortized amounts from these two contracts would create a strong incentive for SDG&E to reduce the costs of these contracts, we believe that the balancing account's existing incentives are sufficient for that purpose. In addition, excluding interest would amount to a disallowance of expenses that have been found reasonable; SWPL's capital costs have been found reasonable, and only the reasonable costs of the PNM and TEP contracts will be recovered in rates and included in the account. Any of the contracts' costs that are determined to be imprudent will be barred from the outset and will not be entered in the account. Thus, the proposal to exclude interest becomes punitive, and we have consistently maintained that the sole intent of the balancing account is merely the deferral of revenues, not the disallowance of prudently incurred expenses. We conclude that interest should be allowed on all amounts in the balancing account.

8. DRA's Other Proposed Modifications

DRA has proposed several other modifications to the original concept of the balancing account.

We agree with the rationale behind the recommendation that the account should begin on July 1, 1987, rather than January 1, 1986, as originally stated. Since one of the main purposes of the balancing account is to give SDG&E an incentive to improve the cost-effectiveness of its purchases over SWPL, it is only fair to allow the utility some time to react to the incentives the balancing account provides. The original starting date allowed only 11 days between the time the balancing account was adopted and

the beginning of recording of the account's credits and debits. Delaying the start of the account until mid-1987 offers the utility a fair opportunity to respond to the account's incentives. In addition, as DRA points out, this delay also substantially reduces the amount of revenues that are deferred by the operation of the account and thus eases the financial burden on SDG&E.

We also find merit in DRA's proposal to amortize the excess costs of the TEP and PNM contracts over five years. This proposal recognizes that, for a variety of reasons, these contracts are likely to result in large excess costs in the next few years, but that lower excess costs and eventually benefits should result from these contracts in the future. Amortizing the costs from these contracts will ensure that neither ratepayers nor the utility is inadvertently harmed by the operation of the account.

Both DRA and UCAN have proposed limitations on the recovery of any balance remaining in the account after the expiration of its ten-year maximum life. DRA's proposal is designed to ensure that recovery is achieved reasonably rapidly, in one or two years, so that SDG&E may put the balancing account behind it. UCAN's proposal is concerned with the effect on ratepayers if the balance is still large after ten years.

The incentives of the balancing account should be sufficient to lead SDG&E to operate SWPL in a way that will eliminate the balance in the account, and thus terminate the account, before the ten-year limit is met. We agree that a balancing account designed to accomplish the purposes of the SWPL account should have a definite termination date. Both DRA and UCAN have presented reasonable proposals for ways of amortizing any balance remaining at termination of the account.

DRA recommends that the balancing account use base rate revenue requirements associated with SWPL's fixed charges, rather than the levelized costs ordered in D.86-06-026. We authorized the use of levelized ownership costs of SWPL in that decision to better

match expected avoided costs. Although we acknowledge that base rate revenue requirements provide a more accurate reflection of costs and benefits from the line in the short term, we think that use of levelized costs is appropriate for a revenue deferral mechanism like the balancing account.

9. Conclusion on the Balancing Account Issues

The SWPL balancing account has many desirable qualities. We discussed some of these benefits in our original decision establishing the account, D.85-12-108, and we listed the purposes of the account as providing an avoided cost cap on SWPL power costs and giving SDG&E an incentive to lower its power purchase costs. This proceeding has added to our understanding of these purposes.

One of the balancing account's more practical benefits is that it establishes a better relation between the costs of SWPL power and the value of that power for ratepayers than would otherwise occur. The importance of this alignment between cost and value to ratepayers has increased from the time of our original decision. At that time we estimated the excess costs to be \$90 million for 1986-88; current estimates are over \$300 million.

The increase in the discrepancy between costs and value resulted primarily from the decline in oil and gas prices, which determine the energy portion of SDG&E's avoided cost. SDG&E entered into several power purchase arrangements with Southwestern utilities just before the collapse in oil prices in the mid-1980s. Although the prices under these contracts seemed reasonable to SDG&E at the time, the oil price decline made the account's comparisons of the price of these purchases with avoided cost extremely unfavorable. The continued stability of the oil market is the primary reason that we have estimated the excess costs of power transmitted over SWPL to be \$313 million from 1986 through 1988.

The balancing account would shift some of the revenues required during this extremely unfavorable period to later years.

when a tightening of the regional power market and more favorable purchases should increase the effectiveness of SWPL. As DRA points out, the costs of SWPL will better match its value to ratepayers if these early revenues are deferred.

The balancing account also gives SDG&E a clear standard, avoided cost, against which to judge both its opportunities for purchases that would be transmitted over the line and its other resource options, including conservation and load management. The presence of a clear standard should help SDG&E focus its analyses of its various opportunities and should aid in its negotiations of contracts with other utilities.

Nevertheless, one important consideration which we had earlier overlooked persuades us to withdraw our previous adoption of the SWPL balancing account. As we have discussed, the balancing account focuses too much on one resource of SDG&E's system, and the account's incentives may not always encourage SDG&E to operate its entire system at the minimum cost consistent with proper reliability. The balancing account prods SDG&E to use SWPL to transmit the cheapest possible energy, usually economy energy, but the lowest cost operation of the system may sometimes dictate a different use for SWPL, as shown in the example of the interaction between SWPL and the Pacific Intertie.

SDG&E has stated that it would ignore the incentives of the balancing account to minimize the overall costs of its operations, but we believe that regulatory incentives should be consistent with the desired behavior, and should not require the utility to ignore the incentives to live up to its public obligations. The balancing account as presently structured focuses too narrowly on a single resource and therefore diverts SDG&E from devoting its attention to the most efficient operation of the entire integrated system.

Although the balancing account could be modified to overcome the problem with the Pacific Intertie, we suspect that

other discrepancies in the incentives would soon become apparent. Rather than continuing to patch up the balancing account, we prefer to withdraw our earlier authorization.

The removal of the balancing account should not be read as an indication that we are lessening our scrutiny of SDG&E's transactions in the the Southwest or its operation of SWPL. We are still very concerned about SDG&E's failure to operate the line in a way that will result in the promised savings that originally justified the line. Obviously, economy energy purchases from a region with much excess capacity are an important element of a program for reasonable use of SWPL, and this opinion should not in any way be read to relieve SDG&E of our conviction that such purchases should be an important element of the line's use. Our decision merely says that SWPL is an important resource that should be used in coordination with SDG&E's other resources to minimize costs for its ratepayers, and that we choose not to restrict SDG&E's flexibility by imposing the incentives of the balancing account.

We conclude that the SWPL balancing account created in D.85-12-108 should be eliminated. In D.86-06-026, we established the balancing account as a tracking mechanism with no revenue effects on SDG&E, pending the rehearing that led to this decision. Since this account has so far been a tracking mechanism that merely recorded the power costs that were in excess of avoided cost, no rate adjustment is required to reflect our conclusion.

IX. Other Issues

In its Opening Brief, SDG&E raised several legal objections to the Commission's authority to take certain proposed actions in this case.

A. SDG&E's Position

First, SDG&E argues that this Commission's assertion of authority over rates filed with the Federal Energy Regulatory Commission (FERC) is improper. According to SDG&E, the Federal Power Act grants FERC exclusive and exhaustive jurisdiction over interstate power transactions. The Commission trespasses on FERC's exclusive jurisdiction when the Commission considers the reasonableness of FERC-filed rates paid under the Tucson and PNM contracts and implies that some of these costs could be disallowed. Similarly, the balancing account's avoided-cost limit on recovery of these costs also disregards FERC's authority to set interstate rates and also violates the Federal Power Act, says SDG&E.

In the recent case of Nantahala Power and Light Company v Thornburg (1986) 476 U.S. 953, the United States Supreme Court held:

"[A] state utility commission setting retail prices must allow, as reasonable operating expenses, costs incurred as a result of paying a FERC-determined wholesale price." (476 U.S. at 965.)

Thus, SDG&E believes that the Commission is compelled, under the authority of the Federal Power Act and the Nantahala case, to accept as reasonable the FERC-filed wholesale rates which SDG&E pays under its contracts with PNM and TEP.

Second, SDG&E argues that the Commission's decisions relating to SWPL place an unlawful burden on interstate commerce, in violation of Constitutional protections. The effect of the Commission's decisions is to order SDG&E to breach or renegotiate its contracts with PNM and TEP. The effect would be to lower costs

to Californians at the expense of citizens of New Mexico and Arizona. This sort of economic protectionism is barred by the commerce clause of the Constitution, according to SDG&E. Moreover, the Commission's decisions are aimed entirely at interstate contracts and would penalize SDG&E for complying with its obligations under interstate contracts. Such orders are patently invalid under the Constitution, asserts SDG&E.

Third, SDG&E believes that the balancing account is discriminatory in violation of the Constitutional guarantee of equal protection. SDG&E points out that the same day that the Commission adopted the balancing account for SDG&E, it rejected a proposal to hold Southern California Edison's investment in the Palo Verde nuclear generating station to the standard of avoided cost. Moreover, even though Edison's purchases from the Southwest have exceed its short-run avoided cost, no balancing account has been imposed, or even proposed, to govern Edison's purchases. SDG&E believes that there is no compelling reason to justify the different treatment of similarly situated utilities. Singling out SDG&E is unfair, it argues, and a violation of the Fourteenth Amendment.

SDG&E supplemented its arguments on July 17, 1988, by serving all parties with copies of the recent case of Mississippi Power & Light Co. v Mississippi, No. 86-1970 (U.S. Supreme Ct., June 24, 1988).

B. DRA's Response

DRA disputes SDG&E's legal arguments.

First, DRA believes that neither the Federal Power Act nor the Nantahala case prohibits the Commission from taking any of its recommended actions in this case. DRA distinguishes the Nantahala case from this case by pointing out that the proposed disallowances in this case are not based on a finding that a FERC-approved rate is unreasonable; rather, proposed disallowances are based on SDG&E's agreement to purchase additional quantities of

power when it was not needed. In the Nantahala case, the Supreme Court voided a state utility commission's order that directly contradicted FERC's finding on the same issue. In this case, no party has challenged the contracts' rates, and the argument has focused on whether the power was needed in the first place and whether other, cheaper sources of power were available. Other issues relate to SDG&E's administration of the contracts, an area not remotely affected by the Nantahala ruling, according to DRA.

DRA concludes that the Supreme Court has not yet reached the issue whether a state utilities commission may lawfully deviate from FERC-approved wholesale rates when the commission finds the rates are imprudent. In these circumstances, there is no reason for the Commission to refrain from issuing whatever orders it finds appropriate in this case.

DRA also supplemented its arguments on February 10, 1988, by serving all parties with copies of the recent case of Kentucky West Virginia Gas Co. v Pennsylvania Public Service Commission (3d Cir. 1988) 837 F.2d 600.

C. City's Response

City also disputes SDG&E's legal arguments.

City notes that Nantahala, even if it is read to give FERC exclusive jurisdiction over a interstate contract's price, did not prohibit state commissions from ruling on whether purchases from a particular source were reasonable. If other, cheaper sources of generation were available, a disallowance could be made.

In addition, the balancing account does not affect SDG&E's ability to recover its costs under the various contracts. Rather, it merely adjusts the timing of the recovery of those costs. The wholesale rates set by the contracts are unaffected by the balancing account.

Finally, the actions proposed in this case do not affect out-of-state customers. All of SDG&E's retail customers are within

California, and the Commission's setting retail rates for SDG&E does not discriminate against customers in other states.

City responded to SDG&E's letter on the Mississippi Power & Light case with a letter of July 11, 1988, disputing SDG&E's reading of that case.

D. UCAN's Response

UCAN makes arguments similar to City's in opposing SDG&E's legal interpretations. It too points out that the issue of the reasonableness of SDG&E's administration of the contracts is not affected by SDG&E's arguments. Like City, UCAN notes the balancing account is designed to allow SDG&E to recover all of its FERC-approved wholesale rates; thus, the balancing account does not trespass on FERC's jurisdiction. UCAN also mentions the distinction between the price and quantity of power. Unlike the factual situation in the Nantahala case, UCAN argues, nothing proposed in this case would directly contradict any FERC ruling. Thus, UCAN concludes that the Commission may lawfully take any of the proposed actions in this case.

E. Discussion

After a review of the legal authorities cited by the parties, we conclude that neither the Federal Power Act nor Nantahala and related cases bar us from taking the actions that have been proposed in this proceeding.

The facts in Nantahala are quite different from the facts presented in this case. In brief, in Nantahala a contract allocated rights to a cheap power source between two affiliated entities, including a utility. The contract provided the utility a 20% share. However, FERC ruled that a 22.5% share would result in just and reasonable rates. The state commission then found that the share should be 24.5%. Thus, in Nantahala the state commission acted on the same issue as FERC, and the state commission's action amounted to an overruling of FERC's action.

No similar facts exist in this proceeding. First, many of the issues relate to contract administration, which is not mentioned in the Nantahala case. Second, the Nantahala court specifically left open the possibility of the type of actions that are contemplated here:

"Without deciding this issue, we may assume that a particular quantity of power procured by a utility from a particular source could be deemed unreasonably excessive if lower-cost power is available elsewhere, even though the higher-cost power actually purchased is obtained at a FERC-approved, and therefore reasonable, price." (476 U.S. at 972. Emphasis in original.)

Later decisions have applied this reasoning to actual controversies (Kentucky West Virginia Gas Company v Pennsylvania Public Service Commission (3d Cir. 1988) 837 F.2d 600), aff'g 650 F.Supp. 659 (M.D.Pa. 1986).

The facts in the Mississippi Power & Light case are also distinguishable from those in this case. In Mississippi Power & Light, FERC had approved an allocation of responsibility for the costs of a newly constructed nuclear power plant among several affiliated utility-owners from different states and had determined the reasonableness of the wholesale rates resulting from its allocation. The state commission approved the corresponding retail rates for one of the utilities, but the state supreme court ruled that the commission could not lawfully do so without first determining that the expenses were prudently incurred.

On appeal, the U.S. Supreme Court held that in these circumstances the state commission was preempted by the FERC proceedings and by FERC's determinations of reasonableness. The Court ruled that the determination of whether the costs of constructing the plant were prudent was within the jurisdiction of FERC, not the state commission. The allocation of cost responsibility among several entities from different states was

also within FERC's jurisdiction. The state commission could not lawfully reexamine FERC's determination of the reasonableness of the wholesale rates resulting from its allocation.

We are confident that the operation of the balancing account would not be affected by these cases. The account was designed to provide for eventual recovery of all prudently incurred costs, no matter which regulatory body determined prudence. Even if we had continued the balancing account, it would have survived SDG&E's legal challenges.

Similarly, we believe the distinction in the Nantahala case between a state's role in reviewing rates and in reviewing a utility's decision to purchase certain quantities of power allows the sort of review that we have conducted of the PNM contract. Our eventual disallowance was based on a conclusion that SDG&E should not have purchased capacity under the PNM contract for the first year of the contract's life, because it could not demonstrate that it would need the capacity during that period. Nantahala and Mississippi Power & Light both permit a review of a utility's decision to purchase a certain quantity of power, even when that power is purchased at FERC-approved rates.

The TEP contract presents a different question. Although the facts are very different from either Nantahala or Mississippi Power & Light, some of the wording of the Mississippi Power & Light case could be read as affecting our ability to make the disallowances we have made in this case. The Court stated that "States may not regulate in areas where FERC has properly exercised its jurisdiction to determine just and reasonable wholesale rates or to insure that agreements affecting wholesale rates are reasonable....The reasonableness of rates and agreements regulated by FERC may not be collaterally attacked in state or federal courts." Mississippi Power & Light, slip op. at 19-20. Since our disallowances of some of the costs of the TEP contract are of rates, rather than the quantities of power SDG&E may prudently

purchase under the contract, this passage suggests that we are preempted by FERC's determinations.

However, we believe that a review of our reasons for imposing the disallowance will illustrate that we have acted within our proper jurisdiction. Our review and the resulting disallowances focused almost exclusively on SDG&E's management's activities in negotiating various amendments of the TEP contract with TEP and Alamito, TEP's assignee. We have found that the actions or omissions of SDG&E's managers and negotiators influenced the level of rates that were eventually incorporated in the parties' agreement. Our focus was on the decisions of SDG&E, which clearly are a proper subject for state regulators to consider. The fact that these instances of imprudence had an effect on contractual rates that were eventually approved by FERC does not deprive us of our right to engage in this review. FERC's review of the reasonableness of the contractual rates takes a very different approach. We cannot agree with SDG&E's apparent point that FERC's approval of the rates negotiated between two utilities implies its disapproval of all other rates that the parties might have agreed to. This conclusion is particularly appropriate when, as in this case, the negotiations arose out of Alamito's desire to avoid detailed examination of the agreement by FERC.

We conclude that neither the Federal Power Act, the Nantahala case, nor the Mississippi Power & Light case prevents us from taking appropriate action in this case.

Nor do we think that the commerce clause bars us from taking the actions proposed in this proceeding. As City has pointed out, nothing suggested in this case would have the effect of shifting costs to ratepayers in other states. If a disallowance is ordered, it would be borne by the shareholders of SDG&E, not by customers in the Southwest. SDG&E's suggestion that we are prohibited from reviewing the prudence of any interstate contracts or purchases, merely because they originate out-of-state, even when

other cheaper sources are available goes well beyond the bounds of present law or reason.

Finally, we also reject SDG&E's argument that its right to equal protection of law has been violated. The circumstances that led to our decision to set up the SWPL balancing account are very different from the facts in the examples SDG&E cites. Different circumstances justify different treatment, and in this sense SDG&E is not similarly situated to Edison.

We conclude that the authorities presented by SDG&E do not prevent us from taking any of the actions proposed in this case.

This conclusion is not intended to assert that FERC has no influence over our determinations. Our disallowance of some of the costs of the TEP/Alamito contract is keyed to the capital costs assumed in the contract, and any modification of those terms by FERC could affect the amount of our disallowance. Similarly, any action by FERC that affected the demand charges or the commencement date of the PNM contract could also influence our disallowance related to the PNM contract.

X. SDG&E's Petition to Set Aside Submission

After this case was submitted, SDG&E on May 5, 1988, filed a Petition to Set Aside Submission and to Bifurcate Proceeding.

SDG&E believes that the portion of the case addressing the 1985 PNM contract should be reopened and that the proceeding should be bifurcated to allow the remainder of the case to proceed to decision while more evidence is taken on issues related to the PNM contract.

Specifically, SDG&E believes that the Commission should consider the actions of FERC before it renders a decision on the PNM contract. PNM filed the contract for approval by FERC on

March 1, 1988, and SDG&E protested the filing on March 21. SDG&E believes that FERC may reduce the charges called for under the contract as a result of its review and may even void the contract entirely. SDG&E argues that the Commission's decision should await the outcome of the FERC proceeding.

DRA filed its response on May 31. DRA opposes the petition. DRA fears that if the Commission delays action until FERC has rendered its decision, the Commission exposes itself to a preemption argument that SDG&E has already made in this proceeding. In addition, SDG&E has not demonstrated the material change in fact or law has occurred that would justify reopening this proceeding. Furthermore, DRA believes that SDG&E may directly benefit from any delay because of the operation of the Annual Energy Rate (AER). The Commission joined several ECAC issues with the consideration of the SWPL balancing account, DRA notes, because it believed that the operation of the account could best be evaluated with concrete examples at hand. SDG&E's proposal violates the Commission's logic, DRA argues, and would prejudice DRA's presentation of its positions.

UCAN filed its opposition to the petition on June 6. Delaying the Commission's decision on PNM issues would amount to a concession of preemption by FERC, which UCAN thinks is inadvisable. Moreover, the issues addressed in the eventual FERC decision may not be at all material to the issues addressed in this proceeding, in which case a delay would not serve even the purposes advocated by SDG&E. Like DRA, UCAN argues that SDG&E has not alleged a material change or law or fact that would justify reopening the record, and UCAN also believes that it would be prejudiced by separating the PNM-related issues from the consideration of the balancing account.

SDG&E filed a reply to DRA's response on June 17, 1988.

We will deny SDG&E's petition. We see no purpose in delaying the decision on the PNM contract any further. The nature of our review of the PNM contract has been quite different from FERC's review, and we believe that any action that FERC may take would complement, rather than contradict, our decision. As we have discussed, our disallowance focused on the quantity of capacity that SDG&E agreed to take from PNM during a period when it needed no additional capacity. The Nantahala and Mississippi Power & Light cases both indicate that states may review questions of the quantity of power that utilities purchase in interstate transactions without conflicting with FERC's jurisdiction. We have not determined that the charges called for in the PNM contract were unreasonable, a determination that would bring us closer to the facts of the Nantahala and Mississippi Power & Light cases.

Thus, we conclude that our decision would be unaffected by any action that FERC might take and that therefore no purpose would be served by reopening this proceeding to take notice of FERC's eventual action.

XI. SDG&E's Second Petition to Set Aside Submission

On February 21, 1989, SDG&E filed a second Petition to Set Aside Submission of this case.

Under Rule 84 of the Commission's Rules of Practice and Procedure, such a petition may be filed after the conclusion of hearings but before the issuance of a decision. The petition must meet several requirements:

"Such petition shall specify the facts claimed to constitute grounds in justification thereof, including material changes of fact or of law alleged to have occurred since the conclusion of the hearing. It shall contain a brief statement of proposed additional evidence, and explain why such evidence was not previously adduced." (Rule 84.)

SDG&E's petition addresses a disallowance of the demand charges for the first year of the PNM contract. This disallowance was contained in the proposed decision that was issued on October 21, 1988. SDG&E argues that the disallowance should be tempered by the contract's benefits. SDG&E's specific proposal is to reopen the case to hear evidence on SDG&E's 1988 system peak, its reserve margin during this system peak, its use of the PNM contract from June 13 through December 1988, and its projected use of the contract through April 1989, the end of the disallowance period.

SDG&E believes that this evidence would persuade us to adopt a substantially greater capacity value for the contract's first year to offset the disallowance. SDG&E attaches proposed testimony to its petition. This testimony states that SDG&E has used the contract at a 58% average monthly capacity factor through December 1988. SDG&E concludes that the disallowance should be no more than 42% of the total demand charges for the year.

SDG&E justifies the timing of the filing of its petition by stating that developing an adequate operating history for the PNM contract required the passing of time, and a significant history is available now.

On February 23, DRA filed a response opposing the petition.

We will deny SDG&E's petition, for several reasons.

First, the petition does not adequately explain why this petition could not have been filed earlier, rather than three days before this matter was scheduled for decision. It is obvious, as SDG&E states, that developing an operating history for the contract requires the passing of time. What is not obvious is why 6 1/2 months of operating history is significant and 5 1/2 months was not. The reports that SDG&E attaches to its proposed testimony are issued monthly, and the final report, which covers December and which was released on February 16, does not appear to deviate from

the pattern of use that had developed over several months. In short, SDG&E has not demonstrated why its proposed evidence could not have been previously adduced, as required by Rule 84.

Second, the basis for the apparent conclusion of SDG&E's petition is not logically compelling. The capacity factor associated with SDG&E's use of the line has no direct relation to whether or not SDG&E needed capacity, which was one of the issues that led to the disallowance. The capacity factor associated with the contract is directly related to the amount of energy that SDG&E purchases under its contract. The amount of energy purchased should be a function of the contract's price in relation to the market price at the time of the purchases. These purchases could be made at off- or mid-peak periods and would increase the capacity factor associated with the use of the contract, but such purchases would have nothing to do with SDG&E's need for additional capacity. Because the capacity factor associated with the contract is a function of the market price of energy, it is even possible that SDG&E could have a 100% capacity factor associated with the contract but have no need for additional capacity for its system. Thus, the evidence the SDG&E proposes to present does not support its conclusion.

Third, the evidence that does relate to the need for capacity, information on the 1988 peak demand and the corresponding reserve margin, is exactly the sort of hindsight review that we have tried to avoid in this decision. One of the points of the disallowance is that SDG&E's demand forecasts at the time it decided to enter into the PNM contract did not show a need for additional capacity for the first year of the contract. No one expects such forecasts to be perfectly accurate, which is part of the reason for the target reserve margins. The fact, if it is a fact, that SDG&E's 1988 peak demand exceeded the peak forecasted in 1985 does not lessen our concern about the mismatch between SDG&E's demand forecast and its resource planning. We ordered the

disallowance in part because SDG&E's resource planning actions ignored its contemporary resource plans, and SDG&E's proposed evidence has no effect on this conclusion.

Finally, we note that SDG&E's petition is directed to a recommendation contained in the ALJ's proposed decision. SDG&E's petition and its proposed evidence come very close to being additional comments on the proposed decision. The purpose of the petition to set aside submission is to allow enough flexibility in our proceedings to take recent events into account in our decisions. These petitions should not be used as a way of making additional comments on the proposed decisions.

Findings of Fact

1. In D.85-12-108, we established a balancing account for purchased power transmitted over SWPL. The balancing account designed to limit SDG&E's immediate recovery of the costs of such purchases to SDG&E's avoided cost.
2. In D.86-06-026, we granted SDG&E's request for rehearing of the balancing account portion of D.85-12-108, we posed six questions for the parties to address in the rehearing, and we directed SDG&E to present an affirmative showing of the reasonableness of the costs of its purchases from PNM, TEP, and CFE.
3. In D.86-09-010, we directed all SWPL-related issues to be considered in the rehearing proceeding.
4. In Amendment 3 of the TEP contract, SDG&E's obligation to take 100 MW during the former Extended Phase 3 was transferred to the new Revised Phase 4. No actual increase of SDG&E's obligations occurred as a result of this restructuring of the contract.
5. SDG&E agreed to set contract demand for Phase 5 of the TEP contract at 400 MW before TEP conveyed its intention to exercise its option to set contract demand at 500 MW.
6. It is unlikely that TEP would have had the ability to deliver more than 400 MW during Phase 5.

7. In Amendment 3 of the TEP contract, the agreement to set contract demand at 400 MW for Phase 5 involved neither SDG&E's imprudence nor extraordinary bargaining skills.

8. SDG&E's contemporaneous analysis showed that a 24-month Phase 5 with a demand of 400 MW was more beneficial than a 19-month Phase 5 at 500 MW.

9. The benefits of Amendment 3 outweighed the cost of accepting an additional 21 MW of capacity in Phase 4 of the TEP contract.

10. SDG&E's analysis of the change in the assignment clause of the contract with TEP focused on the effects of an assignment of the contract to a wholly owned subsidiary of TEP, rather than on what rights it was being asked to give up as a result of the change.

11. On June 1, 1984, TEP assigned its contract with SDG&E to Alamito. SDG&E was informed of the assignment on June 8. On July 6, TEP filed for approval of the assignment by FERC. SDG&E became aware of this filing on July 23. SDG&E did not protest the filing or intervene in the FERC proceeding. FERC approved the assignment on October 1. SDG&E met with TEP to obtain information about the assignment on October 5.

12. The assignment took place on November 1, 1984. In December 1984, TEP spun-off Alamito as an independent company.

13. After the spin-off, Alamito's capital structure was 80% debt and 20% equity. SDG&E agreed to set Alamito's capital structure at 70% debt and 30% equity for purposes of the contract.

14. If SDG&E had not agreed to the change in the assignment clause, it is reasonable to conclude that it would have been able to negotiate a capital ratio of about 75/25 with Alamito or to have obtained comparable concessions.

15. SDG&E's definition of decremental cost for repayment of the balance of the dollar banking account with CFE ensured that

energy repayments were the cheapest source of energy at the time of the repayment.

16. Delays in the completion of Units 1 & 2 of the Palo Verde nuclear power plant were beneficial in reducing SDG&E's obligation to purchase capacity under the 1979 PNM contract.

17. The GRC resource plan of November 8, 1984, showed a need for additional purchases totaling 215 MW from 1988 through 1990. The GRC plan showed no need for additional capacity in 1988. An "undetermined resource" of 100 MW scheduled for 1989 could be deferred until 1990 by accelerating the planned return of two of the Silver Gate units by one year.

18. The GRC plan was SDG&E's most recent resource plan when it began negotiations with PNM.

19. PNM's draft letter of understanding of November 29, 1984, proposed a sale of 100 MW at \$23.40 per kilowatt-month, beginning May 1, 1988.

20. SDG&E never attempted to negotiate a lower demand charge than the one proposed in the draft letter of understanding. On April 25, 1985, SDG&E proposed reducing contract demand to 50 MW. On May 21, 1985, SDG&E proposed delaying the start of the contract.

21. When compared to the GRC plan, the ROC plan of June 25, 1985, delayed the return of 100 MW from Encina 1 from 1988 to 1989 and accelerated a undetermined purchase of 100 MW from 1989 to 1988.

22. The ROC plan did not show a need for additional capacity in 1988; rather, it assumed that the PNM purchase would begin in 1988.

23. SDG&E's economic analysis of May 16, 1985, showed that the PNM contract would cost more than generation fueled by oil and gas if oil and gas prices remained at 1985 levels or decreased.

24. SDG&E's economic analyses of April 5 and May 16, 1985, contained simplifying assumptions that tended to overstate the benefits of the PNM contract.

25. The September analysis was the first economic analysis to consider the actual terms of the PNM contract.

26. The September analysis concluded that the expected savings of the PNM contract compared to avoided cost were \$5 million.

27. The capacity values used in the September analysis were adjusted to reflect probability of need, were less than SO2's avoided capacity payments for 1988 and 1989 for a contract of equal term beginning in 1988, and were less than the capacity values adopted in D.85-12-108.

28. The \$5 million expected benefit that resulted from the September analysis was within or nearly within PROMOD's margin of error.

29. The September analysis showed that under any of the fuel price forecasts used in the analysis the PNM contract would be more costly than avoided cost in 1988.

30. The 1984 market study expected that few opportunities for baseload purchases would be available in the early 1990s, but it also noted that SDG&E's actions could generate new opportunities.

31. Many of the coal plants investigated by SDG&E had high prices or lacked a transmission path to SDG&E.

32. In 1985, the primary risk that diversity in fuel sources would protect SDG&E against was the risk of increases in oil and gas prices.

33. To the extent that SDG&E's fuel forecasts in its September analysis reflects the upper range of reasonably likely fuel prices, the PNM contract may be seen as insurance against a potential \$88 million loss.

34. Oil prices declined steadily from \$35.50 per barrel in March 1981 to \$27 a barrel in 1985.

35. Oil prices fell from \$27.60 per barrel in November 1985 to \$12.65 per barrel in April 1986.

36. After the fall of oil prices in early 1986, SDG&E revised its fuel forecasts and concluded that the PNM contract would have an expected present-value cost of \$33.7 million more than avoided cost over its term.

37. Any price concessions PNM would have granted SDG&E for its agreement to extend the deadline for securing transmission arrangements would have been limited by PNM's expectations of the cost of making the extra efforts needed to complete the arrangements and to execute the transmission agreement with SRP before the May 1 deadline. It would have been reasonable to expect that these expenses would not exceed \$20,000, and PNM's offer of a rate reduction to SDG&E would not have exceeded \$20,000.

38. No capacity credit should be awarded for economy energy purchases over SWPL.

39. The balance in the SWPL balancing account from 1986 through 1988 will be \$313 million.

40. According to the record in this case, SDG&E has no need for additional capacity until 1990 at the earliest.

41. The SWPL balancing account focuses too much on one resource of SDG&E's system, and the account's incentives may not always encourage SDG&E to operate its entire system at the minimum cost consistent with proper reliability.

42. On May 3, 1988, SDG&E filed a Petition to Set Aside Submission and to Bifurcate Proceeding. DRA and UCAN filed responses opposing the petition on May 31 and June 6, respectively. SDG&E replied to DRA's response on June 17, 1988.

43. On February 21, 1989, SDG&E filed a second Petition to Set Aside Submission. On February 23, DRA filed a response opposing the petition.

Conclusions of Law

1. The prudence of SDG&E's entering into the CFE, TEP, and 1979 PNM contracts are not at issue in this proceeding.

2. The term, "reasonable and prudent," means that at a particular time a utility's practices, methods, and acts followed the exercise of reasonable judgment in light of facts known or which should have been known at the time the decision was made. It means that the utility reasonably expected the act or decision to accomplish the desired result at the lowest reasonable cost consistent with good utility practices. Good utility practices are based upon cost-effectiveness, reliability, safety, and expedition.

3. A decision may be found to be reasonable and prudent if the utility shows that its decision making process was sound, that its managers considered a range of possible options in light of information that was or should have been available to them, and that its managers decided on a course of action that fell within the bounds of reasonableness, even if it turns out not to have led to the best possible outcome.

4. Decisions involving large amounts of money, high degrees of risk, and greater levels of uncertainty will require proportionately greater care than routine decisions.

5. SDG&E was imprudent to relinquish the right to withhold its consent to unreasonable assignments of the TEP contract to TEP's subsidiaries, without obtaining a corresponding concession from TEP in Amendment 3.

6. SDG&E should not recover \$5.9 million corresponding to the difference between its costs under the TEP contract assuming a 80/20 capital ratio for Alamito as compared with a 75/25 ratio. SDG&E has recovered excess funds since June 1, 1985, and this excess recovery, with interest at the contemporary ECAC rate, should be removed from the ECAC balance. As shown in Appendix B, the total disallowance connected to the TEP/Alamito contract amounts to \$7.1 million as of December 31, 1988. SDG&E should be

permitted to recover all other costs incurred under the TEP/Alamito contract from May 1, 1984, through April 30, 1986.

7. SDG&E's purchases from CFE from February 1, 1986, through April 30, 1986, were reasonable.

8. SDG&E's administration of the 1979 PNM contract from May 1, 1984, through April 30, 1986 was reasonable.

9. SDG&E's strategy of limiting its commitment to long lead-time resources to half of its expected need was a reasonable approach in the period considered in this decision.

10. SDG&E was imprudent in allowing important terms of the PNM contract to be set in negotiations before it had analyzed their costs and benefits.

11. SDG&E's decision makers were unreasonable in not giving more weight, during negotiations with PNM, to the possibility that oil and gas prices would remain stable or decline.

12. The capacity values used in the September analysis were reasonable for purposes of that analysis.

13. In light of the small net benefit projected by the September analysis, a prudent manager would have questioned the basis for the oil and gas price forecasts, would have considered the effect of larger variations in oil prices than those used in the analysis, and would have closely examined the soundness of the \$5 million projected net benefit of the PNM contract.

14. QFs could not reasonably have been expected to meet the need projected by the ROC plan.

15. The PNM contract was preferable to relying on purchases from Edison and PG&E.

16. SDG&E was reasonable in not relying on conservation to displace the PNM contract.

17. DRA presented a reasonable alternative to the PNM contract that would have permitted SDG&E to postpone its decision on acquiring additional baseload capacity for at least a year.

18. In the circumstances existing in November 1985 and in light of the facts that SDG&E knew or should have known, SDG&E should have delayed its commitment to purchase baseload capacity from PNM.

19. SDG&E acted reasonably in recognizing that the fuel diversity represented by the PNM contract provided SDG&E's system with insurance against dramatic rate increases prompted by high oil and gas prices.

20. In light of the facts available in November 1985, delay could have reasonably been expected to provide better information about the likely future of OPEC and thus about the course of oil and gas prices.

21. SDG&E should not be allowed to recover the demand charges under the PNM contract from May 1, 1988, through April 30, 1989, totaling \$28,080,000. However, SDG&E should receive credit, at current avoided cost rates, for the capacity provided by the PNM contract during this period, including an appropriate bonus payment reflecting the contract's 95% capacity factor. As calculated in Appendix C, for one year this credit amounts to \$6,946,000. Thus, the net disallowance related to the timing of the PNM contract is \$21,134,000. SDG&E should also have an opportunity in future ECAC proceedings to demonstrate that, during the period from May 1, 1988 through April 30, 1989, its energy purchases under the PNM contract were cheaper than the least expensive comparable purchases in the market at the same time.

22. After the fall in oil prices in early 1986, SDG&E should have taken advantage of every opportunity to renegotiate or terminate the PNM contract.

23. SDG&E acted imprudently in not informing PNM when the transmission difficulties were first mentioned that SDG&E intended to enforce its rights under the contract, including the right to terminate if PNM did not produce the required proof of transmission arrangements on time.

24. SDG&E's imprudence led to its losing the opportunity to reduce its costs under the contract by about \$20,000, and SDG&E should not be allowed to recover this amount from its ratepayers.

25. SDG&E should have had its attorneys review the PNM-SRP transmission agreement to see if PNM had met its legal obligations under Section 5.3 of the PNM contract, and SDG&E should have pressed any legal contentions resulting from that review.

26. FAS 92 does not prevent the Commission from applying the balancing account to the costs of purchased power transmitted over SWPL.

27. SDG&E should view all of its facilities and purchases, including SWPL and the purchase transmitted by SWPL, as an integrated system, with the paramount goal of meeting customers' electricity needs at the lowest possible price.

28. The avoided cost standard adopted in D.86-06-026 was a reasonable one for use in connection with the balancing account.

29. The SWPL balancing account should be eliminated.

30. Neither the Federal Power Act nor Nantahala and related cases bar us from taking the actions that have been proposed in this proceeding. The commerce clause of the constitution does not bar us from taking appropriate action in this case. SDG&E's right to equal protection of the laws has not been violated in this case.

31. SDG&E's Petition to Set Aside Submission and to Bifurcate Proceeding should be denied.

32. SDG&E's second Petition to Set Aside Submission, filed February 21, 1989, should be denied.

ORDER

IT IS ORDERED that:

1. San Diego Gas & Electric Company (SDG&E) shall reduce its Energy Cost Adjustment Clause (ECAC) account to reflect our disallowance of \$5,928,000 of the costs SDG&E has incurred under its contract with Alamito Company, with appropriate interest at the ECAC rate, as illustrated in Appendix B.

2. SDG&E shall further reduce its ECAC balancing account by the amount it has and will pay under its contract with Public Service Company of New Mexico (PNM) in demand charges from May 1, 1988 through April 30, 1989, with appropriate interest at the ECAC rate for any such payments made from May 1, 1988, to the effective date of this decision. However, SDG&E shall credit its ECAC account by the amount that SDG&E would pay qualifying facilities for 100 MW of capacity under a one-year Standard Offer No. 2 contract beginning May 1, 1988, including any appropriate bonus payments for the 95% capacity factor required under the PNM contract, as illustrated in Appendix C. This credit should be adjusted to reflect the actual date that the PNM contract takes effect. This credit should also reflect appropriate interest at the ECAC rate for any amounts that would have been credited between the date the contract takes effect and the effective date of this decision. Further adjustments to the ECAC balancing account to reflect the benefits received from SDG&E's energy purchases under the PNM contract between May 1, 1988 and April 30, 1989 may be ordered in future ECAC proceedings.

3. SDG&E shall further reduce its ECAC balancing account by \$20,000.

4. SDG&E's Petition to Set Aside Submission and to Bifurcate Proceeding is denied.

5. SDG&E's second Petition to Set Aside Submission, filed February 21, 1989, is denied.

This order is effective today.

Dated FEB 24 1989, at San Francisco, California.

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

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

Victor Weissert
Victor Weissert, Executive Director

APPENDIX A

List of Appearances

Applicant: William L. Reed, James F. Walsh, C. Edward Gibson, E. G. Barnes, and Michael R. Weinstein, Attorneys at Law, for San Diego Gas & Electric Company.

Interested Parties: Richard K. Durant and Frank J. Cooley, Attorneys at Law, for Southern California Edison Company; Steve Geringer and Dane Dauphine, Attorneys at Law, for California Farm Bureau Federation; William B. Marcus, for JBS Energy, Inc; William S. Shaffran and Leslie J. Giraud, Attorneys at Law, for City of San Diego; Gary D. Simon, for El Paso Natural Gas Company; Morrison & Forester, by Jerry Bloom, Attorney at Law, for San Diego Energy Alliance; Gary Estes, for Hunter Industries; Kathryn Stein, for Barakat, Howard & Chamberlin, Inc.; Roger J. Peters, and Mark R. Huffman, Attorneys at Law, for Pacific Gas and Electric Company; and Michael Shames, Attorney at Law, for Utility Consumers' Action Network (UCAN).

Public Staff Division: Timothy E. Treacy, Attorney at Law, William F. Dietrich, and Gregg Wheatland.

Public Advisor's Office: Natalie Hanson.

(END OF APPENDIX A)

APPENDIX B

REVENUE REDUCTION BASED ON THE ASSUMED
CAPITALIZATION FOR ALAMITO
(See Exhibit 523, Appendix 11)

	Debt	Equity
Negotiated capital structure	70%	30%
Assumed capital structure	75%	25%

Period	Springerville Months Rate Base	Tax Rate	Net-to-gross multiplier
A 6/85 - 12/86	19 \$504,900,000	50.00%	2.00000
B 1/87 - 5/87	5 \$28,754,000	44.57%	1.80408

SDG&E share of Springerville Rate Base	=	251/360
	=	0.69722
Weighted avg. cost of debt (from 4/1/87 FERC filing)	=	9.03%
Negotiated return on equity	=	15.00%

PERIOD A

Changes in annual revenue requirement:	
(a) Due to incr. in debt capitalization	\$1,584,124
(b) Due to dec. in equity capitalization	(\$5,280,413)
Total annualized change	(\$3,696,289)
Average monthly change	(\$308,024)
Total change over the 19-month period	(\$5,852,457)

PERIOD B

Changes in annual revenue requirement:	
(a) Due to incr. in debt capitalization	\$90,216
(b) Due to dec. in equity capitalization	(\$271,260)
Total annualized change	(\$181,044)
Average monthly change	(\$15,087)
Total change over the 5-month period	(\$75,435)

PERIOD A+B

Change in revenue requirement over the 24-month period (in nominal \$)	(\$5,927,892)
---	---------------

Month	Annual ECAC rate	Average revenue change during month	Cumulative Future Value at end of month
Jun 1985 (actual)	8.08%	(\$308,024)	(\$309,061)
Jul	7.35%	(308,024)	(619,921)
Aug	7.56%	(308,024)	(932,821)
Sep	7.72%	(308,024)	(1,247,837)
Oct	7.83%	(308,024)	(1,565,008)
Nov	7.80%	(308,024)	(1,884,206)
Dec	7.77%	(308,024)	(2,205,428)
Jan 1986	7.75%	(308,024)	(2,528,690)
Feb	7.71%	(308,024)	(2,853,950)
Mar	7.63%	(308,024)	(3,181,100)
Apr	7.20%	(308,024)	(3,509,135)
May	6.60%	(308,024)	(3,837,306)
Jun	6.62%	(308,024)	(4,167,349)
Jul	6.71%	(308,024)	(4,499,537)
Aug	6.33%	(308,024)	(4,832,108)
Sep	5.92%	(308,024)	(5,164,730)
Oct	5.68%	(308,024)	(5,497,930)
Nov	5.68%	(308,024)	(5,832,706)
Dec	5.76%	(308,024)	(6,169,467)
Jan 1987	6.10%	(15,087)	(6,215,953)
Feb	5.84%	(15,087)	(6,261,328)
Mar	6.05%	(15,087)	(6,308,021)
Apr	6.16%	(15,087)	(6,355,528)
May	6.45%	(15,087)	(6,404,816)
Jun	6.93%	0	(6,441,804)
Jul	6.92%	0	(6,478,952)
Aug	6.65%	0	(6,514,856)
Sep	6.71%	0	(6,551,285)
Oct	7.37%	0	(6,591,521)
Nov	7.89%	0	(6,634,860)
Dec	7.17%	0	(6,674,503)
Jan 1988	7.61%	0	(6,716,831)
Feb	6.87%	0	(6,755,285)
Mar	6.58%	0	(6,792,326)
Apr	6.62%	0	(6,829,797)
May (forecast)	6.62%	0	(6,867,475)
Jun	6.62%	0	(6,905,360)
Jul	6.62%	0	(6,943,455)
Aug	6.62%	0	(6,981,760)
Sep	6.62%	0	(7,020,276)
Oct	6.62%	0	(7,059,004)
Nov	6.62%	0	(7,097,946)
Dec	6.62%	0	(7,137,103)

APPENDIX C

CALCULATION OF ANNUAL FIRM CAPACITY PAYMENTS
San Diego Gas & Electric Company

This calculation is based on SDG&E Standard Offer 2, Option 1-Dispatchable, with prices from Firm Capacity Payment schedule. Assumptions are a 100 MW facility, 95% on-peak capacity factor, and a one year agreement in effect from May 1, 1988 to April 30, 1989.

Monthly payment = $1/12 \times CP \times FC \times CBF$, and

$$CBF = \frac{ED}{C \times (PP - SP) \times 0.85}$$

where CP = firm capacity price
FC = C = firm capacity
CBF = capacity bonus factor
ED = energy delivered during on-peak hours of peak months
PP = peak hours in peak months
SP = scheduled maintenance during peak hours of peak months

Peak months for SDG&E are June, July, August and September. The available days are 22 in June, 20 in July, 23 in August and 21 in September, for a total of 86 days. On-peak hours are from 11 a.m. to 6 p.m., or 7 hours per day. Therefore:

CP = \$ 65
FC = 100 MW = 100,000 KW
PP = 86 x 7 = 602 hours
SP = 0
ED = 0.95 x 100,000 x 602 = 57,190,000 KWH
CBF = 57,190,000 / (100,000 x (602 - 0) x 0.85) = 1.11765

Monthly payment = $1/12 \times 65 \times 100,000 \times (1, \text{ or } 1.11765)$
= \$ 541,667, or \$ 605,394

For a one year contract beginning May 1, 1988, the seller would not be eligible for bonus payments until October 1, 1988.

Annual capacity payments
= $1/12 \times 65 \times 100,000 \times ((7 \times 1.11765) + (5 \times 1))$
= \$ 6,946,089

(END APPENDIX C)

ALJ/BTC/jt

Decision _____

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of)
SAN DIEGO GAS & ELECTRIC COMPANY)
for authority to Increase its Rates)
and Charges for Electric, Gas)
and Steam Service.)
_____)

Application 84-12-015
(Filed December 17, 1984)

And Related Matter.)
_____)

I.85-02-010
(Filed February 6, 1985)

(Appearances are listed in Appendix A.)

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OPINION

I. Summary

In this opinion, we reconsider the Southwest Powerlink (SWPL) balancing account that we adopted in Decision (D.) 85-12-108. We also review the reasonableness of the acts of San Diego Gas & Electric Company (SDG&E) in connection with its contracts with several other utilities for purchases of power transmitted over SWPL.

Overall, we conclude that most of SDG&E's purchased power costs were reasonable and that it obtained many valuable provisions in its negotiations with other utilities. However, we find that SDG&E acted imprudently in some of its negotiations with Tucson Electric Power Company and its successor under the contract, Alamito Company, and we disallow \$5.9 million of the cost of SDG&E's purchases from Alamito. Interest increases this disallowance to \$7.0 million as of September 1, 1988. We find SDG&E's transactions with Comision Federal de Electricidad (CFE) to have been reasonable. We find several instances of SDG&E's imprudence in its negotiation of a new power purchase contract with Public Service Company of New Mexico, and we make two separate disallowances of \$21,978,000 and \$20,000.

Finally, we determine that the SWPL balancing account should be terminated.

II. Introduction

The Southwest Powerlink is a single-circuit, 500-kilovolt transmission line constructed by SDG&E and extending from the Palo Verde Switchyard about 40 miles west of Phoenix to the Miguel Substation 10 miles southeast of San Diego. The line connects with local systems in the Yuma and Imperial Valleys, and two additional

230 kilovolt transmission lines interconnect to the Mexican electric system operated by CFE. SWPL went into commercial operation on June 19, 1984, at a cost of \$208 million. SDG&E's initial scheduling entitlement on the line was 700 megawatts (MW), but improvements increased its entitlement to nearly 1,100 MW in early 1986.

The seed for this decision was planted over three years ago, in D.84-12-065, when we directed SDG&E and the Commission's staff to address the status of SWPL and, more specifically, "to determine whether there is reasonable use being made of the SWPL." D.84-12-065, which decided the reasonableness review phase of SDG&E's 1984 Electric Cost Adjustment Clause (ECAC) case, found the record in that proceeding inadequate to determine the reasonableness of the operation of SWPL and deferred the determination of reasonableness to the present application, the company's general rate case for test year 1986.

The decision in the general rate case, D.85-12-108, found that the price of SDG&E's purchases of capacity transmitted over SWPL was considerably higher than SDG&E's current cost and the costs of its other sources of generation. We were concerned about this development, because part of the purpose for SWPL was to decrease the cost of providing energy to SDG&E's customers. We concluded:

"We think that in order to restrict ratepayer costs to what is a reasonable cost of purchased power, to achieve intertemporal equity between ratepayers, and to give SDG&E the proper incentive to manage the SWPL line and ensure that it is a cost-effective resource, it is necessary to institute the SWPL Balancing Account." (D.85-12-108, mimeo. p. 120c.)

As originally constructed, the balancing account would allow SDG&E to recover in rates only the avoided-cost equivalent of

power transmitted over SWPL.¹ Costs in excess of avoided cost would be recorded in the balancing account, and the balance would decrease when purchases were made at less than avoided cost. The balances in the account would earn interest at the ECAC rate. Any remaining balance in the account after five years would be presumed to be unreasonable, subject to a persuasive showing by SDG&E that it had managed the line reasonably.

SDG&E applied for rehearing of D.85-12-108, and in D.86-06-026 the Commission granted rehearing limited to the following questions:

- "1. What would be the difference between the cost of power purchased over the SWPL and avoided cost, measured at a capacity value of \$78/kw/yr and current short-run avoided cost for the period January 1, 1986 through December 31, 1988?
- "2. Is the deferral of cash flows, by limiting SDG&E's revenue recovery for SWPL energy to the 'value' of that energy, a sufficient incentive to encourage the company to reduce its purchased power costs?
- "3. What is the appropriate standard by which to measure the value of SWPL power to ratepayers? Would pricing SDG&E's SWPL cash flow at current short run avoided cost discourage the utility from making long-term contractual commitments to purchase SWPL power?
- "4. What are SDG&E's energy and capacity needs in the 1986 through 1996 time frame?
- "5. What role in SDG&E's resource plan should the SWPL play? Should it continue to

¹ The concept of avoided cost originated in connection with a utility's purchases of electricity generated by independent producers. Avoided cost refers to the cost that the utility avoids by purchasing from independent producers, rather than generating an equivalent amount of power itself.

provide largely firm capacity? Should contracts for the purchases be flexible to enable the deliveries to meet SDG&E's resource needs as determined bi-annually [sic] in the OIR-2 proceeding?

- "6. Should the balance in the SWPL account accrue interest?" (D.86-06-026, mimeo. pp. 12-13.)

The rate case decision, D.85-12-108, also directed SDG&E and the Commission's staff to address the reasonableness and the purported economic savings of SWPL for 1984-86 in SDG&E's 1986 ECAC reasonableness review. D.86-06-026, which modified D.85-12-108, further directed SDG&E "in its next ECAC reasonableness review to present an affirmative showing of the reasonableness of the actions it has taken to minimize the costs" of its purchases under contracts with Public Service Company of New Mexico (PNM), Tucson Electric Power Company (TEP), and CFE. However, in D.86-09-010, we granted SDG&E's motion to remove SWPL-related issues from the ECAC proceeding and to consolidate all SWPL issues in the rehearing proceeding.

The issues were further refined in an Assigned Commissioner's ruling of October 15, 1986. The ruling determined that the prudence of SDG&E's entering into the CFE, TEP, and 1979 PNM contracts would not be issues in the rehearing.

Thus, as eventually defined, the issues in this proceeding fall into two general areas. First are the issues relating to the operation of the balancing account and, in particular, the questions posed by the Commission in the order granting rehearing. Second are the issues relating to the reasonableness of SDG&E's purchases and related activities from May 1, 1984, through April 30, 1986, and, in particular, the reasonableness of the purchases under the contracts with PNM, TEP, and CFE during this period.

The reasonableness review will determine what portion of the money already expended by SDG&E should be allowed for eventual recovery from ratepayers. Resolution of the balancing account issues will determine the timing of that recovery. Logic suggests that we first resolve the reasonableness issues before addressing the balancing account.

Although many parties filed appearances in this proceeding, active participation in this case was limited almost exclusively to the four parties who filed briefs in this case: SDG&E, the Commission's Division of Ratepayer Advocates (DRA) (formerly known as the Public Staff Division), Utility Consumers' Action Network (UCAN), and the City of San Diego (City). At hearings in San Diego on April 20, 1987, statements were presented by representatives of the San Diego Energy Alliance, Hunter Industries, and the Grey Panthers. These statements supported the SWPL balancing account as a way to encourage SDG&E to lower its revenue requirement and its retail rates.

The broad issues in this case are conveniently discrete, and this decision will address and resolve them separately.

III. The Standard of Review

Both SDG&E and DRA raised the question of what standard the Commission should apply in its review of the reasonableness of the expenses that SDG&E has incurred under the contract. These parties had somewhat different views of the proper standard.

A. SDG&E's Position

SDG&E asserts that the standard is "whether the particular management attained the best reasonably achievable result based on facts and conditions known or which should have been known at the time the actions were undertaken," and the company cites D.87-06-021 as authority for its position. SDG&E goes on to quote more extensively from that decision:

"The term 'reasonable and prudent' means that at a particular time any of the practices, methods, and acts engaged in by a utility follows the exercise of reasonable judgment in light of facts known or which should have been known at the time the decision was made. The act or decision is expected by the utility to accomplish the desired result at the lowest reasonable cost consistent with good utility practices. Good utility practices are based upon cost effectiveness, reliability, safety, and expedition.

"A 'reasonable and prudent' act is not limited to the optimum practice, method, or act to the exclusion of all others, but rather encompasses a spectrum of possible practices, methods, or acts consistent with the utility system need, the interest of the ratepayers and the requirements of governmental agencies of competent jurisdiction." (D.87-06-021, mimeo. pp. 19-20.)

SDG&E fears that DRA seeks to impose a standard requiring the best imaginable results and will improperly rely on after-the-fact knowledge of how events occurred, rather than considering the parties' reasonable expectations at the time the decisions were being made.

B. DRA's Position

DRA emphasizes that SDG&E bears the burden of proving by clear and convincing evidence that it reasonably and prudently administered each contract. In reasonableness reviews, DRA asserts that the Commission requires the utility to make a substantial affirmative showing, and "the burden rests heavily upon a utility to prove it is entitled to rate relief and not upon the Commission, its staff or any interested party...to prove the contrary" (D.83-05-036, mimeo. p. 2).

DRA seems to concur with the definition of "reasonable and prudent" put forward by SDG&E, but DRA adds that the utility must also take into account the risks associated with the size and

complexity of the contract. DRA quotes from a decision on Pacific Gas and Electric Company's Helms pumped storage project:

"[When] tasks are undertaken which in and of themselves are of such enormity as to greatly expose the utilities and potentially their ratepayers to substantial financial risks, utilities must exercise even greater care and managerial acumen than would be called for in ordinary circumstances." (D.85-08-102, mimeo. p. 21.)

In response, SDG&E points out that the Commission has applied this higher standard only in cases involving large capital additions costing more than a billion dollars. In the case of SWPL, no capital costs are under review, and the sums in dispute are considerably less than a billion dollars. SDG&E believes that this higher standard should not apply in these circumstances.

C. Discussion

First, we reiterate our recent statements elaborating on the meaning of "reasonable and prudent," which were quoted previously. In the circumstances of this case, it is particularly important to emphasize that a reasonable and prudent act is not limited to the optimum act, but includes a spectrum of possible acts. As we have stated even more recently, "Our legitimate concern as the agency charged with oversight and economic regulation of the monopoly utilities is not merely with the outcomes of the utilities' decisions; we are also concerned with the process employed to arrive at a particular decision." (D.87-12-071, mimeo. p.32.) Thus, a decision may be found to be reasonable and prudent if the utility shows that its decision making process was sound, that its managers considered a range of possible options in light of information that was or should have been available to them, and that its managers decided on a course of action that fell within the bounds of reasonableness, even if it turns out not to have led to the best possible outcome. As we have previously stated, the action selected should logically be

expected, at the time the decision is made, to accomplish the desired result at the lowest reasonable cost consistent with good utility practices.

DRA has argued that a higher standard should apply in this case because of the large amount of money involved. We view the amount of money potentially affected by a decision to be one of the circumstances that the utility's managers should take into account in coming to their decision. Our previous decisions should not be read to establish two discrete standards of review, a high standard for large generating projects and an ordinary standard for other decisions. Rather, we expect that the utility's managers will consider that decisions involving large amounts of money, high degrees of risk, and greater levels of uncertainty will require proportionately greater care than routine decisions.

The decisions under review in this case are not as weighty or risky as a decision to invest billions of dollars in a new generating plant, but neither are they as routine as deciding to purchase \$1,000 of office supplies. The contract at issue foreseeably required SDG&E's commitment to purchase hundreds of millions of dollars of power and, moreover, these purchases were expected to produce savings to justify the construction of a power line costing several hundred million dollars. By any standard this is a major commitment, and to fall within the zone of reasonableness and prudence SDG&E's decision making should have reflected a level of care and thoroughness appropriate to this magnitude of expenditure.

Although the standard of our review is relatively clear, applying this standard to the issues in this case is extremely difficult. Several of the decisions being reviewed were made in the context of negotiations for revisions of an existing contract. The terms of the original agreements set the stage for and constrained the scope of those negotiations. We have already determined that the prudence of entering into the original CFE,

TEP, and 1979 PNM contracts is not an issue in this case, so our review is limited to the reasonableness of SDG&E's negotiations for changes in the existing contracts.

Even without the added complication of the constraint of the original contracts, evaluating the performance of a utility in negotiations is extremely difficult. One of the paramount problems is establishing a baseline against which the utility's performance can be measured. In theory, the baseline would be the result that a reasonable and prudent negotiator would achieve in the same circumstances. But even in simple negotiations there are nearly an infinite number of proposals and combinations of proposals that could be considered and, as we have discussed, a range of outcomes that are reasonable and prudent. Successful negotiations usually involve a subjective balancing of interests, a compromising of objectives, and much creativity in developing a solution that satisfies all parties. It is a delicate process and one that is very difficult to reconstruct, even when thorough documentation of proposals, responses, and evaluations is present.

Although different approaches may be preferable in other circumstances, for purposes of the review of amendments to existing contracts, as required in this case, we have found the following approach to be useful. We have first examined the goals that the utility hoped to achieve in the negotiations and have evaluated whether that goal was reasonable. We then compared the actual outcome with the goal. Finally, we considered whether a reasonable and prudent utility would have taken other steps to come closer to achieving the utility's goals. This approach is not always articulated in the following discussion, but it provided the background to much of our analysis of this case.

IV. The Purchases From Tucson Electric Power Company

A. Background

The chronology for the TEP purchases is complicated but important. We will first attempt to set out the sequence of events as simply as possible.

TEP and SDG&E signed the original contract on November 29, 1978. SDG&E agreed to purchase energy and capacity from TEP in five phases over ten years, with somewhat different terms governing the deliveries for each phase. The contract set prices according to a cost-of-service formula, which was intended to produce rates reflecting the actual fixed and variable costs of the plants producing the power. The contract is a "take or pay" agreement in the sense that SDG&E must pay a demand charge for specified levels of capacity whether or not energy is actually delivered, unless the failure to deliver results only from TEP's willful action. No ceiling was placed on the resulting rates. The parties amended the contract several times before the period we are concerned with in this decision.

The original contract gave TEP an option to sell up to 100 MW of power from its system to SDG&E from July 1985 through June 1987, during what was then called Extended Phase 3. TEP exercised its option in June 1983.

Under the original contract, Phase 4 was to begin on the commercial operation date of TEP's Springerville Unit 1, a coal-fired generation plant located in Arizona, and was to continue for 24 months or until December 31, 1988, whichever came earlier. During this phase, contract demand, the amount of capacity reserved and paid for by SDG&E, was set at 230 MW from Springerville Unit 1. Phase 5 was to begin the day after the end of Phase 4 and was to continue for 19 months. Contract demand for Phase 5 would be between 200 and 500 MW, at TEP's option, from Springerville 1 and 2, TEP's system, or a combination of these resources. In 1981, TEP

notified SDG&E that demand during Phase 5 would be between 350 and 500 MW.

Various considerations led the parties to begin negotiating Amendment 3 in September 1983. Amendment 3 was executed on January 6, 1984, and made several changes to the parties' obligations. Extended Phase 3 was eliminated, and Phase 3 was replaced with a Revised Phase 3, which would continue until the commercial operation date of Springerville Unit 1. Revised Phase 4 was to begin on the commercial operation date of Springerville Unit 1 and was to continue for 24 months. During this period, SDG&E would purchase 230 MW from Springerville Unit 1 and 100 MW (at a 60% capacity factor) from TEP's system. An agreement to set Springerville Unit 1's net dependable capacity for purposes of the contract at 330 MW, rather than its actual net dependable capability of 360 MW, had the effect of increasing SDG&E's contract demand by an additional 21 MW from Springerville Unit 1. Phase 5 was extended five months to cover 24 months after the end of Revised Phase 4. During this phase, SDG&E would purchase 400 MW from TEP's system. SDG&E also received rights to 106 MW of transmission service from San Juan to Palo Verde until May 1, 1985, and SDG&E was relieved of an obligation to pay for part of 170 MW of transmission during Phase 5.

The parties also agreed to modify the assignment clause of the contract to permit TEP to assign the contract to a wholly owned subsidiary without SDG&E's consent. The contract had previously permitted assignment only with SDG&E's written approval. In June 1984, TEP assigned the contract to Alamito Company, which was then TEP's wholly owned subsidiary. The assignment took effect November 1, 1984. In December 1984, TEP spun off Alamito, and it became an independent company. In late 1985, Alamito's management conducted a leveraged buy-out of the company.

The implications of the spin-off of Alamito led to several revisions of the contract, which were incorporated in

Amendments 4 and 5 and in a letter agreement between the parties. Negotiations of these changes began in March 1985.

Under these amendments, the parties stipulated that Alamito's capitalization ratio, for purposes of calculating the cost of service, would be 30% equity and 70% debt, and the return on equity was set at 15%. Alamito agreed to give access to the Springerville site to the consultant who was advising SDG&E on determining and verifying the plant's commercial operation date. Alamito agreed to increase the capacity factor for system sales from 60% to 65%. If a change in the price of coal for Springerville Unit 1 was proposed, Alamito agreed to give SDG&E full access to information. If the price increase was not justified, Alamito agreed to take all necessary legal action to resist the price increase.

The significance of these bare facts will be illuminated by the discussion of the parties' positions on the disputed issues. Generally speaking, DRA, supported by UCAN and City, believes that the original contract worked to the disadvantage of SDG&E's customers during the period under consideration. According to DRA, SDG&E was locked into an obligation to pay for expensive capacity it did not need, when SWPL could have been more economically used to transmit cheap economy energy that was plentiful in the Southwest. DRA criticizes SDG&E for not taking advantage of the negotiations leading to the amendments to reduce SDG&E's obligation to pay for unneeded capacity.

More specifically, the parties challenging SDG&E's actions believe that Amendment 3 resulted in unnecessary increases in contract demand of 21 MW and 100 MW in Revised Phase 4 and of 50 MW in Phase 5. These parties also assert that Amendments 4 and 5 resulted in SDG&E's unreasonable waiver of its right to object to certain assignments, which had harmful effects when TEP spun-off Alamito and assigned to the contract to Alamito.

SDG&E believes that its actions were reasonable in all respects.

Under the current version of the contract, Phase 4 ran from June 1, 1985 to May 31, 1987, and involved sale of 251 MW of capacity and energy from Springerville 1 and 100 MW of capacity and energy from TEP's system. Phase 5 began June 1, 1987, and continues to May 31, 1989. During Phase 5, SDG&E has the right to purchase up to 400 MW of capacity and energy from TEP's system.

B. SDG&E's Position

SDG&E rejects the other parties' specific criticisms of its actions during the negotiations, and it asserts that its actions resulted in substantial savings for ratepayers.

First, SDG&E believes the DRA's criticism of the agreement to accept 100 MW of system sales during Revised Phase 4 is misplaced. DRA's criticism is based on the notion that SDG&E assumed a new obligation for additional capacity, according to SDG&E. In fact, SDG&E asserts, the 100 MW in Revised Phase 4 was merely a continuation of an existing obligation to purchase 100 MW during Extended Phase 3, which was eliminated as part of Amendment 3. Viewed in this way, the obligation actually arose when the original contract was negotiated in 1978, according to SDG&E, and SDG&E had no reasonable opportunity to reduce its purchases during the negotiations of Amendment 3.

Second, SDG&E acknowledges that defining net dependable capacity for Springerville Unit 1 as 330 MW, rather than the actual net dependable capability of 360 MW, had the effect of increasing its obligation to purchase capacity during Revised Phase 4 by 21 MW. However, SDG&E believes that DRA ignores the concomitant benefits that were tied to SDG&E's acceptance of this increase. SDG&E argues that access to cheaper energy costs from coal-fired plants should be included in the calculation of the cost of this 21 MW increase, for a net cost of \$6 million, rather than the \$15,681,000 in total demand charges that DRA uses. Against this

cost should be balanced \$29 million in benefits, according to SDG&E.

SDG&E believes that extending Phase 5 from 19 to 24 months and reducing the amount of capacity it was required to purchase from a potential 500 MW to 400 MW saved about \$14 million in production costs. Securing the transmission path from San Juan to Palo Verde for 106 MW was worth another \$12 million. In addition, SDG&E gained transmission rights during Phase 5 that cost it nothing but were worth about \$3 million.

When all of these benefits from the negotiations are balanced against the small cost of accepting a slightly higher capacity obligation, SDG&E concludes that its actions during the negotiations were reasonable.

Third, SDG&E rejects DRA's position that it could have negotiated its Phase 5 obligation down to 350 MW from the 400 MW it actually achieved. SDG&E points out that the excess capacity in the Southwest, combined with the decline in TEP's retail load growth and TEP's commitment to build Springerville Unit 1 made it extremely unlikely that TEP would accept any reduction of the contract demand amount. The contract assured TEP a higher price than it could obtain elsewhere for its capacity, and TEP made clear that it intended to hold SDG&E to its commitment. In addition, at the time of the renegotiation, SDG&E's analyses showed that the price of the 400 MW was about \$42 million cheaper than purchases from independent producers at long-run avoided cost prices.

Fourth, SDG&E believes that its consent to the amendment of the assignment clause was reasonable in light of the information available to it at the time it agreed to the amendment. Its contemporaneous analyses uncovered no risk to SDG&E from the change in the clause, and TEP repeatedly assured SDG&E that assignment to a wholly owned subsidiary would not affect SDG&E costs under the contract. Furthermore, SDG&E saw no basis at the time for protesting the change in the clause to the Federal Energy

Regulatory Commission (FERC), the federal agency with the authority to review contracts for sales between utilities.

Fifth, SDG&E believes that the 70/30 debt-equity ratio it accepted for Alamito was reasonable in light of the information available at the time. SDG&E feared that Alamito could manipulate its capital structure to the detriment of SDG&E if a year-by-year actual capital ratio were used to calculate the cost of service. SDG&E also feared that Alamito's cost of debt could increase suddenly with lower bond ratings. For these reasons, SDG&E thought it beneficial to tie down a fixed ratio, based on reasonable projections.

C. DRA's Position

DRA believes that SDG&E was imprudent for failing to take advantage of the negotiations and amendments to reduce the ill effects of what was turning out to be an unfavorable contract.

DRA argues that as early as 1982, SDG&E's own analyses raised concerns about the high prices of capacity under Phases 4 and 5 of the contract. At the same time, an article in Forbes magazine discussed the clever manipulations of TEP and quoted TEP management as saying that the contract with SDG&E was cheap for TEP and relatively expensive for SDG&E. Yet SDG&E waited a full year before even attempting to get TEP to negotiate changes in the contract.

When Amendment 3 was negotiated, SDG&E agreed to provisions that created four specific costs or risks, according to DRA.

The first cost noted by DRA was the agreement to take an extra 21 MW during Revised Phase 4, when DRA believes SDG&E should have been striving to decrease its capacity obligations. The increase in the contract capacity resulted from SDG&E's agreement to set the net dependable capability of Springerville Unit 1 at 330 MW. The demand charges were based on a ratio of 230 MW to the net dependable capability of the plant. DRA asserts that SDG&E knew

that the actual net dependable capability of the unit was 360 MW, yet it allowed the amendment to state it as 330 MW. When the ratio was applied, this stipulation resulted in an increase of capacity of 21 MW, with a corresponding increase in demand charges. The demand charges for these extra, unneeded megawatts, according to DRA, was \$15,681,000. DRA believes that the agreement to set the net dependable capability at lower than its actual level was imprudent, in light of the fact that SDG&E did not need capacity during Revised Phase 4, and DRA urges the disallowance of \$15,681,000 in demand charges.

Second, DRA believes the agreement to establish contract demand at 400 MW for Phase 5 was imprudent. The contract gave TEP the option of setting the contract demand between 200 and 500 MW, and TEP had earlier notified SDG&E that demand for Phase 5 would be between 350 and 500 MW. DRA points out that SDG&E's own internal memos concluded that TEP was incapable of delivering much more than 350 MW, and DRA views SDG&E's agreement to accept a contract demand at 50 MW over the 350 MW minimum level as imprudent. DRA rejects SDG&E's claim that TEP threatened to purchase enough capacity over the Inland Power Pool to enable it to sell SDG&E the 500 MW maximum permitted under the contract. DRA points that there is no written record of the making or receiving of this threat, and that, in any event, SDG&E had already agreed to take 400 MW before the date that the alleged threat was made. DRA also criticizes SDG&E's acquiescence in TEP's request to extend Phase 5 from 19 to 24 months. This extension provided no benefits to SDG&E and appears to be for the convenience of TEP. Yet, according to DRA, SDG&E received no concession for granting TEP this extension. DRA recommends disallowance of \$24,348,000 of demand charges for the extra 50 MW during Phase 5.

The third extra cost that DRA finds is the agreement to take 100 MW during Revised Phase 4. Although DRA recognizes that this 100 MW probably offsets the elimination of 100 MW scheduled

for Extended Phase 3, DRA believes that SDG&E was imprudent for not even attempting to negotiate a further reduction in its capacity obligation when it had the opportunity. DRA recommends a disallowance of \$60,104,000 for this imprudence.

Fourth, DRA believes that SDG&E was imprudent to agree to modify the assignment clause so that SDG&E would not have the right to object to an assignment to a wholly owned subsidiary of TEP. DRA points out that SDG&E failed to track the proceedings before the Arizona Corporations Commission which would have provided information on TEP's intentions. DRA says that the ability to withhold consent to any proposed assignment is particularly important when the buyer, SDG&E, was obligated to pay even if the seller fails to perform under a broad range of circumstances. DRA believes that this was such a contract, and that SDG&E should have been particularly careful to safeguard its rights under the assignment clause. DRA finds imprudence in SDG&E's agreement to alter the clause after only minimal and short-sighted analysis.

DRA feels that SDG&E was unreasonably passive in the face of the spin-off of Alamito. Especially after the amendment of the assignment clause, SDG&E effectively allowed TEP to sell the contract with SDG&E to an independent company without SDG&E's consent. DRA believes that this behavior was imprudent, but recommends no direct disallowance in Phase 3. Rather, DRA thinks the effects of the alteration of the assignment clause were felt during the negotiations of Amendments 4 and 5.

The spin-off of Alamito affected the level of the demand charges during Phase 4, according to DRA. DRA believes that significant cost reductions should have occurred during Phase 4. DRA believes that SDG&E should have asked FERC to review the spin-off and that SDG&E had considerable leverage at this time. In DRA's opinion, Alamito feared FERC's review because FERC might reduce the cost of capital used in the calculation of the cost of service, FERC might take a jurisdictional interest in Alamito, and

FERC's review could delay the management buy-out. DRA believes that SDG&E should have taken advantage of its leverage to negotiate more favorable amendments.

More specifically, DRA faults SDG&E for agreeing to a 70/30 debt-equity ratio without calculating the benefits of a floating ratio or a lower fixed ratio and without trying to bargain for a lower and more favorable ratio. In fact, the actual debt-equity ratio never exceeded 79/21 during Phase 4. DRA recommends a disallowance of \$11.1 million, the difference between the 70/30 ratio that SDG&E agreed to and the 79/21 ratio that would have applied if SDG&E had obtained Alamito's agreement to use a floating ratio.

D. City's Position

The City of San Diego agrees with DRA that SDG&E's primary concern during the negotiations of Amendments 3, 4, and 5 should have been to reduce the contract demand obligation as much as possible. City views SDG&E's claimed reduction of demand to 400 MW during Phase 5 as a hollow victory, since its stated goal was a reduction to around 330 MW. City concurs with DRA that it was imprudent for SDG&E to agree to take 400 MW instead of the 350 MW minimum called for under the original contract. City supports DRA's recommended disallowance of \$24,348,000, the cost of this extra 50 MW during Phase 5.

E. UCAN's Position

UCAN was struck by the ~~inexpert and passive nature of~~ SDG&E's handling of its negotiations with TEP. In UCAN's view, SDG&E was repeatedly outmaneuvered by TEP, which resulted in SDG&E's agreeing to accept the extra 21 MW in Revised Phase 4 and 400 MW rather than 350 MW in Phase 5, even though its own analyses urged reductions in contract demand for these phases.

UCAN is also disturbed by SDG&E's "inexplicable" acceptance of modifications to the assignment clause. It accepted this change even though its own vice president had characterized

TEP as "a bunch of crooks." When SDG&E found out about the assignment of the contract to Alamito, it first delayed its investigation and then was satisfied with TEP's oral reassurances. It failed to protest the assignment to FERC or to use the threat of a protest as leverage for further concessions during negotiations, according to UCAN. UCAN believes that disallowances are justified, and UCAN particularly wants to alert the Commission to the passive, inflexible, and unresourceful negotiation practices of SDG&E.

F. Discussion

We have already discussed at length the difficulty of applying our standard of review to the negotiations involved in this case. We also note that this already difficult task has been complicated by the ways in which the parties have chosen to present their cases. Because the prudence of entering into the TEP contract is not an issue in this case, we are not evaluating whether or not the outcomes of the various negotiations were good deals. Rather, our focus is on whether or not a better outcome to a particular negotiation was possible in light of all the circumstances SDG&E faced.

So far as the record reveals, there are many gaps in SDG&E's account of the process of negotiations. SDG&E has placed great emphasis on the benefits it claims resulted from the negotiations. However, some of these benefits are not directly linked to SDG&E's negotiating efforts. DRA, on the other hand, has asserted that SDG&E could have obtained far greater concessions if it had negotiated more skillfully or persistently.

Our difficulty is that both of these approaches require speculation. DRA's approach requires us to speculate about what would have happened if SDG&E had negotiated in the manner recommended by DRA. DRA has not offered its reconstruction of the negotiations it says should have occurred; rather it has urged various disallowances that presume the complete success of the approach it believes SDG&E should have followed. For its part,

SDG&E has forced us to speculate to separate the real concessions that resulted from its negotiating efforts from the benefits that were unrelated to the negotiations and that would have occurred regardless of the level of SDG&E's negotiating skills.

A review of past events is difficult enough under the best of circumstances. The approaches of both DRA and SDG&E make our task even more difficult. We are thus forced to select the course of events that seems most probable to us based on the record presented in the hearings, even when our account may vary substantially from the versions presented by the parties.

1. Amendment 3

a. The 100 MW

DRA has suggested that SDG&E could have avoided the 100 MW increase in the contract demand for Revised Phase 4. We believe that the evidence is strong that this apparent increase resulted from restructuring the contract and was not an actual increase of SDG&E's obligations. SDG&E's responsibility to take 100 MW during the former Extended Phase 3, which was eliminated, was transferred to the new Revised Phase 4. The two obligations are in all respects identical. From the record before us, we are satisfied that SDG&E acted reasonably and was not imprudent in accepting this restructuring and that no real increase in the contract demand occurred. In addition, DRA presented no evidence that an attempt to reduce this obligation would have met with any success.

b. Setting the Contract Demand
at 400 MW for Phase 5

This issue illustrates the difficulties we confront when the parties stake out diametrically opposed positions, and no evidence is presented to illuminate the vast middle ground between their viewpoints. SDG&E claims that it should receive a \$14-million credit for reducing the contract demand during Phase 5 from the 500 MW maximum that applied in the earlier contract. DRA

claims that SDG&E should be penalized for not obtaining further reductions, down to the 350 MW minimum that existed at the time of the negotiations of the amendment. From our review of the facts, we conclude that setting the contract demand at 400 MW for Phase 5 involved neither imprudence nor extraordinary bargaining skills.

Three items of evidence undermine SDG&E's claim that only its superior negotiating abilities permitted it to obtain a reduction in the contract demand for Phase 5. First, SDG&E appears to have agreed to the 400 MW level very early in the negotiations and certainly before TEP gave any indication that it intended to exercise its option to set contract demand at the 500 MW maximum. Second, during this period, SDG&E's own written analyses questioned TEP's ability to deliver capacity above the 400 MW level. Third, the sworn testimony of TEP's president in a proceeding before the Arizona Corporation Commission supports the notion that TEP would not have elected to deliver more than 400 MW. In that proceeding, Einar Greve, TEP's president, testified about these negotiations:

"[W]e renegotiated a contract where instead of 500 megawatts, we deliver 400 megawatts in that phase. But we extended the phase into '89. That was very fortunate because we wouldn't have 500 megawatts to give them. But sometimes you are lucky." (Ex. 601, Item 10, pp. 53-54.)

Thus, it is not apparent that setting contract demand at 400 MW represented any concession by TEP.

On the other hand, little evidence supports DRA's position that SDG&E could have obtained greater concessions through harder bargaining. Under the earlier contract, TEP had the exclusive right to designate contract demand for Phase 5 as high as 500 MW, and it was unlikely to relinquish this power without concessions from SDG&E. TEP had every incentive to set the contract demand at as high a level as it could predictably deliver, and it had already committed itself to deliver at least 350 MW. Even some of SDG&E's preliminary analyses, which are strongly

relied on to support DRA's position, estimated that "there are insufficient reserves in the TEP system to provide capacity beyond the upper-300 MW range," a statement that suggests that TEP could deliver up to about 400 MW.

In addition, the immediate negotiating history had demonstrated TEP's unwillingness to consider substantial reduction in the contract demand. In April 1983, SDG&E had proposed to reduce contract demand to 230 MW during Phase 4 and to 350 MW during Phase 5. TEP had flatly rejected that proposal.

The impression that we are left with from the evidence in the record is that the discussions among SDG&E's Tom Page and Ronald Watkins and TEP's then-president and chief executive officer, Theodore M. Welp, that resulted in the agreement to set capacity at 400 MW recognized both TEP's power to set contract demand at up to 500 MW and its difficulty in delivering reliable capacity at higher than the 400 MW level. In a realistic attempt to resolve this issue and other less significant issues so that negotiations could focus on more disputed areas, they agreed to set the contract demand at 400 MW, which is probably about the level TEP would have chosen under its existing option.

This conclusion is supported by incidental materials in the record and by common sense. Curiously, we find ourselves unable to embrace the position of any of the parties. SDG&E relied a great deal on repetition of its belief that it acted reasonably, but we found several logical holes in its arguments. For example, SDG&E repeatedly concluded that it had no leverage in its negotiations with TEP, although the market for capacity in the Southwest at that time was a classic example of a buyer's market, when buyers should have maximum leverage over the crowd of sellers eager to market their products. If SDG&E believed it lacked leverage in a buyer's market, what will it claim and how will it respond when the market becomes a seller's market? SDG&E's repeated insistence that it had no leverage underscores DRA's

argument that SDG&E was locked into a contract that required it to buy too much capacity at too high a price; thus, TEP was unwilling to relinquish much of the good deal it had struck.

We are also sympathetic to DRA's criticism that SDG&E failed even to attempt to negotiate reductions in the contract demand beyond the 400 MW that TEP seemed prepared to agree to. In light of the high price and level of demand in the existing contract, SDG&E should have continued to offer proposals that would have resulted in further reductions, even if TEP continued to reject those proposals. For example, after TEP rejected SDG&E's April 1983 proposal for rather large reductions in contract demand for both Phase 4 and Phase 5, SDG&E seemed to believe that no further attempts to reduce contract demand would bear fruit. It failed even to present other proposals with reductions in demand as an element until its officers agreed with TEP's to set the demand for Phase 5 at 400 MW. We cannot help but be disturbed when the representatives of large and essential public utilities appear to show less creativity and persistence in their negotiations than negotiators of far less important transactions, such as contracts for the transfer of real estate or for the services of professional athletes.

While we have just stated our sympathy with some of the arguments of DRA and UCAN, we are disappointed that these parties have failed to follow through on their recommendations. DRA's position seems to be that since SDG&E was not persistent and aggressive in seeking further reductions in capacity, we should assume that it could have achieved reductions down to the 350 MW minimum and that all costs in excess of those needed to pay for 350 MW should be disallowed. We believe that we cannot make such a disallowance without some indication of what sort of success a utility who had negotiated more creatively would have achieved. If such a utility would have succeeded only in reducing the contract demand to 395 MW, it would not be appropriate to disallow all

amounts above those needed to pay for 350 MW. But DRA and UCAN have presented no evidence on this point. They are like a plaintiff in a personal injury action who has proved liability but has presented no evidence on damages. Although the general burden of proof remains on the applicant, we believe that DRA's and UCAN's approach requires them to bear some responsibility for establishing some baseline measure of the results of the prudent behavior they advocate.

In this context, we have concluded that the outcome of this portion of Amendment 3, which appears to have resulted from the discussion among the officers of the two companies, is at about the level that could have been achieved by a prudent utility under the circumstances. The evidence suggests that TEP was prepared to exercise its option to set the contract demand at about 400 MW, as demonstrated by both SDG&E's contemporaneous analysis and Greve's later testimony. The evidence further shows that, although SDG&E did not persistently and creatively present further proposals to reduce the contract demand to TEP, it was unlikely that further reductions could have been obtained without additional valuable concessions by SDG&E. Therefore, we will allow SDG&E to recover its expenditures connected with this issue.

c. The Five-Month Extension of Phase 5

DRA has criticized SDG&E for agreeing to an extension of Phase 5 from 19 months to 24 months during a period when SDG&E's forecast showed no need for additional capacity. DRA cites an analysis in which one of SDG&E's negotiators pointed out that it made no sense to agree to an extension that ended SDG&E's purchases from TEP in May 1989, just at the start of the summer peak period.

From our review of the record, we conclude that the extension was closely tied to the reduction in contract capacity. In combination, the reduction of contract demand and the extension of the term of Phase 5 paralleled earlier proposals by SDG&E. It is a logical linkage that allows one party to secure demand

reductions while lessening the effect on the selling party's overall revenues.

In addition, SDG&E's contemporaneous analyses showed that a 24-month Phase 5 with a demand of 400 MW was more beneficial than a 19-month Phase 5 at 500 MW, as called for before the amendment. We also believe that it was reasonable, in light of projections of capacity in the Southwest, for SDG&E to fear that TEP would purchase capacity from other utilities, at prices less than the price they would receive from SDG&E, to make up for any inability of its system to supply the maximum 500 MW that its existing option allowed.

We conclude that no disallowance should result from the extension of Phase 5.

We should note, however, that a cloud is cast over this conclusion by SDG&E's argument that its contemporaneous analysis calculated that the five-month extension of Phase 5 would provide energy and capacity for \$11 million less than SDG&E's long-term avoided cost, which was based on on-system oil and gas generation and economy energy purchases from the Northwest and Southwest. SDG&E cites testimony to the effect that reserve margins in the Southwest were expected to be between 37% and 90% in 1988 and 1989. With expected reserve margins of that magnitude, SDG&E could reasonably rely on economy energy and short-term purchases during the five months of the extension, since substantial energy would appear to be available even during peak hours. And since the extension did not cover SDG&E's summer peak in any event, SDG&E's ability to meet its highest demand would be unaffected by this strategy. As SDG&E stated in its Opening Brief (at 99), "Had a capacity deficiency occurred on Tucson's system during Phase 5, it would have been for short periods which could easily have been made up by purchases from other utilities." The same logic would apply to SDG&E's system during this period.

Thus, SDG&E's original calculation and continuing claim of an \$11 million benefit from the extension contradicts its primary argument for accepting the extension. This contradiction does nothing to assuage our existing doubts about the quality and soundness of SDG&E's thinking and analyses in its negotiations during this period.

d. The Additional 21 MW in Phase 4

SDG&E concedes that it accepted the redefinition of the net reliable capability of Springerville Unit 1, and that it did so despite the fact that it did not need additional capacity and despite the cost that the redefinition would place on SDG&E. SDG&E states that it accepted the redefinition as part of a package of alterations, most of which were beneficial, which resulted in a net savings of \$23 million, according to SDG&E's calculations.

In exchange for accepting the redefinition, SDG&E claims that it received access to coal energy that was much less expensive than the likely alternative of oil- and gas-fired generation and economy energy purchases. Taking into account the lower cost of coal energy reduced the net cost of the additional 21 MW to \$6 million. It also received the other benefits of Amendment 3: the extension of Phase 5 and the reduction of the contract demand to 400 MW, the securing of additional transmission rights for 106 MW, and the removal of a contingent obligation to reimburse TEP for 170 MW of firm transmission charges paid to other utilities during Phase 5.

We can accept SDG&E's point that the 21 MW was a concession that was part of the total Amendment 3 package, but we do not accept the assumptions underlying the calculation it has offered to support this portion of the bargain. Nevertheless, the record demonstrates that SDG&E performed contemporaneous analyses of the value of the various proposals that were involved in the negotiation of Amendment 3. Those analyses show that SDG&E believed that there were substantial benefits to be gained from the

package of changes in Amendment 3, and that the overall benefit of these changes outweighed the cost of accepting an additional 21 MW by a substantial margin. Just the transmission agreements, to choose one of the less controversial examples, were calculated to be worth about \$15 million, or about twice the net cost of the additional 21 MW. Under these circumstances, we conclude that SDG&E made an informed and reasonable decision to accept the burden and cost of the additional 21 MW to gain the benefits that accompanied this proposal. No disallowance is appropriate for this decision.

e. The Amendment of the Assignment Clause

The evidence on this element of Amendment 3 is quite damning to SDG&E. Not only did SDG&E fail to appreciate the significance of its agreement to alter the assignment clause at the time of the negotiations, but it appears, so far as the record reflects, that SDG&E even today does not appreciate precisely what it did when it acceded to TEP's request to change the clause.

TEP requested changes to the assignment clause, which originally provided that neither party could assign the contract without the written consent of the other party to the contract. The clause also contained the usual provision that such consent could not be unreasonably withheld. The change that TEP requested would have eliminated the requirement of consent for assignments to wholly owned subsidiaries of the parties.

The stated reason for TEP's request was that the change was needed for financing purposes. SDG&E's testimony was very unclear about its understanding of the reasons for the change, and SDG&E appears not to have attempted to determine more specifically why the changes were being requested. SDG&E's contemporaneous analysis focused on the implications of an assignment to a wholly owned subsidiary, and concluded that such an assignment would not affect SDG&E.

From the start, SDG&E apparently did not comprehend what was being requested of it, and its analysis thus focused on the wrong questions. SDG&E's analysis considered the effects it could foresee from a generic assignment to a TEP subsidiary. When compared to the wording of the existing contract, SDG&E was in essence being asked to waive its right to investigate specific assignments in circumstances SDG&E might not be able to foresee, to waive its right to assure itself that these assignments were reasonable, and, more importantly, to waive its right to object to unreasonable assignments to subsidiaries of TEP. The analysis should have focused on the implications of the waiver and the reasons TEP requested it. We believe that the right not to consent to unreasonable assignments to TEP's subsidiaries was a valuable right that SDG&E should not have relinquished without corresponding concessions from TEP.

It is ironic that SDG&E apparently unknowingly gave up a valuable right (and one that perhaps had even greater value to TEP than to SDG&E) during a period during which it still insists it had no bargaining leverage. On one issue where SDG&E clearly had leverage, it waived its right without obtaining any concessions from TEP.

SDG&E apparently agreed to this change as an accommodation to TEP. It is unexplained why such an accommodation should have been granted gratis to a company which had apparently taken a rather hard-line in the negotiations, at least with regard to SDG&E's desires to reduce contract demand.

Thus, SDG&E waived a valuable right without obtaining counterbalancing concessions from TEP. Moreover, SDG&E appears to have failed even to appreciate the nature of its waiver. Under these circumstances, we conclude that SDG&E acted imprudently in agreeing to the changes in the assignment clause. We will discuss the consequences of this imprudence in a later section of this decision.

2. The Assignment and Spin-off of Alamito

The first consequence of the revision of the assignment clause of the contract came shortly after the negotiations for Amendment 3. In late 1983, TEP received the Arizona Corporation Commission's permission to transfer two of its coal-fired generating units, including Springerville Unit 1, to its subsidiary, Alamito. On June 1, 1984, TEP transferred Springerville Unit 1 and its 50% share in San Juan Unit 3 to Alamito. At the same time, TEP assigned its contract with SDG&E to Alamito. Because at that time Alamito was still a wholly owned subsidiary of TEP, and because of the change in the assignment clause agreed to five months earlier, TEP did not need to obtain SDG&E's consent to the assignment. FERC later found that the contract had been assigned "to enable Alamito to finance some \$387 million and so that the proposed spin-off of Alamito would not be taxable to Tucson's shareholders." (See Ex. 600, p. II-12.)

On June 8, TEP's then-executive vice president Greve informed SDG&E of the assignment. On July 6, TEP filed for FERC's approval of the assignment and requested an effective date for the assignment of November 1, 1984. SDG&E did not become aware of this filing until the notice of the filing appeared in the Federal Register of July 23, 1984. The notice stated that petitions to intervene or protest should be filed by July 27, 1984.

SDG&E appears to have done little between June 8 and the appearance of the notice on July 23 to investigate the assignment's effect on SDG&E. The notice in the Federal Register apparently spurred SDG&E to investigate the implications of the assignment, but SDG&E did not file a protest or a petition to intervene in the FERC proceeding.

So far as the record reveals, SDG&E's investigation led to a series of questions about the assignment. SDG&E turned to TEP for answers to those questions. A telephone call in late July resulted in a reassurance that the assignment would not affect

SDG&E, but little detailed information was conveyed. The next apparent contact with TEP was on August 31. This was a telephone call to arrange a meeting to answer the specific questions that SDG&E had developed. During this call, TEP again reassured SDG&E that the assignment would not affect SDG&E, and some specific information was exchanged. SDG&E posed some of its questions to TEP in a letter of September 27, and the meeting with TEP took place on October 5. In the meantime, however, FERC had approved the assignment on October 1, with an effective date of November 1. TEP addressed the questions raised in SDG&E's September 27 letter at the meeting of October 5, and apparently SDG&E was satisfied with the responses.

The assignment took effect on November 1, 1984. In December 1984, TEP's Board of Directors agreed to spin-off Alamito as an independent company.

We have two serious reservations about SDG&E's actions during this sequence of events.

First, many of the questions raised during SDG&E's consideration of the effects of the assignment underscore the significance of the loss that SDG&E had suffered when it agreed to alter the assignment clause. Within a few months of that agreement, SDG&E was raising the types of questions that it should have considered before it waived its right to object to unreasonable assignments to subsidiaries. For example, the memo of August 15 raises several concerns about the capital structure of Alamito and closes with the question, "Are we absolutely sure that Tucson doesn't have to get our permission to do the assignment?" (Ex. 601, Item 13.) If SDG&E concluded at the time of the change in the assignment clause that such an assignment would not affect it, by the time it confronted an actual assignment several months later, it had developed a long list of the assignment's possible effects on its costs under the contract. (See Ex. 601, Items 13 and 14; Ex. 617.)

Second, we agree with DRA that SDG&E was remarkably relaxed in pursuing information on the effects of the assignment. After it was first informed of the assignment, it did nothing for nearly seven weeks when FERC's notice came to its attention. Even then, it failed to protest or intervene in the FERC proceeding, although it apparently hoped somehow to obtain information from FERC (Ex. 601, Item 13). By the time it actually met with TEP, FERC had already approved the assignment, and SDG&E had lost much of the power it had to object to any unfavorable aspects to the assignment that it may have uncovered.

SDG&E also relied heavily on the reassurances and information it received from TEP in its evaluation of the assignment, although by this time SDG&E had ample reason to be suspicious of the accuracy or completeness of TEP's responses. Because of this overreliance on TEP for its information, SDG&E failed even to suspect the possibility that the assignment was a preliminary maneuver to the eventual spin-off of Alamito.

The spin-off shortly after the effective date of the assignment had immediate consequences for SDG&E. Because Alamito's capitalization relied heavily on debt, SDG&E would be paying more than Alamito's true cost of service under the capitalization formula in the contract, which assumed a higher proportion of more costly equity financing. SDG&E recognized the implications of the spin-off, and on January 23, 1985, one of its vice presidents authorized "an investigation of this matter for the purpose of preparing to initiate litigation or any other legal proceedings arising out of this transfer of control." He also recognized that the "transfer may place contract performance to SDG&E in jeopardy" and stated the need for the company promptly to evaluate whether the transfer amounted to a breach of the contract (Ex. 601, Item 16).

Under the terms of FERC's 1979 order approving the original contract, Alamito had to file a justification of its rates

for Phase 4 and the costs supporting those rates by April 1, 1985. Because FERC was unlikely to approve rates based on TEP's, rather than Alamito's, capital structure, SDG&E and Alamito began negotiating for amendments to the contract.

3. Amendments 4 and 5

The issues raised by Amendments 4 and 5 are closely related and will be addressed together.

a. Alamito's Capital Structure

The primary element of Amendment 4 was a revision of Alamito's assumed capital structure for purposes of calculating the cost of service that formed the basis for the demand charge to SDG&E. After the spin-off, Alamito's capitalization was weighted heavily toward debt, and payments based on TEP's more balanced capital structure would effectively overpay Alamito. The negotiations resulted in an agreement to set the capital structure, for purposes of the contract, at 70% debt and 30% common equity.

DRA believes that this ratio was unnecessarily high, and that SDG&E's failure to achieve reductions in the level of contract demand and in the equity portion of the capitalization directly resulted from SDG&E's waiver of its rights under the assignment clause. According to DRA's line of argument, because SDG&E unreasonably gave up its right to investigate the assignment of the contract to Alamito before the assignment occurred, the assignment went through quickly, easily, and without SDG&E's influence. Once the assignment was approved, the stage was set for the spin-off. Even in the negotiations following the spin-off, SDG&E's attitude was that it had no leverage to effect changes in the contract. SDG&E passively accepted Alamito's representations about its future capitalization, DRA asserts, even though its capital structure at the time was 20% equity and 80% debt. If SDG&E had bargained more effectively and if it had retained the leverage provided by the original assignment clause, DRA argues, it could have obtained greater concessions on contract demand and capital structure. Even

during the negotiations, SDG&E apparently failed to recognize that it had leverage arising from Alamito's strong desire to avoid FERC's review of the contract. DRA recommends a disallowance, and estimates that this disallowance may be measured by the difference between the agreed 70/30 capital structure and the 21/79 ratio that was the highest proportion of equity that actually occurred during Phase 4. This amounts to \$11.1 million.

SDG&E argues that it acted prudently in fixing the capital structure. Compared to the existing contract, SDG&E benefited greatly from the revised capital ratios. Moreover, it was wise at the time to fix the ratio, since any increase in equity above the agreed levels or any downgrading of Alamito's debt would have increased SDG&E's demand charges under the contract. Furthermore, FERC had indicated that it would not approve a contract with prices that floated to reflect actual capitalization.

As we have indicated, we agree with DRA that SDG&E acted imprudently in waiving its rights under the assignment clause without obtaining concessions from TEP. We are also persuaded that this waiver eventually influenced negotiations for Amendment 4. There is little doubt that SDG&E would have been in a much stronger position if it had retained its right to consent to proposed assignments, a right which it could have parlayed into more complete disclosures by TEP. We hope that SDG&E would not have consented to the proposed assignment to Alamito without a thoughtful consideration of the consequences. We are convinced that somewhere along the line, most likely during the negotiations for Amendment 4, retaining the right to withhold its consent to unreasonable assignments to subsidiaries would have resulted in direct benefits to SDG&E, benefits that were lost because of the waiver.

For example, retaining the right to withhold its consent to unreasonable assignments would have given SDG&E additional leverage in obtaining information about the reasons for the

assignment of the contract from TEP to Alamito. In light of the fact that Alamito's management began considering a buy-out as early as Spring 1984 (Ex. 641; see Tr. 69:7929), more complete information might have led SDG&E to consider the implications of a leveraged buy-out for its contract with TEP. SDG&E's witness testified on what the company's negotiators would have done with such information:

"Q: If you had known about the undisclosed plans or consideration of a leveraged buyout, would you have negotiated for an actual capital structure as opposed to the 70-30 structure that you did agree to?

"A: . . . : I would have negotiated something that would have given us the full benefits of the--of their expected plans. If they expected a leveraged buyout, they would have a 99 percent debt-1 percent equity, then we would have worked something that would have reflected those costs to Alamito and reduced costs to SDG&E. Whether it would have been actual capitalization or not I can't say today....

"Q: Well, would it be fair to say if you had known about their undisclosed leveraged buyout that you would have either negotiated an actual capital structure or hypothetical capital structure that had a higher percentage of debt to equity?

"A: It could have been something like that. I think the main point was that the costs would have been lower if we had known that a leveraged buyout was planned. The costs we would have eventually settled on for the demand charge would have been lower than what they are now." (Tr. 62:7063-7064.)

Although SDG&E has argued that the leverage buy-out of a utility was unprecedented and therefore completely unforeseeable, we note that the bond counsel who mentioned the possibility of a leveraged buy-out to Alamito's management also advised SDG&E during the same period (Tr. 69:7949, 7951). This suggests that SDG&E was

capable of anticipating the possibility of a leveraged buy-out if it had retained a reason for conducting a thorough investigation of the implications of the assignment. But since it had waived its right to object to assignments, it had no reason to pursue the implications of acts that it was powerless to influence.

DRA has attempted to quantify the results of SDG&E's imprudence by comparing the agreed and actual capital ratios. While DRA suggests that further reductions in demand levels for Phase 4 could have been obtained, it has not attempted to quantify that reduction, and it had focused entirely on the capital ratios. While we agree that some benefits could have been obtained, we dislike DRA's comparison to actual, historical equity levels. This approach relies on hindsight, ignores the legitimate benefits of having fixed capital ratios, and overlooks FERC's indication that it would not approve a floating capital ratio.

Nevertheless, we believe that DRA's estimate bears some relation to SDG&E's foregone benefits. We agree with DRA that it would have been possible for SDG&E to use the leverage it had in the original assignment clause to negotiate a higher debt/equity ratio than it did, or a comparable concession. We have already stated our disagreement with DRA's calculation. From the sparse information available in the record, our sense is that SDG&E could have negotiated a ratio of 75/25 or roughly equivalent concessions if it had retained its right to withhold consent to unreasonable assignments. This ratio is half of the difference between Alamito's actual capitalization at the time of Amendment 4 (80/20) and the agreed ratio (70/30).

Using the method shown in Ex. 523, we calculate the difference between the agreed 70/30 ratio and our assumed 75/25 ratio to be \$5.9 million. Appropriate interest at the ECAC rate should also accrue on this amount. As shown in Appendix B, the total amounts to about \$7.0 million as of September 1, 1988. We will therefore disallow recovery of this amount. This figure is

roughly half of DRA's recommendation; thus, it recognizes some of the benefits of the fixed capital ratio that DRA ignored, and it comports with our general sense of the cost of relinquishing the right to consent to the assignment.

b. Other Agreements

SDG&E points out that it received other benefits from Amendment 4. Specifically, it obtained the right to have its commercial operation date consultant present at the Springerville Unit 1 construction site, and the capacity factor of Springerville Unit 1 was increased from 60% to 65% for purposes of SDG&E's entitlement to energy associated with the capacity it had purchased.

Although we agree that these items provide some benefits to SDG&E, we do not think that the benefits outweigh the capitalization element of Amendment 4. SDG&E had encountered no difficulties with access to the Springerville site up to that time, so the added benefit of having its consultant present at the site is small. The increase in capacity factor would be beneficial only if SDG&E actually needed the added energy made available to it by the increase. SDG&E did not expect to need the energy, so this portion of the amendment operated like an insurance policy against unexpected events. Again, we conclude that the benefit is real, but small.

Although we acknowledge that these small benefits were obtained, we are not persuaded to modify the disallowance we have adopted in connection with the capital structure.

V. The Transactions with Comision
Federal de Electricidad (CFE)

A. Background

On November 12, 1980, SDG&E entered into a contract for the purchase of capacity and energy from CFE. The contract's term was 10 years, starting on the commercial operation date of the last of three geothermal units CFE would construct at Cerra Prieto, and the contract demand was set at 150 MW. After a tremendous devaluation of the Mexican peso, the contract was amended. According to both SDG&E and DRA, this amendment resulted in savings to SDG&E of \$550 million as compared to the original contract.

Purchases under the contract began on February 1, 1986, and through April 30, 1986, the end of the period under review in this case, CFE supplied power to SDG&E with an availability of more than 99%.

In a related development, from 1984 through 1986, CFE was unable to pay its vendors, including SDG&E, in dollars for purchases of equipment and energy. For its sales to CFE, SDG&E created a dollar banking arrangement. Under this arrangement, the amount CFE owed SDG&E was recorded in an interest-bearing account, and CFE was given the option of repaying its debt in either dollars or energy. As a further precaution, SDG&E obtained an insurance policy to guarantee repayment, and CFE paid the premium. Energy repayments from November 1984 through April 1985 were credited on the basis of SDG&E's hourly decremental cost, and repayments from May 1986 through January 1986 were based on 90% of SDG&E's hourly decremental cost.

Although DRA, apparently joined by City, found SDG&E's dealings with CFE during the review period to be reasonable, UCAN raised several issues about these transactions.

B. UCAN's Position

UCAN raises three concerns about the energy-for-energy transactions. First, UCAN wonders whether the Commission was

notified of these transactions. Second, UCAN notes that purchases from the Western Area Power Administration (WAPA) are at 85% of decremental cost and UCAN questions why CFE received more favorable terms. Third, UCAN asserts that SDG&E was unable to verify that the repayment insurance existed before 1986.

UCAN is also concerned about procedures for purchasing economy energy. A single transaction scheduler is responsible for arranging for purchases from and sales to up to 35 other utilities during a 40-minute period each hour. This scheduler must work 12-hour shifts. UCAN questions whether these working conditions give the scheduler a reasonable opportunity to purchase the cheapest energy available. Moreover, UCAN asserts that the scheduler's supervisors have no way of determining whether the scheduler has bought the cheapest possible energy. Finally, UCAN argues that the present system may prevent SDG&E from purchasing low-cost economy energy that has to be transmitted through the territories of other utilities.

C. SDG&E's Position

SDG&E responds to UCAN's query about whether the Commission was aware of the exchanges with CFE by pointing out that this proceeding is the appropriate time for the Commission to review these exchanges, and SDG&E asserts that the Commission's auditors have in fact reviewed these transactions in connection with this case.

As for the comparison with purchases from WAPA, SDG&E believes that UCAN has misunderstood the use of decremental cost in the CFE transactions. In this context, "decremental cost" means "the lowest estimated expense it would otherwise have incurred had it generated or purchased the energy from other sources." Thus, according to SDG&E, energy returned under the dollar banking arrangement gave SDG&E energy as cheap as or cheaper than any other available economy energy, including WAPA energy.

SDG&E also asserts that the record contains clear testimony that the insurance was in effect before 1986 and that all economy energy transactions are well-documented.

In response to UCAN's assertions about energy purchasing procedures, SDG&E notes that its schedulers are assisted by automatic phone systems available for contacting other utilities and by a transaction evaluation computer program. Moreover, SDG&E argues that voluminous records are maintained of all of SDG&E's hourly transactions.

As for the problem of purchasing energy that must be transported through the territories of other utilities, SDG&E points out that SWPL is in part designed to avoid just such problems by giving SDG&E direct access to the energy available from several Southwestern utilities.

D. Discussion

Although UCAN has raised many concerns about the transactions with CFE, it has not demonstrated that SDG&E has acted in anything other than a reasonable and prudent fashion. It is acknowledged that amendments have saved SDG&E and its ratepayers over half a billion dollars compared to the original contract. SDG&E has demonstrated to our satisfaction that its definition of decremental cost for repayment of the dollar banking account balance ensured that energy repayments were the cheapest source of energy at the time of the repayment. UCAN has also failed to demonstrate that SDG&E's practices for securing economy energy were unreasonable or resulted in any lost opportunities for purchasing the cheapest possible energy.

We conclude that SDG&E's purchases from CFE during the period we are concerned with in this case were reasonable and prudent.

VI. The 1979 Contract With PNM

SDG&E agreed to purchase up to 236 MW of capacity and associated energy from PNM in a contract signed on October 30, 1979. The purchases commenced on the commercial operation date of the San Juan Unit 4 plant and terminated on April 30, 1988.

Although DRA criticized the level of the demand charges under this contract, it believes that SDG&E was very fortunate that Units 1 and 2 of the Palo Verde nuclear power plant were delayed. Provisions in the contract tied the level of SDG&E's capacity obligation to the completion date of those units, and DRA calculates that the delays saved SDG&E over \$143 million in charges for unneeded capacity. Apparently because of the reduced capacity obligation under the contract, DRA finds SDG&E's administration of the contract during the record period to be reasonable.

We conclude that the evidence in this proceeding supports a finding that SDG&E's administration of this contract during the record period was reasonable.

VII. The 1985 Contract With PNM

A. Background

In 1984, SDG&E began taking steps to respond to the expiration of three purchased power contracts amounting to over 600 MW, or about 20% of SDG&E's total capacity, before the 1989 summer peak. These expiring contracts included all of SDG&E's capacity from coal and hydroelectric plants.

In 1984, SDG&E commissioned Charles River Associates to perform a study of the bulk power market. This market study found it useful to divide the bulk power market into one group of existing resources able to supply power by 1989 and another group of resources planned to be completed in the 1990s, which were subject to uncertain prices and completion dates. The market study concluded that purchases from existing baseload resources were likely to be cheaper than purchases from baseload resources planned for the 1990s.

Among the near-term resources identified by the market study was a power purchase from PNM. Most of the power would come from coal plants, fulfilling SDG&E's goal of diversifying the fuel sources of the plants that generate electricity for use in its system, and PNM's estimated price was among the lowest identified in the market study. The primary obstacle seen in the study was the need for arranging transmission from PNM's system to SWPL's terminus at Palo Verde.

The contract was signed by SDG&E on November 4 and by PNM on November 5, 1985. SDG&E agreed to purchase 100 MW of capacity and associated energy from May 1, 1988, through April 30, 2001.

Because the contract was signed during the period of the reasonableness review, it is appropriate in this proceeding to consider the reasonableness and prudence of SDG&E's decision to enter into the contract with PNM.

The challenges to the reasonableness of the PNM contract fall into four general areas. First, did SDG&E really need the additional capacity represented by the contract? Second, was the PNM agreement a reasonable choice for meeting any need for additional capacity? Third, are the terms of the contract reasonable? And fourth, has SDG&E acted reasonably in administering the contract?

SDG&E's answer to all these questions is yes. DRA, City, and UCAN question the logic of SDG&E's conclusion that it needed additional capacity and believes that other, cheaper alternatives were available for meeting the system's needs. UCAN, in particular, believes that SDG&E unreasonably failed to consider the availability of conservation and load management to reduce demand and eliminate the need for the contract. DRA also challenges the reasonableness of several of the terms of the contract and concludes that SDG&E has missed several opportunities to cancel or renegotiate a contract that now appears to be more expensive than many other options.

We will summarize each party's answer to these four questions.

B. The Need for Additional Capacity

1. SDG&E's Position

In 1984, facing the expiration by 1989 of over 600 MW of existing purchased capacity, SDG&E commissioned the market study. As a follow-up to the market study in 1985, SDG&E decided to revise its resource plan to determine more precisely how much capacity it needed to have available in the future. This revision took place under the direction of its Resource and Operating Committee (ROC) and will be referred to as the ROC plan. SDG&E was also guided by a strategy that called for limiting long lead-time commitments to approximately 50% of expected need. When this strategy was applied to the 600 MW of the expiring contracts, SDG&E concluded that it should attempt to secure about 300 MW of long lead-time

commitments. Long-lead time commitments were defined as resources that would not deliver power for four or more years. SDG&E also set a goal of developing a diversified resource mix.

The ROC plan, as adopted in June 1985, set out forecasts of SDG&E's loads and resources from 1985 through 2004. According to the ROC plan, even with the PNM purchase, SDG&E would still be 19 MW short of its 20% target reserve margin in 1988. SDG&E could have met its projected 1988 need without the PNM purchase by restarting its Encina 1 or South Bay 3 plants, but SDG&E preferred to keep these plants in reserve to meet short-term needs and unexpected shortages.

The demand forecast of the ROC plan was essentially the same one SDG&E had submitted to the California Energy Commission as part of the Energy Commission's sixth Common Forecasting Methodology (CFM-6) proceeding. The single major change was that SDG&E had revised its proposed CFM-6 demand forecast to reflect more recent estimates of self-generation. SDG&E did not rely on the Energy Commission's adopted demand forecasts in its 1985 Electricity Report (1985 ER), which was issued on April 29, 1985, because SDG&E believed that the forecasts were outdated, a belief that was supported by the fact that SDG&E's actual peak in both 1984 and 1985 substantially exceeded the 1985 ER's forecasted peak load for those years. SDG&E considered the 1985 ER forecast, but it did not rely exclusively on that forecast, because it appeared to be about 100 MW too low at its starting point. SDG&E believes that it was reasonable under those circumstances to use the ROC plan, which was based on its submission to the CFM-6 proceeding and was adjusted for more recent information on the extent of self-generation.

2. DRA's Position

DRA believes that the demand forecast in SDG&E's ROC plan was flawed in many respects, and as a result SDG&E contracted to purchase capacity it did not need.

First, DRA notes that the need for 39 MW of additional capacity in 1988 shown in the ROC plan ignores the plan's assumption that 598 MW of existing generating plants would be put in reserve shutdown status. If these existing plants are taken into account, DRA argues, SDG&E's own plan showed that it had substantial excess capacity through at least 1988. DRA supports its argument by referring to two of SDG&E's internal memos, which questioned the need for additional capacity in 1988 (Exs. 655 & 658, Item 2).

Second, DRA compares the ROC load and resource forecast with the forecast submitted in late 1984 as part of SDG&E's General Rate Case (GRC) for test year 1986 and suspects that the ROC plan manipulated its forecast to fit the PNM contract. The GRC resource plan showed the Encina 1 plant returning to service in 1988; in the ROC plan the return is delayed until 1989. In the GRC plan, two Silver Gate units are returned to service in 1990 and 1995; the ROC plan does not include their return. DRA notes that with Encina 1, South Bay 3, and the Silver Gate plants in the resource plan, SDG&E would need only 82 MW of capacity in 1989, and under its strategy of limiting long lead-time commitments to half of projected need, SDG&E would need to secure only 40 MW of capacity in 1989. DRA also notes that, compared to the GRC resource plan, the ROC plan projects higher demand levels and about 40% less conservation and load management.

Third, DRA argues that if SDG&E had used the official State demand forecast adopted by the Energy Commission in the 1985 ER and had included the existing capacity represented by the shut plants that it intended to return to service, it would have realized that it did not need additional capacity until 1994.

Fourth, DRA responds to SDG&E's belief that the 1985 ER forecast was out of date, as demonstrated by the fact that actual peak demand exceeded the 1985 ER's forecast for both 1984 and 1985,

by noting that the ROC plan's forecast of peak demand in 1985 exceeded actual peak demand by 89 MW.

From these points DRA concludes that SDG&E was unreasonable to rely solely on the ROC forecast to determine the need for additional capacity, a need which was eventually filled by the PNM contract.

3. UCAN's Position

UCAN asserts that SDG&E knew in 1985 that it would not need additional power in 1988 and that existing units could meet projected demand for 1988. The evidence in this case, according to UCAN, suggests that SDG&E agreed to take capacity earlier than it needed it as a concession to PNM. UCAN believes that such a concession was not necessary in the buyer's market that existed at that time.

4. SDG&E's Response

SDG&E asserts that it was prudent in relying on the demand forecast of the ROC plan. In SDG&E's opinion, the demand forecast of the 1985 ER, although it had been recently adopted, was the result of a long proceeding and was unavoidably out of date. The ROC plan was based on SDG&E's filing in CFM-6, which was SDG&E's most recent forecast. SDG&E asserts that it was reasonable and prudent for it to use the most recent information available when it had to decide whether to contract for the purchase of additional capacity.

SDG&E also argues that it acted prudently in placing Encina 1 and South Bay 3 in reserve shutdown until 1989. Its strategy was to try to obtain cost-effective coal capacity and to reserve Encina 1 and South Bay 3 as short lead-time options. Its strategy of limiting long lead-time commitments to about 50% of the expected need for capacity required it to maintain some short lead-time flexibility.

Furthermore, SDG&E thinks it was prudent to leave the Silver Gate plants mothballed. In keeping with its goal of fuel

diversification, SDG&E believed that it should not restart Silver Gate until it had exhausted all competitive options that did not rely on oil or gas.

Finally, SDG&E disputes DRA's suggestion that it doctored its ROC plan to fit the PNM contract.

C. The Selection of the PNM Contract to Fill the Expected Need

1. The Timing of the Start of the Contract

It is now undisputed that the PNM contract would have been more beneficial if it had begun in 1989, rather than in 1988. Even the economic analysis SDG&E performed in September 1985 showed that the contract would be more expensive than avoided cost in 1988 and 1989 in the expected case. The timing of the start of the contract drew comments from the parties.

a. SDG&E's Position

For SDG&E, the timing issue arose out of some of the findings and recommendations of the 1984 market study. The market study (Ex. 530) surveyed the market for several forms of power in the Western United States, Canada, and Mexico from the mid-1980s through the turn of the century. For the capacity market, the study found that SDG&E's opportunities fell into two groups.

One group consisted of purchases from existing or nearly completed resources. The capacity from this group was expected to be available by 1989. Because of these resources existed or were nearly completed, the timing and price of these options were more certain, and compared with the second group, the prices were noticeably lower.

The second group consisted of opportunities, primarily co-ownership opportunities, for obtaining capacity from planned resources. These resources were expected to come on line in the mid-to-late 1990s. However, the market study found that the start-up of these plants could be delayed by various circumstances. Few opportunities existed from 1990 through 1993. In addition, the

prices in the second group were projected to be substantially higher than the pre-1990 group.

According to SDG&E, the market study also indicated that SDG&E faced some competition for the least expensive opportunities and urged SDG&E to begin preliminary negotiations for the most desirable options. Among the best choices identified by the market study was the PNM contract.

Thus, SDG&E was aware that it might have to accept an earlier than desired start for its capacity purchase in order to secure long-term low prices. Therefore, SDG&E urges the Commission to consider the overall cost-effectiveness of the contract over its full 13-year term, and not just the economics of the first two years.

In addition, SDG&E responds to some of the other parties' criticisms by noting that it attempted to negotiate for a delay in the commencement date until 1989. However, PNM rebuffed this attempt. SDG&E was aware that PNM needed revenues in 1988 because it had agreed with New Mexico regulators to remove part of its excess capacity from its rate base. The details of this capacity inventory arrangement gave PNM a strong incentive to make sales from its excess capacity. (See Tr. 74:8408-8410.)

b. DRA's Position

To a large extent, DRA's approach to the timing issue is to accept SDG&E's challenge to evaluate the cost-effectiveness of the contract over its entire term. However, DRA believes that SDG&E incorrectly counted as a benefit the availability of capacity that it did not need. As was previously discussed, DRA further believes that the period during which SDG&E will pay for unneeded capacity will extend considerably beyond June 1989. This portion of DRA's treatment of this issue will be discussed in connection with the economic analysis of the contract in a subsequent section of the decision.

In addition, DRA faults SDG&E for not bargaining more persistently for a later start date for the contract. In DRA's opinion, merely asking one time for a later commencement and accepting without further discussion or protest the other party's refusal, as DRA believes SDG&E did, are not the negotiating practices of a prudent utility. DRA believes that SDG&E should have pressed its leverage as a buyer in a buyer's market and its knowledge of the financial squeeze that PNM's capacity inventory arrangement had put it in to obtain a valuable and logical concession on the start of the contract.

DRA also finds no evidence that SDG&E had calculated the price it would pay for agreeing to accept unneeded capacity when it was negotiating with PNM. DRA believes that at a minimum, a prudent utility would be aware of the cost of any concessions it made during the course of negotiations. DRA finds that SDG&E was unreasonable for negotiating without even a rough estimate of the cost of the unneeded capacity.

c. City's Position

City argues that SDG&E was imprudent to agree to pay for capacity when it knew it would not need the capacity. City therefore recommends that all demand charges that SDG&E will pay for capacity between May 1, 1988 and June 1, 1989, should not be allowed for recovery from ratepayers.

d. UCAN's Position

On this issue, UCAN largely echoes DRA's point that it was unnecessary, in a buyer's market, for SDG&E to accede to PNM's insistence on an early commencement of the contract.

2. The Economic Analysis of the Contract

a. SDG&E's Position

SDG&E states that it performed a comprehensive cost-effectiveness analysis of the PNM contract. This analysis took place in August and September, 1985, and the results were presented

to management in October 1985. For convenience, this analysis will be referred to as the September analysis.

The September analysis compared the expected cost of the PNM contract with the forecasted costs for purchases from qualifying facilities (QFs), cogenerators and small independent power producers qualifying for certain benefits under the federal Public Utility Regulatory Policies Act of 1978 (PURPA). Under PURPA, QFs are to be paid prices equivalent to the utility's avoided cost, or the costs that the utility avoids by purchasing power from the QF rather than generating an equivalent amount of power itself. The analysis used the capacity prices authorized for QFs selling firm capacity for a term of 12 years beginning in 1988 under Standard Offer Number 2 (SO2). Because the contract guaranteed a 95% capacity factor, and because QFs with high capacity factors could earn bonuses under SO2, these bonus payments were imputed to the PNM contract. The analysis also used a range of forecasts of oil and gas prices to test the sensitivity of the results to changes in fuel prices.

The analysis concluded that the PNM would be cheaper than avoided cost by about \$7.5 million when the expected costs of oil and gas were used in the comparison. The PNM contract would be cheaper than avoided cost in every year of the contract term except 1988 and 1989. When the comparison used a high forecast of oil and gas price forecast, the PNM saved \$88 million compared to avoided cost, but when a low forecast of oil and gas prices was used, the contract was \$51 million more expensive than avoided cost. When the probabilities of various events occurring were taken into account, the expected savings from the PNM contract was \$5 million. The analysis concluded that there was a 65% probability that the contract would be cheaper than avoided cost.

Because the level of capacity values had been controversial in the years preceding the contract signing, the analysis used the capacity prices for SO2 SDG&E proposed in its

1986 general rate case. The capacity prices were adjusted to reflect the probability of need based on its annual loss of load probability. The Commission had approved this general approach, according to SDG&E, although the specific prices SDG&E used in its analysis had not received the Commission's approval.

SDG&E believes that the capacity prices it used in its analysis were conservative. The actual capacity prices for SO2 that the Commission later approved in the GRC decision were slightly higher than the prices used in the analysis. In addition, the analysis used Schedule G-61 gas rates, rather than the Schedule G-5 rates that were applied at that time. The result was that the avoided cost used in the analysis was about 7 mills per kilowatt-hour lower than if G-5 gas rates had been used.

b. DRA's Position

DRA faults SDG&E's economic analysis on several grounds.

First, DRA argues that SDG&E did not use any economic analysis to guide it in its negotiations with PNM. SDG&E performed three preliminary analyses that considered only hypothetical purchases under terms not directly related to the actual terms of the PNM purchase. The fourth analysis, the September analysis, was the only analysis that considered the actual terms of the contract, and it was performed only after the terms of the contract had been agreed on. Thus, the only concrete analysis did not guide the negotiations to allow SDG&E to obtain the maximum economic benefit from the contract; it came at a time when its only function could be to aid in the decision whether to accept or reject the proposed contract.

Second, DRA argues that the results of the September analysis were far from compelling. The analysis projected a savings of only \$5 million over avoided cost, or less than 2% of the total costs of the contract. DRA points out that the margin of error in PROMOD, the computerized production simulation model that SDG&E used in its analysis, is plus or minus 1% and that SDG&E's

projected benefits are within the margin of error of the PROMOD model. Thus, DRA argues that SDG&E could not be certain that its analysis showed any benefit from the PNM contract. The analysis showed that the contract's costs exceeded avoided cost in the first two years of its term, and there was a 35% probability that the contract would exceed avoided cost over the entire life of the contract. In DRA's view, no prudent utility would agree to such a marginally cost-effective contract.

Third, DRA believes that the assumptions of the analysis were flawed. DRA asserts that the analysis used too high of a capacity value for the years when no capacity will be needed. DRA presented two ways of adjusting capacity prices to reflect the lower value of additional capacity when a utility has adequate reserve margins.

DRA's first method for adjusting capacity value is to set the capacity value at \$0 when no additional capacity is needed to meet target reserve margins. According to DRA, if the value of capacity is set at \$0 through May 1989, when a 400 MW purchase from TEP expires, the contract would cost \$5.6 million more than avoided cost. If a \$0 capacity value is assigned until 1993, when DRA's suggested resource plan indicated that capacity would first be needed, the contract would cost \$44 million more than avoided cost.

DRA's second method is to apply an Energy Reliability Index (ERI), which calculates a shortage value for additional capacity. When the ERI method is applied to the addition of the 100 MW of the PNM contract to DRA's modified resource plan, the result is that the cost of the PNM contract is expected to exceed avoided cost by \$20.1 million.

Thus, DRA believes that if the value of the contract's capacity had been accurately set, either SDG&E's or DRA's analysis would have shown that the contract would be more costly than avoided cost.

Fourth, DRA questions whether use of a capacity value based on SO2 in SDG&E's analysis made sense in light of the many differences between the obligations contained in SO2 and those of the PNM contract. Under SO2, the producer is paid only for energy actually delivered; under the PNM contract, SDG&E is obligated under certain circumstances to pay even when deliveries are curtailed. Under SO2, energy prices float to reflect changes in the price of the marginal fuel, usually gas or oil; the energy price for the PNM deliveries is fixed. The base capacity price under SO2 is \$120 per kilowatt per year; the payment under the PNM contract is \$280 per kilowatt per year. SO2 prices are based on the value to SDG&E; the contract's pricing scheme focuses on PNM's cost. SO2 allows SDG&E to curtail QFs at certain times; the PNM contract is a take-or-pay agreement. If a QF is unable to live up to its agreement to provide a specified level of capacity, SDG&E is entitled to collect any overpayments it has made for capacity; the PNM agreement allows no such recovery.

DRA summarizes the support for its conclusion that a prudent utility would not have agreed to the PNM contract as follows:

"SDG&E knew that it did not need to make any new purchases in 1988 and that it needed very little, if any, new capacity into the 1990's. SDG&E entered into a contract to buy unneeded capacity in these early years at prices above avoided costs in those years, with the hope that, over the long run, the contract would be cost-effective.

"But SDG&E's estimates of savings from this contract were rapidly shrinking, from an estimated \$100 million savings in May 1985 to a paltry \$5 million savings in September 1985. The estimated savings represented less than 2% of the total production costs over the life of the contract. In fact, the margin of error of PROMOD was greater than the estimated savings. Moreover, if SDG&E had properly accounted for the cost of power it did not need in even one year, 1988, it would have found the agreement.

not to be cost-effective in the expected case."
(Opening Brief, pp. 112-113.)

c. UCAN's Position

UCAN argues that it was unreasonable for SDG&E to enter into a long-term commitment in the circumstances that existed in 1985, particularly when SDG&E's own economic analysis showed that the contract was only marginally cost-effective.

d. SDG&E's Reply

SDG&E believes that it has correctly valued the capacity of the PNM purchases by using its proposed SO2 capacity prices from its 1986 GRC filing. SDG&E notes that these proposed prices, which were used in its economic analysis of the PNM contract, were lower than the adopted SO2 capacity prices in both its 1984 and 1986 general rate cases.

According to SDG&E, DRA's suggestion that capacity should be valued at \$0 for some years is contrary to the Commission's position that capacity always has some value. In fact, during the rate case portion of this proceeding, DRA had proposed to value capacity at \$0 when reserve margins were adequate. The Commission rejected this proposal because it was contrary to several earlier decisions. (D.85-12-108, mimeo. pp. 84-86.)

In addition, SDG&E argues that the ERI method DRA uses for adjusting capacity prices grew out of the suspension of Standard Offer 4 (S04), and the Commission never adopted this method. ~~The method DRA recommends was used to make calculations~~ for adjusting capacity for Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (Edison) to guide the Commission in deciding whether to continue its partial suspension of S04, but no such calculations were applied to SDG&E's circumstances. Moreover, the interim decision that proposed the adjusted capacity prices used the 1984 GRC SO2 prices for SDG&E, and these prices were higher than those used in SDG&E's economic analysis of the PNM contract. Finally, Commission suspended S04,

so the modified prices were never put into effect. For DRA to suggest that SDG&E should have used a method that was never applied to it and never endorsed by the Commission is unreasonable, in SDG&E's view.

In fact, SDG&E continues, in the 1986 GRC decision the Commission endorsed a method very similar to the probability of need factor method that SDG&E used to adjust the capacity prices in its economic analysis. SDG&E argues that it is unreasonable to expect SDG&E to choose a method proposed by DRA but never accepted by the Commission over a method that has been approved by the Commission.

3. The Contract's Other Costs and Benefits

a. SDG&E's Position

SDG&E argues that the contract carried many other benefits beyond its economic value.

(1) Fuel Diversity

One of the foremost benefits of the contract, in SDG&E's view, is that it furthered SDG&E's efforts to diversify its resource base. SDG&E's heavy reliance on generation plants fueled by oil and gas had combined with the oil price increases of the 1970s to drive up SDG&E's rates to among the highest in the nation. SDG&E has since then attempted to diversify its resource base to avoid overreliance on any single fuel source or technology. It now owns part of Units 2 & 3 of the San Onofre Nuclear Generating Station, and it has contracted to purchase power from systems with hydroelectric and coal-fired resources.

In addition, SDG&E had been instructed by the California Energy Commission to decrease its reliance on plants using oil and gas.

Part of the impetus behind SDG&E's contracting for the market study in 1984 was the realization that all of its purchases from hydroelectric and coal plants were going to expire by 1989. It needed to replace these purchases with some other

resources, and it strongly desired to replace them with resources that would continue its efforts toward diversification.

To summarize, SDG&E believes the PNM contract offered the additional benefit of diversification. Diversification in turn offered the benefits of softening the disruptions that could affect a single fuel or technology and of moderating the rate effects of such disruptions.

(2) The PNM Contract Was the Best Option

SDG&E also argues that the PNM contract was the best of the available options. It detailed its consideration of six other resources that were options to the PNM purchase.

First, unlike PG&E and Edison, SDG&E did not receive an overwhelming response to its standard offers to QFs. Accordingly, QFs were not expected to reduce demand or increase supply enough to displace the need for additional resources. The ROC plan's demand forecast included the most recent forecasts of demand-reducing cogeneration, and at that point only three QFs had entered into contracts to deliver firm capacity to SDG&E.

Second, the possibility of developing a coal plant, probably in conjunction with another utility, was explored but rejected because of several problems. Building a plant in California would likely face environmental opposition, and estimating fuel costs was complicated by the uncertainty of rail transportation rates. Building near the mine avoided some of these problems, but for SDG&E it added another problem because of its lack of a transmission line to the proposed sites for Western coal plants. Ownership carried additional responsibilities and risks that were not present in the PNM contract, according to SDG&E.

Third, although DRA suggested that SDG&E could have purchased capacity on favorable terms from Edison or PG&E, neither of those companies had entered the sellers' market. In SDG&E's view, DRA seems to rely on reports indicating that both utilities had excess capacity into the 1990s. However, those capacity

figures resulted largely from the "Gold Rush" of QFs signing standard offers in anticipation of the suspension of S02 and S04, and neither utility felt confident enough about this paper capacity to commit to sell to others.

Fourth, although UCAN suggested that SDG&E could have met its need for additional capacity through increased conservation and load management, SDG&E asserts that demand reductions from mandated and cost-effective conservation and load management programs were already included in the ROC plan's demand forecast. The forecasts were based on SDG&E's proposals in the 1986 GRC, and in fact the Commission authorized \$4 million less than SDG&E requested for conservation and load management. Furthermore, the test of cost-effectiveness for the programs proposed by SDG&E was based on the much higher projections of long-term fuel prices that existed when SDG&E filed its GRC application in December 1984, rather than on comparable forecasts in October 1985, when it needed to make its decision on the PNM contract. SDG&E also views UCAN's and DRA's positions as attempts to relitigate the conservation and load management aspects of the rate case phase of this proceeding.

Fifth, SDG&E believes that DRA's suggestion that it should have relied on its mothballed plants and on purchases of economy energy for its expected capacity requirements would have been a foolish strategy. Since the mothballed plants burned oil and gas, DRA's suggestion would have been a bad goal for all the reasons that fuel diversity is a good goal, as discussed previously. In addition, the availability of economy energy in the 1990s was projected to be primarily during off-peak periods and not when energy would be needed most. Also, without the PNM contract, SDG&E would not have a transmission path to the Four Corners area, where much of the Southwest's economy energy would originate.

Sixth, SDG&E investigated but rejected possible purchases from Modesto-Santa Clara-Redding (MSR) and El Paso

Electric Company (El Paso). MSR was a short-term offer which could fairly be compared to the PNM offer only if the cost of purchasing a follow-up resource was considered. When this comparison was made, PNM emerged as the cheaper long-term resource in SDG&E's analysis. Furthermore, MSR did not have a firm transmission path to Palo Verde, the terminus of SWPL. As for El Paso, it had not made a firm offer, and it also did not have a firm transmission path to Palo Verde. In addition, its system relied heavily on plants fueled by oil and gas, so a purchase from El Paso would not further SDG&E's goal of increased fuel diversity.

(3) Price Stability

A third benefit of the PNM contract in SDG&E's eyes was the stability of its price. The demand rate was fixed for the first four years of the contract, and could then increase only with increases in an index that was not sensitive to changes in oil and gas prices. In addition, increases could occur no more often than once a year.

(4) Transmission Rights

The PNM contract carried with it two valuable transmission rights, according to SDG&E.

First, SDG&E obtained an opportunity to purchase, at cost-based rates and when available, up to 100 MW of backup transmission between Palo Verde and PNM's system. According to SDG&E, this opportunity gave it access to the Four Corners region, a major source of economy energy in the Southwest.

(5) Reliability

SDG&E points out that the PNM contract is a purchase from the PNM system and is not linked to the operation (or outage) of a single unit. In addition, the contract guarantees a 95% capacity factor, an extremely high level of reliability.

(6) Price

SDG&E asserts that the price of the PNM contract was the best price obtainable under the circumstances and at the time

the contract was negotiated. The contract price is 19% lower than a comparable offer from PNM only 14 months earlier. According to both PNM's representations and SDG&E's own analysis, it was less than 80% of the projected cost of PNM's wholesale service during the term of the agreement. Because of PNM's unique capacity inventory arrangement, SDG&E's negotiator concluded that this was the lowest price that PNM could offer. That conclusion was confirmed during negotiations by PNM's rejections of various offers by SDG&E that had the effect of reducing the price.

(7) The Start Date Was Firm

A final benefit of the PNM contract was that the commencement of purchases under the contract was firmly set. Other options contained uncertainties that made it unclear that the resource would be ready when SDG&E needed it.

b. DRA's Position

DRA disputes some of the benefits listed by SDG&E and emphasizes that the contract also carried many risks.

(1) Early Commitment

DRA's points on the adequacy of the demand forecast seem to argue that SDG&E committed to the PNM contract earlier than it had to. This early commitment required SDG&E to forego later and presumably better information on its system demand, fuel prices, and other purchase opportunities. As things turned out, of course, a delay of a few months would have considerably revised the fuel price forecasts, since shortly after the contract was signed oil markets took a plunge to much lower price levels that continue to this day. The commitment to a long-term take-or-pay contract, DRA argues, carried the risk that such changes in the fundamental elements of the contract could occur.

(2) The Contract Had No Escape Hatches

In a similar vein, DRA notes that the contract had no provisions for altering its terms or terminating the contract in the event that circumstances changed substantially from those

contemplated in the agreement. From the moment SDG&E signed the contract, it was committed to purchase capacity until 2001, with one exception that will be addressed later. If the contract turned out to be a bad one, as DRA believes it has, SDG&E would be stuck with a considerable expense until the next century.

(3) The Demand Charge Never Decreases

One of the contract's provisions singled out for special criticism by DRA is the application of the index to the demand charge. Even if the index decreases, the contract provides that the demand charge will not decrease; if the index decreases so that a decrease in the demand charge would otherwise be called for, the demand charge remains at a fixed level until the index has increased enough to justify another increase in the demand charge. Thus, the contract is biased in favor of PNM, in DRA's opinion. SDG&E bears much of the risk of inflation of the index, but PNM bears none of the risk of a decline. If in fact such a decline occurs, the contract would in effect become even more costly. In DRA's view, SDG&E needlessly accepted an asymmetrical risk when it agreed to this provision.

(4) SDG&E Must Pay the Demand Charges Under A Wide Range of Circumstances

DRA criticizes the provision that requires SDG&E to continue to pay demand charges even if delivery of contract energy is curtailed or interrupted. If deliveries are curtailed or interrupted by more than 5% in any month, then the demand charge is reduced by half of the percentage of additional curtailment or interruptions. Although SDG&E compliments itself for negotiating a provision that encourages the seller to perform, DRA notes that this provision could have the effect of requiring SDG&E to pay 55% of the demand charge even when no energy is delivered. (See Tr. 75:8535-8538.) DRA believes that there was no reason for SDG&E to agree to such a provision in light of PNM's strong desire to make a sale.

(5) The Risk of Fuel Price Escalation

DRA notes that the price of fuel is tied to the fuel mix of PNM's system. Thus, if the fuel mix of PNM's system changes due to problems at Palo Verde, San Juan, or Four Corners, the fuel costs under the contract would increase. A sale of PNM's interest in Palo Verde would trigger a provision in the contract that allows the parties to negotiate a satisfactory revision. DRA is concerned that the contract is silent as to what happens if the parties are unable to agree on a revision.

(6) The Risk of Exceeding Avoided Cost

As mentioned previously, SDG&E's economic analysis of the contract concluded that there was a 35% chance that the costs under the contract would exceed avoided cost over the term of the contract. DRA feels that this was too great of a risk to take for this contract, especially in light of DRA's criticisms of the details of SDG&E's analysis.

c. UCAN's Position

UCAN's primary contribution to the weighing of the costs and benefits of the contract is its assertion that SDG&E failed adequately to consider conservation and load management as an alternative to the contract.

UCAN believes that SDG&E has failed to meet its burden of proof and has made no showing that the PNM contract was cheaper than conservation and load management. According to UCAN, SDG&E never attempted to analyze the demand-reducing potential for conservation and load management past 1988. Moreover, SDG&E's forecast illogically showed marginal cost decreasing while average cost increased; this anomaly created a bias against conservation. SDG&E's analysis also made an unfair comparison between conservation and the PNM contract. The strict nonparticipant test was applied to conservation programs, while the looser societal test was the measure of the contract's benefits. UCAN agrees with the Commission, which found in the 1986 GRC decision that SDG&E had

placed too much reliance on the nonparticipant test and which criticized SDG&E for its lack of success in its conservation programs.

UCAN cites several reasons in support of its contention that conservation and load management could have displaced the need for the PNM contract. It points out that in the 1986 GRC decision the Commission ordered SDG&E to conduct conservation programs that SDG&E had not requested, a fact that UCAN says indicates the SDG&E's conservation programs were not as complete as SDG&E claims. Further, UCAN states that SDG&E's forecast of conservation did not anticipate improvements in the technology of conservation and load management. In addition, UCAN's witness gave several examples of programs that were cost-effective in 1985 and will be cost-effective in 1988 that were not pursued by SDG&E. UCAN believes that if SDG&E had done a fair assessment of the true potential for conservation and load management, it would have recognized that the PNM contract was not needed.

UCAN recommends that the Commission not allow recovery from ratepayers of the difference between the cost of the PNM contract and the cost of conservation and load management programs. UCAN's witness identified many programs with estimated costs of conserved energy of between one and five cents. For simplicity, UCAN recommends that the Commission disallow recovery of the two cent per kilowatt-hour difference between conservation programs costing five cents per kilowatt-hour and the expected seven cents per kilowatt-hour cost of the PNM contract. Over the term of the contract, UCAN estimates that this difference will amount to \$216 million.

UCAN also questions SDG&E's contention that fuel diversity justified the contract. UCAN notes the lack of testimony on how SDG&E placed a value on diversity. SDG&E has used the concept of diversity to justify uneconomical contracts, which impede the flexible use of SWPL, in UCAN's opinion.

UCAN joins other parties in criticizing SDG&E for agreeing to an escalation clause that allows rates to go up but never to decline.

d. City's Position

City has concerns similar to those raised by DRA. In particular, City believes that SDG&E committed itself to the contract earlier than necessary. City also finds unreasonable the provision that requires SDG&E to continue to pay a disproportionate share of the full demand charge when deliveries are curtailed or interrupted to less than the 95% level of availability. City further argues that SDG&E should have been more cautious in entering into such a marginally cost-effective long-term contract after its SWPL purchases had received strong criticism during the GRC hearings. Finally, City believes that SDG&E was unreasonable to agree to an index for the demand charge that goes up but never goes down.

D. Discussion of the Terms of the Contract

The primary question for our resolution is whether the decision to enter into the PNM contract was reasonable and prudent, in light of the information that SDG&E's decision makers knew or should have known at the time they made the decision. Our current knowledge of the course of fuel prices and the resulting expectation that the contract will cost more than avoided cost should not have any bearing on our assessment of the decision makers' actions at the time the decision was made.

The contract was approved by SDG&E's Board of Directors on November 1, 1985 and was signed by SDG&E on November 4, 1985. Thus, the only information we may properly consider in assessing the prudence of SDG&E's decision is the information that was available to SDG&E before November 1985 and that was accepted in evidence during this proceeding.

In reviewing this information, we are persuaded that SDG&E was imprudent in entering into the PNM contract when it did.

and that its failure to consider, give proper weight to, and quickly respond to several available facts will result in unreasonable costs for SDG&E and its ratepayers.

1. The Need for Additional Capacity

a. SDG&E Overestimated its Need for Additional Capacity

SDG&E initially began the search for new resources that led to the PNM contract because it believed in 1984 that it needed 600 MW of new resources by 1989 to replace between 600 and 750 MW of expiring contracts. Under its new strategy toward acquiring resources, it hoped to secure roughly 300 MW of its expected need through long lead-time commitments, or those commitments that had to be made four years before the delivery of power.

SDG&E's strategy of limiting its commitment to long lead-time resources to half of its expected need was a reasonable approach in the period we are considering. This approach recognized that demand growth patterns were changing, that good opportunities to obtain capacity might arise in the future, that since 1981 oil prices had first declined and then stabilized, and that flexibility was appropriate under the circumstances.

However, this strategy emphasized the importance of an accurate demand forecast and an accurate estimate of expected need for additional resources. The strategy was only as good as the estimate of expected need that it was applied to. SDG&E's strategy made it particularly important to assess the need for additional resources and to scrutinize the underlying demand forecast carefully and thoughtfully. To the extent that the estimate of need for additional resources was too high or too low, application of the strategy to such an inaccurate estimate would lead SDG&E either to purchase unneeded resources or to fail to secure enough new resources to meet customers' demands.

Even when the fact that several of SDG&E's large contracts would expire in 1988-89 is taken into account, SDG&E

seems to have overestimated its need for replacement capacity. According to the GRC resource plan of November 8, 1984, SDG&E expected to have enough capacity to sell 100 MW to Arizona Public Service Company in 1985 and to take the Encina 1 and South Bay 3 plants, totalling 298 MW, out of service in 1986. Rather than a need for 600 MW in 1989, the GRC resource plan (Ex. 45) shows additional purchases of only 215 MW from 1988 through 1990.

Thus the need for capacity shown by SDG&E's resource plan of November 1984 was considerably less than the 600 MW that SDG&E believed it needed to secure when it began its search for new resources earlier that year. This dramatic change in an assumption underlying SDG&E's resource acquisitions strategy did not seem to affect its pursuit of a contract with PNM.

b. The Contract's Important Terms Were Established Before SDG&E Analyzed Them

SDG&E began the negotiations leading to the PNM contract in the fall of 1984 by requesting PNM to develop principles for a sale to SDG&E. PNM responded in a meeting in November 1984 with a proposal for a contract for sales of 100 to 200 MW for eight years beginning in 1988. PNM also proposed a 100 MW contingent sale with an additional 100 MW to be shaped to fit SDG&E's load patterns. SDG&E told PNM that it could not make a final commitment until July 1, 1988, one month after the expected completion of the ROC plan.

PNM followed up this meeting with a draft letter of understanding of November 29, 1984 (see Ex. 531, Item 2). What is noteworthy about the draft letter of understanding is that it proposed many of the terms that were eventually incorporated into the final PNM contract. For example, the draft stated that the contract was to begin on May 1, 1988. Contract demand was set at 100 MW with an option for an additional 100 MW. The price for capacity was set at \$23.40 per kilowatt-month, with no increase in the first four years.

SDG&E responded with a revised letter of understanding. The revised letter did not commit SDG&E to a purchase of energy and capacity but stated that the parties were working toward an agreement.

Nevertheless, many of the terms of the draft letter of understanding soon became assumed points of agreement for the eventual contract, and further negotiations focused on other topics. For example, SDG&E states that after it received the draft letter of understanding, it compared the contract demand price with PNM's costs and concluded that the price was reasonable. (Ex. 529, pp. IV-7 - IV-8.) There were no further negotiations on the price term.

Negotiations on the contract's other terms continued, but meanwhile a final letter of understanding was executed on January 15, 1985 (Ex. 531, Item 3). Although the language of the final letter of understanding was intentionally broad, it repeated the parties' apparent assumption that the purchases would begin in 1988. The letter mentioned that the parties were discussing purchases during 1988-2003 and were negotiating a contingent capacity purchase of between 100 and 200 MW for about 15 years beginning in the late 1980s. More specifically, the letter referred to a post-1987 power transaction. The letter also stated that agreement was expected by July 1.

What is striking about these early negotiations is how many of the important terms were essentially set at an early date, with little or no analysis by SDG&E and little consideration of SDG&E's requirements. So far as SDG&E's testimony reveals, the only analysis of the proposed capacity charge was a comparison with PNM's estimated costs. SDG&E apparently did not compare these proposed charges with other options or with the value that this capacity represented for SDG&E.

Moreover, as SDG&E employees pointed out on December 12, 1984, and in May 1985 (Ex. 655; Ex. 658, Items 2 & 3), SDG&E's

resource plans at this time showed that SDG&E did not need 100 MW of capacity in 1988 and perhaps not in 1989. The resource plan filed with its GRC application was developed on November 8, 1984 (Ex. 45) and showed an expected reserve margin of 22.2% in 1988 without the PNM purchase. (SDG&E's target reserve margin at this time was 20%.) The slot the PNM purchase eventually assumed in the resource plan, an "undetermined resource" of 100 MW, did not emerge in the GRC plan until 1989. Moreover, this purchase could be deferred until 1990 if necessary by accelerating by one year the planned return of two of the Silver Gate units.

Despite these concerns, SDG&E proceeded to negotiate many other terms of the proposed agreement without altering its negotiating posture to reflect these important questions of need and value.

So far as the record reveals, SDG&E never attempted to negotiate a lower demand charge; PNM's initial proposal in the draft letter of understanding became the demand charge term of the final agreement. The question of delaying the start of the contract until 1989, when the GRC resource plan first showed a need for additional capacity, was not raised in the negotiations with PNM until a meeting on May 21, 1985, over six months after negotiations began and after the contract had already been through several drafts. Not surprisingly, PNM rejected this late proposal, and SDG&E thereafter dropped its request. A proposal to reduce the contract demand to 50 MW, still more than the resource plan showed was needed in 1988, was not made until April 25, 1985. PNM rejected this proposal, and SDG&E did not pursue a demand reduction again.

Thus, as late as May 1985, SDG&E was negotiating the details of a contract whose essential terms PNM had established at the outset, for a purchase of capacity SDG&E could not show it needed, at a price it could not demonstrate was in line with the value to SDG&E. Although SDG&E has asserted that the PNM contract

was justified by the ROC plan, many of the crucial points of the agreement were essentially established well before the ROC plan was approved.

c. The ROC Plan Did Not Show a Need For Additional Capacity in 1988

As we have just mentioned, the GRC plan of November 8, 1984, did not show a need for additional capacity in 1988, when deliveries under the PNM contract were proposed to begin. SDG&E asserts, however, that its revised resource plan, the ROC plan, justified the commencement of the PNM purchase in 1988.

When the ROC plan was released and adopted in late June, it showed a need for an undetermined capacity purchase of 100 MW in 1988. But SDG&E's argument that the ROC plan justified the PNM contract is misleading. The need for the purchase in 1988 was accomplished by a juggling of resources and not by just an increase in demand. For example, the chief way that a need for purchased power was created in the ROC plan was to delay the return of 100 MW from the Encina 1 plant. The GRC resource plan had shown a 100 MW undetermined purchase in 1989 and the return of Encina 1's 100 MW in 1988. The ROC plan accelerated the undetermined purchase to 1988 and kept Encina 1's 100 MW out of service an additional year until 1989.

There is little question that the real effect of the ROC plan was to accommodate, not to justify, the beginning of the PNM purchase in 1988. This is clear from Table I-1 of the ROC plan (Ex. 529, p. I-13), which identifies the 100 MW PNM purchase as the only resource planned to be added in 1988. The developers of the ROC plan assumed that the PNM purchase would begin in 1988, included that purchase in the plan, and adjusted the return of Encina 1 accordingly. Moreover, the ROC plan completely removes the Silver Gate plants from the resource plan, although just seven months earlier the GRC plan showed 198 MW from the Silver Gate plants returning in 1990 and another 102 MW returning in 1995.

d. SDG&E Failed to Give Adequate Consideration to the Effect of Oil and Gas Price Variation on the Contract's Benefits

In the early stages of the negotiations with PNM, SDG&E's analyses showed that the transmission arrangements, which were then uncertain, could have a dramatic effect on the range of expected benefits under the contract. SDG&E accordingly made a special effort to have PNM solidify the transmission path to Palo Verde, the terminus of SWPL. These efforts were successful.

By May 16, 1985, however, an analysis revealed that uncertainty in the forecasts of the prices of oil and gas had become the variable that had the greatest effect on whether the contract was beneficial. Although this analysis did not use the specific terms of the PNM contract, it purported to test the sensitivity of the contract's benefits to oil and gas prices. One result of this sensitivity testing showed that when it was assumed that oil and gas prices would not increase from 1985 levels over the term of the contract, the PNM contract and all other purchase options were expected to cost more than oil and gas generation. In other words, if oil and gas prices continued to stay level, SDG&E would be economically better off relying on generation fueled by oil and gas than purchasing under the contract.

SDG&E's reaction to this possibility was extremely muted. The possibility that oil and gas prices would stay level or decrease was assigned a 5% probability; the probability that fuel prices would increase was set at 95%. The chance that fuel costs would not increase "was considered very unlikely" (Ex. 529, p. V-6).

SDG&E has not explained why it considered flat fuel prices to be so unlikely. At that time, oil prices had not increased for nearly five years, not since January 1981. The Organization of Petroleum Exporting Countries (OPEC) had not been very successful in enforcing production quotas that were key to

maintaining artificially high prices. Some experts were predicting higher prices, including a forecasting service relied on by SDG&E. However, many other experts, including some services that SDG&E subscribed to, were predicting a collapse of OPEC and an emergence of market-determined prices at a much lower level than existed under OPEC's dominance. For example, DRA introduced into evidence three articles that appeared either in the popular press or in one of SDG&E's forecasting service subscriptions in the year preceding the signing of the contract. (Ex. 648, 649, 650.) The articles suggested that most experts expected oil prices to decline, to prices as low as \$10 per barrel.

The conclusion of the May analysis that oil and gas prices would increase contradicted SDG&E management's judgment of just a few months earlier. In January 1985, SDG&E's managers with expertise in energy demand were unanimous in their views that "gas prices will move down for three to five years." A majority of these managers also believed that "OPEC has lost its dominant control over the market and that for the next few years there will be a leveling or decrease in oil prices." (Ex. 664, p. 3.) SDG&E has not explained what happened in the intervening four months to change its managers' forecast of fuel prices so completely.

SDG&E has thus failed to explain why it gave so little consideration to the possibility that oil prices would decline or remain flat, at least for the early years of the contract. Because SDG&E knew by May 1985 that the PNM contract did not make economic sense if fuel prices continued to be stable, there was ample time to reconsider or reexamine the fuel forecasts before committing to the contract. As far as the record reveals, SDG&E did not reevaluate its fuel forecasts until around early November 1985, about the time the contract was signed, and clearly too late to influence the contract's terms. (Tr. 72:8162.) SDG&E's failure to pursue this weak link in its support for the PNM contract led it to overlook some of the options it still had. At a minimum, the

results of a reconsideration of the effect of fuel prices on the desirability of the PNM contract would have given SDG&E valuable ammunition in its efforts to negotiate a better deal with PNM. It was unreasonable for SDG&E's decision makers to give so little weight to the effect of fuel price forecasts on the cost-effectiveness of the PNM contract.

e. SDG&E's Economic Analyses Did Not Support the Contract

SDG&E conducted four economic analyses of the PNM contract, with results presented on January 9, April 5, May 16, and in September and October 1985. (Ex. 529, pp. IV-7 - IV-8, Tr. 74:8412-8414; Ex. 532, Items 1, 2, & 3.) For several reasons, we find the results of these analyses to be much less persuasive than they apparently were for SDG&E's decision makers.

The first analysis was merely a comparison of the demand charge of PNM's offer, as reflected in the draft letter of understanding of November 29, 1984, with PNM's costs. The analysis concluded that the price was not out of line with PNM's costs. As we have already discussed, this analysis did not compare PNM's proposed demand charges with SDG&E's other options or with the value of the capacity to SDG&E. The purpose of this analysis was only to see if the demand charge was excessive in relation to PNM's costs.

The second and third analyses assumed different terms from those that were actually being considered for the contract. Some of these differences, such as the assumption that the contract demand would be 50 MW (rather than the actual contract demand of 100 MW), were insignificant and were justified to allow comparability with other options.

But unlike the size assumption, other simplifying assumptions could and probably did influence the results of the analyses. For example, both of these analyses assumed that the term of the contract would be 20 years and that the contracts would

begin in 1989. As we have discussed, at the time of these analyses SDG&E expected that the PNM contract and payment of the contract's demand charges would begin in 1988, even though SDG&E's latest resource plan, the GRC plan, showed that SDG&E would not need additional capacity until at least 1989. In terms of the economic analyses, 1988 would therefore probably have a large net cost. Because the contract was structured to reflect the costs of a baseload plant and because the demand charge was proposed to be fixed for the first four years of the contract, the contract was expected to be particularly beneficial in its later years. But since benefits were expected to accrue primarily in the later years, the analyses were further distorted by the assumption of a 20-year term, as opposed to the 13- to 15-year term that was the focus of the negotiations. The analyses essentially eliminated a year that was expected to provide few or no benefits and extended the PNM contract into years when benefits were very likely to accrue. Thus, the analyses were almost certain to come up with results that overstated the actual benefits of the PNM contract.

The analysis undertaken in August and September, which we will refer to as the September analysis, was the first to use the actual terms of the PNM agreement. This analysis used a production cost model, PROMOD, to simulate the effect of the various purchase options on the entire SDG&E system. The approach of the analysis was to compare purchases under the PNM contract, using different sets of assumptions, with SDG&E's avoided cost, as defined for SO2. The analysis also incorporated the risk analyses used in the earlier studies.

The September analysis found that when high oil and gas prices were assumed to be in effect over the term of the contract, the PNM contract's net benefit was about \$88 million. When low oil and gas prices were assumed, however, costs under the PNM contract exceeded avoided costs by more than \$51 million. In the expected

forecast of oil and gas prices, purchases under the contract were projected to save about \$5 million compared to avoided cost.

DRA argues that the analysis should have valued capacity at \$0, rather than SO2's avoided capacity cost, for the years when no capacity was needed to meet target reserve margins. DRA also asserts that SDG&E should have used the ERI to adjust capacity values in its analysis.

We do not agree with DRA's argument that SDG&E was unreasonable to use the capacity values it did in the September analysis. As SDG&E pointed out, at that time the Commission had not specifically approved use of a \$0 capacity value nor the ERI method staff presented. SDG&E testified that the capacity values it used in its analysis had been adjusted to reflect its probability of need, and to this extent the concerns of DRA were considered.

DRA's concern seems to be grounded in a mismatch between the lack of a need for capacity in the early years of the contract, which DRA argues should be reflected in a capacity value of zero, and the higher level of need for capacity that corresponds to the sizeable capacity payments SDG&E has used in its analysis. However, SO2 provides for a levelized capacity payment to QFs who are willing to commit to supply capacity to the utility's system over a set period of years. In a specific year, those levelized payments may exceed the shortage value of the supplied capacity for that year, just as the comparable amounts that the utility collects from ratepayers for its generating plants (annual depreciation plus a return on the undepreciated capital costs) may exceed the one-year shortage value for a specific year.

In addition, if QFs had accepted SDG&E's SO2 at that time (SO2 was not suspended until March 1986) and had committed to supply 100 MW of capacity for 13 years beginning in 1988, they would have received levelized capacity payments for 1988 and 1989.

that are higher than the capacity prices used in the analysis of the PNM contract.

Also, we note that in December 1985 in SDG&E's GRC, we concluded that, based on the record in that case, "the value of additional QF capacity will be based on the full cost of a CT [combustion turbine]," unmodified to reflect the utility's varying need for additional capacity. (D.85-12-108, mimeo. p. 88.) (The cost of a combustion turbine provided the basis for avoided capacity costs during this period.) Thus, SDG&E actually made more of an adjustment in its analysis of the PNM contract than we were willing to make at roughly the same time. We cannot agree with DRA that SDG&E was unreasonable to go even further in adjusting avoided capacity costs.

As we understand the September analysis, it was intended to test whether the PNM contract was expected to be cheaper than the utility's expected avoided cost. And the analysis was adequate to provide an answer to this narrow question.

We agree with DRA, however, that the results of SDG&E's analysis should not have automatically determined SDG&E's decision whether or not to sign the PNM contract. The slim margin of cost-effectiveness that resulted in the expected case should have alerted management that a closer scrutiny of the assumptions of the analysis was needed before a decision on the contract could be made with confidence.

DRA has suggested that a elimination of the capacity value attributed to the contract for just a one-year period was sufficient to reverse the analysis's conclusion that purchases under the contract would probably be cheaper than expected avoided costs. Although we have not found fault with the capacity values used in the analysis, DRA's example illustrates just how inconclusive the analysis was.

The inconclusive result of the economic analysis, which showed only a \$5 million expected benefit over the term of the contract, leads to two points.

First, the narrow margin of benefit should have induced SDG&E's management to examine the details of the analysis. Although we have not faulted the way in which the analysis valued capacity, an alert decision maker would have been wise to scrutinize this element of the analysis, since only a small change in the valuation of capacity was capable of reversing the conclusion of the analysis.

The September analysis highlighted the importance of the forecasts of oil and gas prices to the economics of the PNM contract. The contract's charges were based on PNM's costs, which reflected the PNM system's emphasis on coal plants. Baseload coal plants have high capacity costs and low energy costs compared to plants fired by oil and gas, and the contract called for a relatively high demand charge and a low energy rate. As might be expected, the September analysis showed that the contract's demand charges always exceeded avoided capacity costs of SDG&E's oil- and gas-based system. Any savings resulting from the contract occurred only because the contract had lower energy costs than plants using oil and gas and only when the price of oil and gas was high enough to create enough of an advantage for the contract's energy costs to outweigh its higher capacity costs. The September analysis showed that, as a rough estimate, only when the cost of oil approached \$30 per barrel in nominal dollars and the cost of gas approached \$5 per MMBTU did the contract begin to become cheaper than generation from oil and gas plants. (SDG&E now estimates that the contract would become cost-effective when the price oil reaches \$25 per barrel and the price of gas reaches \$4.20 per million BTU (Tr. 73:8347).) At prices lower than this level, the contract was not cheaper than avoided cost. Furthermore, there was considerable speculation that oil prices could fall dramatically, as shown by the articles from

1984 and 1985 that were introduced in evidence. The range of prices foreseen at this time was considerably broader than the range considered in the September economic analysis.

A prudent manager would have questioned the basis for the oil and gas price forecasts, would have considered the effect of larger variations in oil prices than those used in the analysis, and would have closely examined the soundness of the \$5 million projected net benefit. Because the expected benefit was so small, even a slight change in some of the important variables would be sufficient to convert the result of the analysis from a net benefit to a net cost.

The record in this case does not reveal whether SDG&E's management scrutinized the September analysis to this degree in deciding to execute the contract. So far as the record reveals, the result of the economic analysis was accepted at face value, with no further questioning or consideration of the assumptions that went into the analysis. If this was in fact what happened, the decision to proceed with the contract was extremely questionable.

Our second point ignores these troublesome questions and assumes that the \$5 million expected benefit was a solid estimate that resulted from the best analysis possible under the circumstances. Even if SDG&E's management asked all the proper questions about the analysis and the decision to enter into the agreement with PNM was fully informed, it does not seem to us that a \$5 million benefit, approximately 1.5% of the total cost of the contract, is a sufficient benefit on its face to justify entering into such a long-term agreement. The loss of flexibility that is inherent in any long-term agreement in itself is a sufficient reason to have outweighed the result of the economic analysis.

Thus, we cannot conclude that entering into the contract was a prudent decision merely from the economic analysis. Indeed, SDG&E seems to agree with this conclusion when it argues in its

reply brief that even when the economic projections for the contract turned sour, it would not automatically have terminated the contract if an opportunity for termination arose.

The trend of the results of SDG&E's economic analyses should have also disturbed its decision makers. The May 16 analysis projected that the PNM contract would cost about \$100 million less than avoided cost over its assumed 20-year term. By the time of the September analysis, however, the expected savings (this time based on the actual terms of the contract) had fallen to just \$5 million.

At this point, we believe a prudent manager should have questioned whether the risks of the PNM contract continued to be outweighed by this \$5 million savings and other less quantifiable benefits. SDG&E's own economic analysis had concluded that the quantifiable economic benefits from the contract were negligible. This is the time when a thorough reexamination of the risks and benefits of the contract should have occurred. Up to this point, SDG&E's emphasis seems to have been on the benefits of the contract, but the May analysis's finding that the contract's expected benefits disappeared unless fuel prices increased and the ambiguous results of the September analysis should have alerted SDG&E to the very real possibility that the contract could have substantial costs. In our view, after the September analysis SDG&E's managers should have been questioning whether a long-term commitment to a contract that carried substantial economic risks was appropriate at that time. The record does not show that the September analysis led to any reconsideration of the risks of the contract.

Another fact makes this failure to reconsider the contract even more striking. As DRA has pointed out, the expected savings of about \$5 million amount to about 1.5% of the total costs of the contract over its term. But even under the best of circumstances, PROMOD has a margin of error of plus or minus 1% to

1.5¢ (Tr. 73:8357; Ex. 115, p. 38). Thus, at this point SDG&E had no real assurance from its analysis that any substantial economic advantage would result from the PNM contract.

The September analysis also revealed another fact that should have entered into SDG&E's thinking about the contract. In all of the cases used in the analysis--including low, medium, and high projections of oil and gas prices--the PNM contract was more expensive than avoided cost for 1988. Marginal generation from SDG&E's units fueled by oil and gas or purchases from QFs at avoided cost prices would be cheaper than purchases from PNM in 1988, even if oil and gas prices increased considerably from 1985 levels.

Thus, not only did SDG&E's resource plans show that it did not need the PNM purchase in 1988, but its analysis showed that it would be more expensive in 1988 to purchase power under the contract than to generate an equivalent amount of power from its existing plants.

For all of these reasons, we conclude that neither the GRC plan nor the ROC plan nor SDG&E's economic analyses justified the purchase of 100 MW from PNM beginning in 1988.

f. Other Considerations Did Not Outweigh the Contract's Risks

Although neither SDG&E's resource plans nor its economic analyses justified entering into the contract when SDG&E did, other considerations could have led a rational decision maker to execute the contract despite this lack of apparent justification. For example, the purchase could have made sense if it displaced more expensive sources of power, if the total benefits over the term of the contract clearly outweighed the contract's costs in its early years, if it met a new projected increase in peak demand for 1988 that SDG&E had no cheaper way of meeting, or if the contract's other benefits outweighed its risks. The parties addressed some of these considerations.

(1) Increased Demand

The issue of increased demand arises because the ROC plan forecasted a considerable increase in peak demand for 1988. The ROC plan forecasted a peak demand of 2,609 MW; comparable figures for the GRC resource plan of November 1984 and for the 1985 ER released in April 1985 were 2,524 MW and 2,456 MW, respectively.

The ROC plan's projected increase of 85 MW and 153 MW over the respective forecasts of 1988 peak demand of the GRC plan and the 1985 ER could provide a justification for beginning the PNM purchases in 1988. SDG&E argues that it was reasonable to rely on the ROC demand forecast rather than the Energy Commission's 1985 ER forecast because the 1985 ER forecast was the culmination of a long process, and more recent information showed its demand projections to be low. We agree that, in light of the importance of the demand forecast to SDG&E's new strategy, it was reasonable to consider the most up-to-date information available. It does not follow, however, that SDG&E's reliance on the ROC forecast was completely reasonable.

Even if SDG&E considered the 1985 ER forecast to be outdated, it should not have entirely disregarded the forecast. The Energy Commission's forecast still was the official state forecast of expected demand for SDG&E. By law, if SDG&E had proposed to build a 100 MW generating plant in California rather than to purchase 100 MW from PNM, it would have had to demonstrate that the 100 MW was needed to meet the expected demand for 1988 as projected by the Energy Commission's forecast. (See Public Resources Code Sections 25305-25308, 25502, 25523(f), 25524(a).) The process leading to the ER weighs the opinions and expectations of a variety of experts, and SDG&E should have carefully considered the results of that process, even if it eventually decided to rely on its own forecast.

In support of its choice of the ROC forecast over the 1985 ER forecast, SDG&E points out that the actual peak demands

for 1984 and 1985 were higher than the 1985 ER forecast for those years by 89 MW and 100 MW, after adjustments for weather variations (Tr. 79:9133-9134). However, at the time the ROC forecast was adopted in June 1985, the peak for 1985, which according to the record was reached in the summer (Tr. 79:9134), was unlikely to have yet occurred. Thus, the discrepancy between actual and forecasted peak demand for 1985 could not have entered into SDG&E's initial reasons for choosing the ROC forecast over the 1985 ER forecast, since SDG&E almost certainly adopted and relied on the ROC forecast before information on 1985 peak demand was available.

By the time the contract was signed in November, however, 1985 peak demand figures were available. We have previously concluded that SDG&E's choice of a more recent forecast over the 1985 ER forecast in determining its resource needs was not in itself an imprudent act. As SDG&E has pointed out, the 1985 peak demand figures, when they became available, showed that the 1985 ER forecast for 1985 was 100 MW too low. However, the 1985 peak demand figures should have also raised some concerns about the accuracy of the ROC forecast. To about the same extent that the 1985 ER forecast underestimated 1985 peak demand (100 MW), the ROC forecast overestimated 1985 peak demand (89 MW). If SDG&E thought the 1985 ER demand forecast was too low, then it should have suspected the ROC forecast of being too high. If the ROC forecast's overestimation continued at the same level and the demand forecasts of the ROC plan were lowered by a constant 89 MW each year, even the ROC plan would show no need for new resources in 1988. If the overestimation was the beginning of a trend, so that the margin of error increased from year to year, the need for additional resources might be put off even further.

A further cause for questioning the ROC forecast and its assumptions should have been the wide discrepancy between the 1985 ER forecast and the ROC forecast for later years. The difference between the two forecasts for 1988 was 153 MW, but by

1996 the difference grew to 476 MW. The large gap between these two forecasts should have led SDG&E to review thoughtfully the reasons for this difference.

By the end of the summer, SDG&E should have been reconsidering the accuracy of the ROC forecast and should have been at least questioning its reliance on that forecast. When the ROC demand forecast proved to be too high for 1985, SDG&E should have reconsidered the assumptions underlying its forecast and reexamined the desirability of the proposed purchase from PNM. We find no evidence in the record that it did so.

Thus, by the time that SDG&E signed the PNM contract, it should have been aware that there was a very high probability that it did not need any additional capacity for at least the first year of the contract. But since the contract required the payment of demand charges even if SDG&E did not take energy, SDG&E knew it would be paying for unneeded capacity for at least one year. It did so in hopes that later benefits from the contract would outweigh these early demand charge payments.

(2) The Timing of the Need for Capacity

The urgency that SDG&E seemed to feel to conclude the PNM agreement before the end of 1985 was grounded in the ROC demand forecast and the findings of the market study on the availability of options after 1989. As we have discussed, however, the ROC plan did not show a real need for additional resources until 1989 at the earliest. In addition, some of the conclusions of the market study had not been emphasized.

In formulating its strategy, SDG&E had relied heavily on the market study's division of baseload resources into existing resources that could supply power before 1990 and planned resources that could supply power after 1990. The market study concluded that opportunities for baseload purchases before 1990 were expected to be cheaper and more predictable in price and start of operations than the choices in the 1990s (Ex. 530, pp. 1-2,

1-7). Because of the potential for delay in planned resources and because of a current and expected capacity surplus in the West, the market study concluded that the availability of baseload resources after 1990 was speculative and prices were uncertain. Because of the uncertainties identified by the market study, SDG&E set a goal in 1984 to try to secure additional baseload power before 1990 from existing resources. Pursuit of this goal seemed to make SDG&E particularly eager to secure the power represented by the PNM contract.

However, although the market study was cautious and conservative about its projections of the availability of baseload resources in the 1990s, it noted that this caution arose to some extent because of a lack of information. The market study pointed out, for example, that "the identified alternatives [for baseload power in the 1990s] do not include all the opportunities that will arise or, more importantly, SDG&E may be able to develop" (Ex. 530, p. 1-7). The study also concluded that "it is clear that SDG&E initiative is likely to be needed to convert the more attractive indications of interest into tangible opportunities" (Ex. 530, p. 1-10). Similarly the study stated that "the nature of the alternatives identified, and the responses we received in utility interviews, underscore the importance of being open to new opportunities not now identified and the value of initiative in attempting to generate new opportunities" (Ex. 530, p. 2-20). Although the study noted that few opportunities for baseload purchases in 1990-1995 existed at the time of the study, it emphasized that the key to the availability of resources during this period was whether demand grew faster or more slowly than projected at that time (Ex. 530, p. 2-32).

Thus, the market study was not as gloomy about opportunities beyond 1990 as SDG&E seemed to regard it. The fact that SDG&E's own need for capacity before 1990 had come under question should have led SDG&E to reconsider whether early

commitment to a long-term contract was still its only practical option. The market study acknowledged that other options would open up in response to SDG&E's initiative and other events.

(3) The Alternatives to the PNM Contract

Another possible justification for signing the PNM contract, despite the ambiguous results of the September economic analysis, would be if the PNM purchases allowed SDG&E to displace more expensive resources, either immediately or when it needed additional capacity. SDG&E's other options should also have been considered when SDG&E's decision makers deliberated on whether or not to sign the contract. Short-term options would become important if SDG&E decided to postpone purchases from PNM. In addition, if SDG&E decided to reject the terms of PNM's offer, long-term options would eventually be required to meet growing need when reserve margin fell below target levels. The parties focused on several such options.

At the outset of this discussion, we note that before SDG&E began to search in earnest for the capacity it believed it needed, it commissioned the market study to survey the opportunities that could arise through the end of the century. We believe that SDG&E's commissioning of the market study before it made any decisions about future capacity choices was not only reasonable but commendable. While it may not always be necessary to hire an outside consultant to perform this analysis, we think that a utility is wise to survey its long- and short-term opportunities and to consider the risks and benefits of the most likely choices before it decides on a major resource acquisition. Assuming that the market study was thorough, competent, and not unduly expensive, we think that SDG&E's decision to make this overview of power markets through the end of the century was reasonable.

Qualifying Facilities We agree with SDG&E's general position that QFs did not offer a reasonable chance of providing

the needed capacity that the ROC plan's demand forecast identified. SDG&E's high retail rates made it more likely that independent generation would be used to offset retail purchases from SDG&E, rather than to produce power to be sold to the utility. SDG&E's resource plan attempted to forecast this demand-reducing cogeneration.

A related consideration is that SDG&E's high retail rates make self-generation economically competitive for many smaller industrial and commercial customers, and developments in cogeneration technology are making smaller self-generation units increasingly more feasible. The record is unclear on whether SDG&E's projections of demand-reducing cogeneration included a consideration of these technological developments.

Purchases from Edison or PG&E We agree with SDG&E that the existence of large projected reserve margins for PG&E and Edison resulted to a great degree from a rush to sign standard offers before the suspensions of S02 and S04. Because of the nature of these capacity additions, Edison and PG&E did not attempt to sell their expected surpluses during the period when SDG&E was shopping for additional resources. Instead, the evidence is that Edison itself was inquiring about purchases. We conclude that the PNM contract was preferable to potential purchases from either Edison or PG&E at this time.

Conservation We find it difficult to fault SDG&E for not relying on conservation and load management to reduce enough demand to displace the need for the PNM contract. During this period, we had announced our intention to "stay the course" for conservation expenditures in a general rate case of another utility. This policy was a reaction to declining oil and gas prices that rendered many conservation programs uneconomic. Staying the course meant that we would continue to allow sufficient funds to keep essential conservation programs going, but that we were reluctant to increase expenditures for conservation. In this

regulatory climate, to rely on conservation to displace the PNM contract, SDG&E would either have had to flout our directions or to make a special and persuasive showing of the soundness of its strategy. We cannot approve of the first course of action and, judging from the results in the GRC, where we trimmed SDG&E's requested conservation expenditures by nearly one-quarter, we doubt that the second course of action would have succeeded.

This does not mean that SDG&E should have neglected the potential of targeted conservation programs for reducing peak demand. In the GRC decision, for example, we eventually found that commercial demand reduction, thermal energy storage, and other programs were particularly cost-effective. Since much of the justification for the PNM contract was to provide capacity to meet increasing peak demand, efforts to reduce peak demand would have been particularly effective.

Coal Plants SDG&E claimed that it investigated several possible arrangements for purchases from or ownership in coal plants. We agree that most of the possibilities were not desirable because the price was too high or because transmission arrangements were unclear or expensive, among other reasons. However, the market study identified at least some arrangements that were not only possible but at least as beneficial as PNM. The record does not explain why these plants were rejected from further consideration.

SDG&E notes that there were additional responsibilities associated with ownership of a coal plant. We agree, but SDG&E should also have considered the benefits of ownership, including the substantial benefit of receiving very cheap power in the later years of the plant's useful life, when the capital costs have largely been depreciated.

In a similar vein, SDG&E criticizes DRA's suggestion that constructing or buying part of a coal plant may be cheaper than purchasing under the PNM contract. SDG&E says that the seven

cent per kilowatt-hour figure DRA used in its comparison was expressed in 1984 dollars, rather than real dollars, and when this comparison was made in equivalent terms, PNM was cheaper. For a fair and accurate comparison, however, SDG&E should have also factored in the cost of replacing the PNM contract when it expires, since ownership of a coal plant would provide energy throughout the plant's useful life of about 40 years.

While we agree with SDG&E that many of the coal options were not worth pursuing, several appear to be competitive with the PNM contract. In addition, it is unclear if SDG&E's cost comparisons fairly reflected the full benefits of ownership of a coal plant.

DRA's Proposal DRA has argued that SDG&E's mothballed plants gave it a practical short-term alternative to the PNM purchase. Under DRA's proposal, SDG&E would meet any initial capacity needs by returning existing but idle plants to service. In particular, Encina 1, the Silver Gate plants, and South Bay 3 were available. Although SDG&E had earlier declared its desire to keep these plants in reserve to meet unexpected short-term variations in demand, these plants provided SDG&E with a cushion and gave SDG&E the luxury of additional time in making its decision on the PNM contract. Even if delaying meant the withdrawal of PNM's offer, the worst possible outcome of a delay, use of the mothballed plants would give SDG&E time to pursue other resources. Even if the ROC plan's demand forecast proved to be accurate, SDG&E would not need any more capacity until 1989. Furthermore, the continued availability of economy energy projected by the market study meant that SDG&E would not have to operate these plants as baseload units; they could be used to follow load so that the system could take advantage of cheaper economy energy.

Thus, SDG&E could delay committing to purchase additional firm capacity, and gain the benefit of the knowledge of later circumstances. Rather than relying on the 1984 market

study's assessment of the market, SDG&E could review the state of this complex and evolving market from a point nearer to the time it actually needed capacity. And if demand did not grow at the rate projected in the ROC study, SDG&E would have even more time to restudy the timing of its need for more capacity and the availability of the needed resources. At this time, negotiations of purchases from Portland General Electric (PGE) and Pacific Power and Light Company (PP&L) had not yet reached the stage of a final decision; those negotiations could continue and if fuel markets turned upward or if demand grew at a higher than expected rate, these companies could help meet a more certain need for additional capacity.

In addition, SDG&E would have a better assessment of the effect of its newer conservation and load management programs, and it would have the possibility of tailoring those programs better to fit its needs, for example, by targeting peak shaving and load shifting to delay the onset of additional capacity requirements.

The existing plants were also a cheap source of capacity with no uncertainties about transmission paths, start dates, or unconventional technologies that were associated with other proposed plants. If additional capacity was needed in the near term, the MSR offer, among others, could be accepted to meet those needs. And other opportunities could arise, especially in light of the widespread excess capacity in the Southwest, as time went on.

Thus, one of the prime virtues of DRA's proposal is that it would buy time for SDG&E. DRA has made a strong case that SDG&E could have postponed its decision on acquiring additional baseload capacity for at least a year. Moreover, we conclude that such a delay in its commitment would have been a prudent course of action at this time.

g. Other Benefits and Risks

(1) Diversity

Diversity of fuel sources and technologies is unquestionably a good policy to follow, all other things being equal. But since other things are rarely equal, we believe that the goal of diversity must be carefully considered in a specific situation.

The unstated assumption in the discussion of diversity in this case is that diversity is a way of guarding against unexpected shortages or cost increases associated with a particular fuel or technology. All current sources of electricity are susceptible to either occasional interruptions or to increases in the price of an important input. In the 1970s SDG&E learned hard lessons about the risks of excessive reliance on a single fuel source.

The two risks that diversity is designed to guard against--interruptions or price increases--are of a somewhat different nature, although they sometimes overlap. Interruptions--created, for example, by an extended drought in the case of hydroelectric power or by a technical flaw in a particular type of nuclear plant--bring a threat of interruption of supply to customers, with all the attendant hardships. For example, SDG&E has shied away from purchases tied to the operation of the Palo Verde nuclear plants, because the plants are of a similar design to the two San Onofre plants, which are partly owned by SDG&E. If a problem arose with that design that required the plants to shut down, overreliance on that particular design could result in supply interruptions.

Price increases, on the other hand, do not necessarily result in interruptions; electricity is available to customers, but at a higher than expected price. Although the hardships are considerable in such circumstances, they are less severe than when electricity is unavailable at any price.

As a practical matter, the likelihood of an extended interruption to a single utility is extremely slight. Even if that utility experiences a shortage, it can probably purchase electricity from other utilities, although the price of the purchase may be high.

In the case of the PNM contract, the risk that diversity mitigated was primarily the risk of price increases, in our opinion. Although SDG&E's reliance on oil and gas was still very high, it seemed unlikely in 1985 that an oil embargo, like the embargo of the early 1970s, would actually threaten SDG&E's ability to obtain fuel for its fossil fuel plants. The change in the world market, the changes in the United States' regulation of oil, and in particular the changes in the regulation of domestic natural gas made it unlikely that SDG&E would suffer a fuel shortage. Even if such a shortage occurred, moreover, the abundance of capacity in the Southwest increased the probability that SDG&E would still be able to purchase power to meet its needs.

Thus, the primary value of diversification at this time was to guard against the risk of increases in oil and gas prices. This conclusion is supported by SDG&E's economic analysis, which compared the cost of the PNM contract with projected avoided cost, which at that time was based on the capacity costs of a combustion turbine and on projected oil and gas prices.

The economic analysis gives us an estimate of the potential benefits of diversification. In SDG&E's high oil and gas price scenario, the PNM contract is expected to provide a cumulative present value of \$88 million compared to avoided cost. Thus, if SDG&E's assumptions accurately reflect the upper range of reasonably likely fuel prices, the PNM contract may be seen as insurance against a potential \$88 million loss if SDG&E was forced to rely on combustion turbines fueled by oil or gas to produce electricity instead of relying on the PNM purchase. Of course, to the extent that SDG&E could generate or purchase energy more

cheaply than the estimated avoided cost, the \$88 million figure would decline.

The other side of the coin is that the PNM contract locked SDG&E into making substantial demand payments for 13 years. If oil and gas prices decline, the contract could easily exceed the costs of generating electricity by using oil and gas. Even the relatively small decline in prices described in the low oil and gas price case of SDG&E's economic analysis would result in payments exceeding avoided cost by over \$51 million. Lower prices would increase this cost.

On balance, we conclude that SDG&E acted reasonably in recognizing that the fuel diversity represented by the PNM contract provided SDG&E's system with insurance against dramatic rate increases prompted by high oil and gas prices. At the time, between one-half and two-thirds of SDG&E's generating resources were fueled by oil or gas. If oil and gas prices increased, the system's fuel costs would increase proportionately, and purchases with prices that were not based on oil and gas, such as the PNM purchases, would moderate the price rise's effect on rates. On the other hand, if oil and gas prices decreased, the effect on rates of the somewhat higher priced PNM purchases would be overwhelmed by the larger price decreases for electricity produced by the oil and gas units. Thus, the strategy seemed to be designed to minimize the effect on rates of variations in the price of oil and gas.

However, the value of this insurance depended on the forecast for the course of oil and gas prices. As we have discussed, SDG&E erred in not giving enough weight to the possibility that fuel prices would remain stable or decrease. In addition, for purposes of estimating a value for this diversity, the range selected for the economic analysis of the PNM contract was too narrow; actual prices soon jumped the bounds of the analysis.

Although it may be a distinction with no practical meaning, we should point out that the PNM contract in itself did not diversify SDG&E's resource base. The contract was not tied to any particular resource, technology, or fuel. PNM was free under the contract to provide the necessary capacity and energy from an oil- or gas-fired plant, if it chose to. The diversifying effect of the contract resulted from several elements, chiefly PNM's obligation to provide a high capacity factor, and the way in which the structure of payments mimicked the costs of a coal plant: demand charges were high, energy charges were low and not closely linked to changes in oil and gas prices. If SDG&E had obtained similar terms from a system reliant on oil and gas, the diversifying effect would have been identical.

(2) Other Benefits

We find the other benefits SDG&E claims for the contract to be relatively insignificant.

SDG&E cites the stability of the demand charge as a benefit. However, the level of the demand charge is fairly high, composing roughly two-thirds of the total expected cost of the contract in the base case of SDG&E's September economic analysis. Since these demand charges mimic capacity costs, which are sunk costs that are annualized to develop yearly cost equivalents, we would expect them to be relatively stable. In addition, as the other parties have pointed out, the charge rises and never falls, even if the indices that make up the escalator should decline. Furthermore, the contract requires SDG&E to continue to pay the demand charge proportionately when the availability of power under the contract falls below 95%. This may be an improvement on some contracts, but in the extreme case it still may obligate SDG&E to pay considerable sums for nothing.

The other benefit pointed out by SDG&E, the rights to 100 MW of nonfirm transmission to the Four Corners area, may turn out to be more valuable. However, the use of the rights is

dependent on several contingencies: PNM must not need the line, SDG&E must need economy energy at the time that the line is not otherwise in use, and, since the rights are from Four Corners to Palo Verde, there must be capacity available on SWPL. We suspect that SDG&E could have readily quantified the value of these rights if that value was substantial. As the record stands, however, we have no information that quantifies the value of these rights or that tells us how likely it is that SDG&E will be able to take advantage of this benefit.

(3) The Risks and Benefits of Delay

We have already discussed how several elements of the decision on the PNM contract were greatly affected by changing circumstances. We have concluded that SDG&E should not have signed the PNM contract when it did without further analysis, that it should not have purchased capacity it did not need without countervailing benefits, and that it had the ability to meet its customers' requirements even if it delayed the PNM contract for at least a year. We have also concluded that the marginal benefits shown by SDG&E's analysis of the PNM contract did not outweigh the loss of flexibility and other risks attached to the contract.

A full consideration of the effects of delay, however, should also address whether the value of the additional time outweighed the risks of postponing taking action to meet expected capacity needs. The market study had concluded that baseload purchases before 1990 were cheaper and more readily available than purchases in the 1990s, and the study found that no baseload purchases were then known to be available from 1990-1993. In part, the risk that SDG&E perceived, based on the market study, was that its need for capacity would arrive at a time when no capacity would be available or at a time when only much more expensive capacity was available. But signing the PNM contract carried the risk that later developments would substantially affect the desirability of the contract. Later information would be of

value to SDG&E only if it led to an option that was cheaper than the PNM contract over the term of the contract.

A rational decision maker might judge that a delay would be valuable if postponing a decision would allow unsettled and uncertain circumstances to resolve themselves. There is little value in delaying a decision from a time of uncertainty to a later time of equal uncertainty; the value of delay derives from the ability to make a better decision because of better information. Viewed from the perspective of late 1985, what uncertainties or instabilities affecting the decision to accept PNM's offer were likely to clarify themselves over the next few years?

Demand growth patterns had been somewhat unpredictable, as shown by the variations among the Energy Commission's projections in the 1985 ER, actual peak demand for 1984 and 1985, and SDG&E's projections in 1985. The primary influences were changes in the economy and the influence of conservation and load management. It seems likely that a delay would yield better estimates of peak demand for 1989, for example, but it is not clear that SDG&E's ability to forecast demand four or five years into the future would improve significantly. Mid- to long-term demand projections would probably remain about as uncertain as they were in 1985.

Oil prices had been relatively stable, although the underlying support for this stability, the operation of a shaky cartel, was unstable. Even with the historical success of the cartel, oil prices had declined from \$35.50 a barrel in March 1981 to \$27 per barrel in 1985 (Ex. 647). A delay in the decision may have resulted in better information about whether the cartel was going to collapse or regroup. We have earlier discussed the wide range of the experts' opinions about future oil prices. SDG&E knew that this was an important variable in evaluating the benefits of the PNM contract. It had known since April 1985 that level oil prices would make the purchases from PNM economically undesirable.

The September analysis showed that under the low range of SDG&E's predicted oil and gas prices, the PNM contract would cost \$51 million more than avoided cost. Any clarification of the expected course of oil prices would have been extremely valuable to SDG&E.

There was some uncertainty concerning the availability of generating resources in the future, but it was unclear at that time that many of these uncertainties would be resolved in the next few years. Many utilities were postponing decisions on constructing new resources because of the same uncertainties SDG&E faced--uncertainties about demand growth, the economy, and oil prices. On the other hand, the market study had concluded that SDG&E's initiative could rouse some of these other utilities into action and could create opportunities for acquisition of baseload capacity that were not foreseen by the market report.

After weighing all of these concerns, we cannot agree with the parties' recommendations that would disproportionately penalize SDG&E for favoring long-term considerations over short-term considerations. SDG&E was attempting to secure capacity to get beyond a period when it appeared that little capacity would be available for purchase. The strategy proposed by DRA is a logical and attractive alternative that should have been seriously considered by SDG&E, but it is a strategy that involves a procurement of a series of short-term resources until the early to mid-1990s when, even according to DRA's current projections, some additional capacity would be needed. SDG&E's strategy was to attempt to secure a long-term resource that would extend beyond the uncertainties of the mid-1990s. Although we have concluded that a delay in committing to a long-term contract was appropriate at the time we are concerned with, we do not conclude that a long-term commitment was imprudent at all times.

The advantage of a short-term strategy is the flexibility to respond to changing conditions. The advantage of a long-term strategy is certainty and security during a time of uncertainty. We are reluctant to criticize our utilities for taking a long view; indeed, we believe that greater problems are created by short-sightedness. But long-term decisions must be made with an appreciation of the lack of flexibility to respond to changing conditions that accompany such commitments. Long-term commitments are desirable when good opportunities arise. The utilities' responsibility is to ensure that the commitment is sufficiently valuable to outweigh the lack of flexibility that the commitment entails.

2. Conclusion

By the end of October 1985, when negotiations with PNM had reached the point of a final decision, SDG&E knew or should have known the following facts. It knew that the ROC demand forecast had proven to be too high by 89 MW for 1985. It knew that it would not need additional capacity until 1989 at the earliest. It knew that purchases under the PNM contract would begin in May 1988 and that therefore SDG&E would be paying demand charges for unneeded capacity for at least a year. It knew that the contract's costs would exceed avoided cost for at least one year and probably two years. It knew that declining or even stable oil prices would make the contract uneconomic for its entire 13-year term. It knew that the expected economic benefits of the PNM contract over avoided cost were negligible at best, and it should have known that its analysis could not demonstrate that any economic benefit could reasonably be expected from the contract. It knew that there was at least a 35% chance, under SDG&E's own analysis, that the PNM contract would cost more than the avoided cost prices the Commission had authorized for SO2. It knew it had over 500 MW of mothballed plants that could be put into operation, if necessary, to meet the needs of SDG&E's customers. It knew that the market

study had concluded that large amounts of economy energy would be available into the 1990s and that SDG&E's initiative could open up resource possibilities not uncovered by the market study.

Under these circumstances, we believe that a prudent manager would have sought to reassess the PNM contract and the assumptions that had led SDG&E to the brink of signing the contract. SDG&E had no compelling need, other than pressure from PNM, to enter into the contract at this time in light of all the uncertainties that had developed. At best, SDG&E either would have avoided an expensive long-term commitment or it would have obtained additional concessions from PNM. At worst, SDG&E would have lost the opportunity represented by the PNM contract and would have been forced to rely on the mothballed plants and economy energy while it pursued other possibilities. But we are left with the impression that SDG&E was swayed too much by the previous negotiations and by its earlier, rough analyses and not enough by the changing circumstances that related directly to the desirability of the contract.

Thus, we have found SDG&E to be imprudent in several related respects. SDG&E commenced negotiations for a purchase of capacity beginning in a year when it knew it did not need additional capacity. As we have seen, this commencement date was eventually incorporated into the agreement. SDG&E proceeded with the negotiations of important terms of the contract without the benefit of an analysis of those terms. It failed to give adequate consideration to the possibility that oil and gas prices would not increase as much as expected or that the variation in fuel prices would be wider than predicted. SDG&E signed the contract when its economic analysis showed that the benefits were marginal at best, under circumstances that strongly suggested that even that analysis was optimistic.

3. Disallowance

The parties who argue that SDG&E was imprudent suggest various penalties. DRA recommends that SDG&E should not be allowed to recover the cost of the demand charges for capacity that it should have known in 1985 that it would not need. According to DRA, SDG&E should have known in 1985 that it would not need additional capacity until 1994, and DRA calculates a corresponding disallowance to be \$174,001,000.

City recommends disallowance of all demand charges SDG&E will incur under the contract from May 1, 1988, the start of the contract, until June 1, 1989. In addition, City recommends disallowance of all costs exceeding avoided costs from June 1, 1989, through April 30, 2001.

UCAN bases its recommendation on its contention that conservation and load management could have supplied the equivalent of the 100 MW SDG&E purchased from PNM. It suggests that the difference between available conservation improvements and the costs of the PNM contract will amount to nearly \$217 million over the life of the contract. Its recommendation, however, seems to be that the Commission should disallow, on an annual basis, the difference between the costs of reasonable conservation and load management programs and the cost of the PNM contract.

Our consideration of an appropriate disallowance for SDG&E's imprudent actions in relation to the PNM contract is tempered by our recognition of the benefits of the contract and the many prudent actions and decisions SDG&E took in its negotiation and evaluation of this contract, as we have already discussed.

Our criticism of SDG&E's actions with regard to the PNM contract is directed to its failure to consider and analyze carefully several of the important terms of the contract and its failure to react appropriately to changing circumstances and information that affected key terms of the contract and that had the potential to completely reverse the economic desirability of

the contract. Although these failures were significant and will result in SDG&E incurring unreasonable costs, we have also recognized the many benefits of the contract and the many laudable acts of SDG&E's negotiators and management.

Under these circumstances, we believe that disallowance of all of the contract's demand charges from May 1, 1988 through April 30, 1989, would be justified. We have previously concluded that SDG&E should have delayed its decision for about one year, that its own resource plans could not demonstrate a need for capacity in 1988, and that the September economic analysis showed the contract to have a net cost in both 1988 and 1989. A delay of one year would have placed the purchase in line with SDG&E's resource plans and would have greatly improved the economic benefits of the contract. The additional year would have given SDG&E the benefit of another year's information before the contract was signed, and this delay would have benefited SDG&E greatly.

We will temper this disallowance somewhat, however. In our calculations of avoided cost for payment to QFs, we have consistently recognized that capacity always has some value, even if that value is merely insurance against an outage that is very unlikely to occur. In recognition of the fact that the PNM contract will be supplying capacity to SDG&E's system starting in 1988, we believe that SDG&E should receive credit for the value of that capacity, as measured by comparable payments to QFs under S02, for the one year that it will not recover the full costs of its demand charges under the contract.

We calculate the amount of the demand charges under the PNM contract from May 1, 1988, through April 30, 1989, to be \$28,924,000. Under SDG&E's currently authorized capacity payments under S02, a one-year contract for 100 MW beginning in 1988 would be paid \$65 per kilowatt per year. (See SDG&E's filing of April 22, 1988, in compliance with D.87-12-056 and D.88-03-079, Ex. C-1 and C-2.) For one year, this amounts to \$6.5 million. In

addition, a QF who supplied power during specified peak periods at the 95% capacity factor called for in the PNM contract would qualify for bonus capacity payments. Addition of the bonus would increase the capacity credit to over \$6.9 million, as shown in Appendix C. ✓

Thus, the amount of our disallowance is \$21,134,000. This amount would ordinarily be recovered through the operation of the ECAC account. SDG&E shall reduce the amount it records for the demand charges incurred under the PNM contract from May 1, 1988, through April 30, 1989, in its ECAC account by this amount, with appropriate interests adjustments for both the payments and credits from May 1, 1988 to the effective date of this decision. ✓

E. The Administration of the Contract

Apart from the question whether SDG&E should have entered into the contract with PNM, two issues emerged concerning SDG&E's administration of the contract during the record period. The first question is whether SDG&E should have acted on an apparent opportunity to terminate the agreement. The second issue has to do with SDG&E's reaction to a possibility that PNM has not met its obligations under the contract.

1. The Agreement to Extend the Deadline

SDG&E signed the PNM contract on November 4, 1985. In the months that followed, OPEC lost its coherence and oil prices fell precipitously from \$27.60 per barrel in November 1985 to \$12.65 per barrel in April 1986. As a result of this decline, SDG&E revised its forecast of fuel prices and compared its revised forecast of avoided costs to the contract's costs. The results were summarized in a memorandum of April 8, 1986, and, as might be expected, the analysis showed that the contract was no longer cost-effective over its term, that the contract had an expected present-value cost of \$33.7 million, and that under revised fuel price forecasts, no benefits would result from the contract until 1998. (Ex. 531, Item 17.)

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A possible ground for termination that emerged during this period concerned PNM's contractual obligation to provide SDG&E with proof by May 1, 1986, that it had obtained the transmission capability to provide at least 50 MW of power to SDG&E. The contract specified that the transmission service had to meet a certain level of firmness. If PNM failed to provide such proof by May, either party had a right under the contract to terminate the contract on June 1, 1986.

On March 21, 1986, PNM notified SDG&E that it would not be able to have a final transmission agreement demonstrating the required capability by May 1. PNM supplied a letter of understanding for SDG&E's review, and the parties considered extending the May 1 date. On April 29, the parties signed a letter agreement that granted PNM an extension of time to deliver an executed transmission contract to SDG&E. The transmission agreement, in which the Salt River Project (SRP) agreed to supply PNM with the necessary transmission capability, was executed on May 5, 1986.

a. DRA's Position

DRA argues that SDG&E's April 1985 fuel forecast and reassessment of the PNM contract confirmed what SDG&E should have suspected all along--that the contract was not cost-effective. After the April study showed that the contract was expected to cost \$33 million over its life, DRA believes that SDG&E should have taken all steps and seized all opportunities to terminate or renegotiate the agreement. DRA notes that under the revised fuel forecasts, activating the Silver Gate plants became SDG&E's cheapest option for additional capacity, and that gas prices would have to escalate 40% above the forecasts' expected prices before the cost of energy would overcome the capacity savings made possible by Silver Gate.

DRA also points out that D.85-12-108, issued in December 1985, after the contract was signed, directed SDG&E to go below the

threshold of cost-effectiveness and to provide inframarginal resources whenever possible. This decision should have strengthened SDG&E's resolve to modify or terminate the contract.

DRA finds it incomprehensible that SDG&E's negotiator, when he was informed of PNM's difficulties in developing a final contract with SRP, volunteered that "SDG&E would consider an extension of the cancellation date." He also invited PNM to "draft a letter agreement extending the date to whatever PNM believes sufficient." (Ex. 658, Item 13, p. 1.)

Under these circumstances, DRA believes that SDG&E's negotiators were completely wrong to volunteer to extend the May 1 deadline when PNM notified them of its problems in making firm transmission arrangements. SDG&E's own attorneys indicated that no concessions should be given without some counterbalancing benefit (see Tr. 75:8580-8582), yet SDG&E's negotiator offered the extension without any discussion of concessions by PNM, even though PNM's representative seemed to expect to have to offer some price concessions to get the extension (see Ex. 658, Item 13). Although DRA doesn't speculate about the course of events in the absence of this offer of an extension, it finds that SDG&E was imprudent in failing to take advantage of the leverage that even PNM acknowledged it had.

b. SDG&E's Position

SDG&E believes that its actions in agreeing to the extension were reasonable under the circumstances. After SDG&E balked at PNM's suggestion for an extension, PNM made special efforts to put the transmission agreement with SRP in its final form. On April 24, a committee that included a majority of SRP's Board of Directors approved the transmission agreement with PNM. It was clear to SDG&E at this time that the contract would be approved by SRP's Board. The next regularly scheduled meeting of the Board was May 5, and SDG&E concluded that withholding consent to an extension would have only the senseless effect of forcing a

special meeting of the Board and arousing the ill will of PNM and SRP. Accordingly, SDG&E agreed to the extension.

In addition, SDG&E notes that its contract with PNM did not contain a clause stating that time was of the essence. Under New Mexico law, which governed the interpretation of the contract, in the absence of such a clause a party's substantial compliance with contractual deadlines qualified as adequate performance. Since SDG&E believed that it would be unable to demonstrate that it had been harmed by a five-day delay in providing the proof of transmission capability, SDG&E concluded that a court would find that PNM had substantially met the guideline, and if SDG&E attempted to terminate the contract, it would find itself in breach of the contract and potentially liable for damages.

SDG&E rejects DRA's contention that its handling of the extension should have been influenced by the issuance of D.85-12-108. SDG&E disputes DRA's reading that the decision directed SDG&E to purchase only resources that are inframarginal. First, SDG&E argues that the Commission has never endorsed a policy that called for purchasing only inframarginal resources. Second, since the Commission has defined inframarginal to mean purchases that are so cheap that they would be made despite the presence of QFs, a policy of purchasing only inframarginal resources would force SDG&E to pass up many opportunities to purchase cheap power that does not meet the stringent test of inframarginality. Third, the Commission has indicated that avoided cost should act as a ceiling price for purchases, and that utilities should not make purchases that exceed avoided cost. SDG&E believes that it has complied with this policy in signing the PNM contract, since the overall cost of purchases under this contract was expected, when the contract was signed, to be less than avoided cost.

SDG&E believes that its actions were reasonable under these circumstances.

2. Did the Transmission Arrangements with SRP Meet the Requirements of the Contract?

a. DRA's Position

DRA also asserts that the eventual transmission arrangements between PNM and SRP did not meet the requirements of the PNM contract with SDG&E in three ways.

First, DRA argues that SDG&E had an opportunity to terminate the PNM contract because the transmission agreement was not as firm as required by the PNM contract. More specifically, Section 5.3 allowed for termination

"...if prior to May 1, 1986, PNM has not obtained transmission capability or other back-up service to provide at least 50 MW of System power at the Point of Delivery for the term of this Agreement, irrespective of the operational status of the ANPP generating units [the Palo Verde nuclear plants]. Such transmission contract(s) shall provide transmission service on a basis at least as firm as is set forth in Appendix B." (Ex. 531, Item 15, p. 6.)

Appendix B defines firm transmission service for the purposes of the agreement and provides that such transmission may not be interrupted or curtailed except when technical difficulties affecting the portion of the transmission system used to provide the service limit the transmitter's ability to provide firm service and to provide service to its firm customers.

DRA points out that Section 1.2.2 of the transmission agreement terminates the firm back-up transmission service "when PNM no longer has entitlement to any generation at ANPP" (Ex. 531, Item 19, p. 3). But since Section 13.9 of the PNM contract expressly requires SDG&E to continue purchasing capacity under the contract even if PNM relinquishes its entitlement to ANPP's generation (Ex. 531, Item 15, pp. 33-34), it is clear that the transmission may terminate before the end of the full term of the PNM contract. Thus, DRA reasons, the PNM-SRP transmission

agreement did not meet the requirements of Section 5.3 of the PNM contract, and SDG&E had an opportunity to terminate that contract.

Second, DRA notes another combination of events that could result in termination of the transmission agreement before the end of the term of the PNM contract. Section 4.1.1 of the transmission agreement allows the transmission service to be curtailed or interrupted at SRP's sole discretion if it needs the transmission facilities to serve its firm system requirements with generation from its Coronado plants, including future Coronado plants and substitute units. Under Section 4.1.3, PNM has the right to ask SRP to find an alternative transmission path for the firm back-up transmission service over the facilities of neighboring utilities when SRP's facilities are interrupted or curtailed under Section 4.1.1. But if all of SRP's transmission facilities are needed to transmit Coronado generation to serve SRP's firm system requirements, PNM has a right under Section 1.2.3 of the transmission agreement to terminate the agreement. Thus, DRA argues that this set of circumstances could result in the transmission service terminating before the end of the PNM contract. Again, the requirements of Section 5.3 of the PNM contract have not been met, and, according to DRA, SDG&E had another ground for terminating the PNM contract.

Third, Section 6.1 of the transmission agreement allows for possible modification to the transmission facilities if certain problems arise. But work on any such modifications is not required to begin until January 1, 1989. Since the PNM agreement begins on May 1, 1988, DRA argues that the required firm back-up transmission service may not be available for the full term of the PNM contract if these modifications are required.

DRA further faults SDG&E for failing to have an attorney review the transmission agreement to see if it met the requirements of Appendix B of the PNM contract. SDG&E's review was apparently limited to a technical review of the capability of the transmission

path proposed by the transmission agreement. Thus, according to DRA, SDG&E wasted a valuable opportunity either to terminate the PNM contract or to use the threat of termination to get concessions from PNM.

DRA further criticizes SDG&E for then going out of its way to cure the defects of the transmission agreement when it agreed to a letter agreement with PNM on June 18, 1986. This letter agreement gave SDG&E the option of terminating the PNM contract if PNM terminates the transmission agreement under Section 1.2.3, if PNM is unable to find back-up transmission from another source, and if PNM's proposed service alternatives are not acceptable to SDG&E. But DRA notes that the letter agreement did not cover termination under Section 1.1.2 of the transmission agreement (the ANPP contingency). In addition, although SDG&E retained its right to terminate the contract, exercise of this right would come at a severe financial penalty to SDG&E, since the PNM contract was expensive in its early years. Under SDG&E's forecast of April 1986, the PNM contract was not expected to become cost-effective until 1998. The earlier the contract was terminated, the more the contract's cost would exceed avoided cost. If SDG&E terminated before 1998, it would lose the opportunity for any benefit to result from the contract.

Thus, DRA concludes that SDG&E was imprudent for not taking advantage of its opportunities to terminate the PNM agreement. DRA argues that this imprudence adds further support to its recommendation that SDG&E should not be allowed to recover the costs of the excess capacity under the contract. DRA believes that SDG&E should have known in 1985, based on available information, that it would not need capacity until 1994. Thus, DRA recommends that the demand charges from May 1988 through May 1994, amounting to \$174,001,000, should not be recovered from ratepayers.

b. SDG&E's Position

SDG&E believes that its review of the transmission agreement was thorough and that its conclusions were sound.

First, SDG&E addresses what DRA refers to as the ANPP contingency. DRA has suggested that the transmission agreement might be terminated if PNM disposed of its entitlement to ANPP, even though SDG&E's obligation to purchase capacity under the PNM contract would continue. SDG&E points out that any such disposition by PNM of its rights to ANPP generation would also violate the provisions of Section 5.4 of the PNM contract:

"PNM shall make good faith efforts to obtain transmission capability or other back-up service adequate to provide service under this Agreement, and once so obtained, shall maintain such capability or service for the remaining term of this Agreement." (Ex. 511, Item 15, p. 7.)

SDG&E asserts that the event that would trigger a termination of the transmission agreement--PNM's disposition of its entitlements to ANPP--would also be a material breach of the PNM contract. The act that would cause termination of the transmission agreement is entirely within the control of PNM, and this provision is exactly like a host of other actions PNM might take to breach the transmission agreement. Thus, SDG&E argues that DRA has demonstrated only that PNM could take actions that would be a material breach of the PNM contract and that would also result in termination of the transmission agreement.

Second, SDG&E states that it analyzed the firmness of the transmission services provided in the transmission agreement and concluded that they met the requirements of Appendix B. A later probabilistic analysis demonstrated that the minimum expected availability for 100 MW of service (twice the amount required by the PNM contract) was greater than 99.5%. SDG&E viewed SRP's reservation of the firm path for its firm resources as merely

shifting the burden to PNM to pay for additional upgrades to expand the path's capacity.

Third, the stated date, January 1, 1989, for the start of any necessary upgrades did not in any way relieve SRP of its contractual obligation to provide firm transmission back-up service beginning May 1, 1988, as set forth in Section 2.1 of the transmission agreement (Ex. 531, Item 19, p. 4).

Finally, SDG&E disagrees with DRA's premise that it should have seized any opportunity to cancel the contract. In light of the high volatility of the oil market, SDG&E was reluctant to act only on the projections of its latest forecast and to reject a decision based on previous forecasts. The benefits of the PNM contract were still substantial, and the decision to terminate, even if an opportunity had presented itself, would not have been automatic.

c. DRA's Response

DRA questions whether SDG&E's analysis was as thorough as asserted by SDG&E. DRA points out that SDG&E's witness, the person who performed much of the review, admitted that the Transmission Planning Section did not review all of the requirements of the contract, and that he assumed that several important provisions would be reviewed by someone else. In addition, DRA notes that the quantitative analysis cited by SDG&E was performed in August 1987, well after the time when SDG&E was required to assert the failure of PNM to obtain the required transmission rights.

DRA also challenges SDG&E's reliance on Section 5.4 by noting that the language of that section requires only that PNM maintain the back-up service "it has obtained." If the service that it has obtained does not meet the explicit requirements of Section 5.3 and Appendix B, Section 5.4 does not place any greater responsibility on PNM to obtain firmer service.

DRA also cites New Mexico law and legal treatises in support of its contention that by not objecting to PNM's failure to

obtain the required transmission service, SDG&E waived the defective performance, so that SDG&E would be barred from raising its objection to the transmission service at a later time, presumably when that defect affected deliveries under the PNM contract.

Moreover, DRA points out that if SDG&E really believed in May 1986 that PNM had an absolute obligation to provide firm back-up transmission service, it could have asserted that duty in the letter agreement of June 18, rather than removing PNM's absolute obligation and substituting a lesser "good faith" obligation to provide alternatives.

Finally, DRA rejects SDG&E's assertion that it may not have terminated the PNM contract even if it felt it had an opportunity to terminate in May 1986. DRA points out that the Commission in December 1985 had stated that avoided cost was the ceiling price that should be paid for purchases over the SWPL (D.85-12-108, p. 120h). In response to SDG&E's fear that its April 1986 forecast might prove to be too low, DRA reasserts its earlier criticisms of the forecasts that supported the PNM contract and the extremely small benefits that those forecasts projected for the PNM contract.

3. Discussion

a. The Agreement to Extend the Deadline

We agree with DRA that once SDG&E realized the strong possibility the the PNM contract would turn out to be a poor bargain, it should have taken advantage of every opportunity to renegotiate or terminate the contract. We find it inexplicable in these circumstances that SDG&E would voluntarily offer to extend the May 1 deadline. SDG&E would have been completely within its rights under the contract and within the bounds of acceptable business behavior to insist that PNM live up to the obligations it agreed to in entering into the agreement. SDG&E was under no legal or moral obligation to assist PNM in meeting its obligations. We

find it difficult to give credence to SDG&E's repeated assertion that it had no bargaining leverage in many negotiating situations when it failed to recognize the leverage that circumstances presented it.

Viewed in isolation, SDG&E's decision to agree to an extension after SRP's committee, which included a majority of SRP's Board, approved the transmission agreement does not appear unreasonable, but we think that this incident should not be viewed in isolation. PNM knew from the moment it signed the contract on November 4, 1985, that it was bound to provide SDG&E with proof of firm transmission arrangements by May 1. It would not have been SDG&E's stubbornness that would have forced a special meeting of the SRP Board (if SDG&E had not consented to the extension), it would have been PNM's failure to make the necessary arrangements early enough so that they could be considered at a regular meeting of the Board before May 1. Yet SDG&E stated that it feared that it would only annoy PNM and SRP if it withheld its consent to the extension. But any annoyance should have been directed at PNM, and if necessary SDG&E could have aided SRP and PNM in recognizing the true source of the delay.

Moreover, we strongly suspect that SDG&E's unnecessary, inappropriate, and apparently unsolicited offer to extend the deadline led PNM to believe that SDG&E would cooperate in solving PNM's problem. Thus, SDG&E itself may have created the setting for the annoyance that SDG&E then felt necessary to avoid.

We conclude that SDG&E acted imprudently in not informing PNM when the transmission difficulties were first mentioned that SDG&E intended fully to enforce its rights under the contract, including the right to terminate if PNM did not produce the required proof of transmission arrangements on time. If SDG&E had done so, at worst the situation would be identical to the one SDG&E faces today. It is very possible that PNM would have offered some price concessions, as its representative had indicated on April 3,

1986. SDG&E may have also had an opportunity to terminate a contract which appeared then as it does now, to be a very expensive resource.

Determining how SDG&E's imprudence has affected its ratepayers presents some difficulties. DRA ties this instance of imprudence to its larger recommendation to disallow all costs of excess capacity, or the demand payments from 1988 through 1994. We have earlier rejected this approach, and we think we should consider the effects of this particular action separately.

No party suggests that this incident would have presented SDG&E with a clear and legitimate opportunity to terminate the contract, but it may have led to offers of price concessions from PNM. In fact, PNM's representative volunteered that PNM would consider such concessions (Ex. 658, Item 13, p. 2).

Any price concessions, however, would have logically been limited by PNM's expectations of the cost of making the extra efforts needed to complete the arrangements and to execute the transmission agreement with SRP. Realistically, PNM was not going to allow the contract with SDG&E to lapse merely because it was difficult to translate its letter of understanding with SRP into a final contract within the time limits called for in the PNM contract. However, PNM may have been willing to reduce SDG&E's costs somewhat so that PNM would not have to incur the extra expenses necessary to get the agreement signed on time. Thus, PNM would have either "bought" SDG&E's concurrence in the extension or it would have incurred the expenses necessary to comply with the strict terms of the contract; PNM would have followed the course of action that it expected to be less expensive.

We can speculate that the extra expenses that capped PNM's potential concessions to SDG&E could have included added attorneys' fees, overtime payments to some workers needed to complete the agreement, compensation for added costs SRP would incur in arranging an extra or emergency meeting of the SRP Board,

and related expenses. However, in light of the absence of any evidence on this topic, only a rough estimate of these expenses is possible, and only a token disallowance is justified.

We estimate that it would have been PNM's expectation that these expenses would not exceed \$20,000; thus, its offer of a rate reduction to SDG&E would not have exceeded \$20,000. Thus, \$20,000 is a reasonable estimate of the maximum effect that SDG&E's imprudence in this instance had on ratepayers. We conclude that SDG&E's imprudence led to its losing the opportunity to reduce its costs under the contract by about \$20,000. We will not allow SDG&E to recover this amount from its ratepayers. Because we acknowledge that this amount is merely an estimate and, in any event, is intended as a nominal disallowance, we will not add interest to the \$20,000 disallowance.

b. The Transmission Arrangements

The first question for our consideration is what SDG&E's attitude should have been toward the PNM contract in May 1986. We agree with DRA that SDG&E should have been seizing every opportunity to reduce its obligations under the PNM contract. By its own forecast of oil and gas prices, SDG&E expected that the contract would cost over \$33 million more than avoided cost, and that the contract would show no benefit until 1998. Even though the soundness of this new forecast could be questioned, the fact that oil prices had already fallen well below the range that SDG&E considered in the low oil and gas price case of its earlier analysis should have raised grave doubts in the minds of SDG&E's managers about the wisdom of the PNM contract. The Commission had indicated that avoided cost should be a ceiling for purchases over the SWPL, and now SDG&E's own analysis indicated that the contract would exceed that ceiling. Any possibility for getting out of the contract or for reducing SDG&E's costs under the contract should have been vigorously pursued.

Both DRA and SDG&E get distracted from this central point somewhat in arguing about the likelihood that SDG&E's possible objections to the transmission agreement would have been sustained. Of the three objections to the transmission agreement raised by DRA, only the third, concerning the timing of transmission upgrades, could be rejected out of hand. The others, concerning the possibility of termination if PNM sold its rights to Palo Verde generation and SRP's rights to curtail or interrupt the transmission path under certain circumstances, are both credible. Even though SDG&E's reviewers seemed to feel that the possibility of termination was slight, under the wording of the contracts there was a credible legal argument that PNM had not met its obligations under Section 5.3 of the contract. SDG&E should have pressed that argument with PNM, if not in hopes of terminating the agreement, then at least in an attempt to get concessions that would lower the costs of the contract. SDG&E had nothing to lose and much to gain by pressing these arguments.

However, it appears that SDG&E did not even take the step of having its attorneys review the transmission agreement to see if PNM had met its legal obligations, so it forfeited the opportunity of raising any legal objections to the transmission agreement.

Moreover, as DRA has pointed out, it should have been SDG&E's goal either to terminate the agreement or to obtain concessions at the outset. Even if SDG&E preserved its right to terminate the agreement later, as SDG&E's argument on the ANPP entitlement issue seems to suggest, it would have endured the most burdensome period of the contract only to terminate before the contract's benefits started coming in.

We are unable to say at this late date whether SDG&E could have successfully sustained a claim of termination or whether its efforts to get concessions from PNM would have been successful. We feel confident in speculating that the change in oil prices must have increased PNM's desire to sell capacity to SDG&E even at a

reduced price and that SDG&E probably had more bargaining leverage at this time than it believed then or apparently believes now. We cannot know what would have happened with certainty. But we conclude that SDG&E acted imprudently by failing to assess the situation at the time, failing to have its lawyers review the PNM-SRP agreement for compliance with the requirements of the PNM contract, failing to set a strategy for administration of the PNM contract, and failing to pursue vigorously every opportunity to obtain concessions.

We are unable to assess how these instances of imprudence will affect ratepayers. The most likely outcome, if SDG&E had pressed its claims, would have been some reduction in the prices called for in the contract, in our opinion. However, we have no basis for estimating or quantifying those concessions. Although we will not make a particular disallowance for these imprudent acts, our conclusion that SDG&E acted imprudently reinforces our previous disallowance of the contract's demand charges for one year.

F. Conclusion on the 1985 PNM Contract

We have now completed our review of the reasonableness of SDG&E's entering into the contract with PNM and of the administration of the contract from its inception through April 30, 1986. Except for the amounts we have disallowed, all other expenses SDG&E incurs under this contract are reasonable. However, SDG&E's administration of the contract after April 30, 1986, will be reviewed for reasonableness in future ECAC cases.

Our estimated total disallowance of SDG&E's expenses under the PNM contract is \$21,998,000; the final disallowance may differ slightly from this amount because of the calculation of interest.

VIII. The Balancing Account

A. Background

The original purpose of this rehearing was to reconsider certain aspects of the balancing account created in D.85-12-108. The decision granting rehearing, D.86-06-026, instructed the parties to address six specific questions. We will examine these questions and the parties' responses in sequence, and we will consider related issues before discussing our overall conclusions.

B. The Balance Through 1988

The first question posed in D.86-06-026 was:

"What would be the difference between the cost of power purchased over the SWPL and avoided cost, measured at a capacity value of \$78/kw/yr and current short-run avoided energy cost for the period January 1, 1986 through December 31, 1988?"

1. SDG&E's Response

SDG&E's answer to this question appears to be set forth in an appendix to its opening brief. The appendix contains a response to a data request from DRA. The response gives three estimates corresponding to three forecasts of oil and gas prices.

SDG&E's most likely forecast of oil and gas prices, as of October 1986, results in the costs of power purchased over SWPL exceeding short-run avoided costs by about \$378 million. Under the low price forecast, this figure increases to \$410 million. Under the high price forecast, the purchased power costs exceed avoided cost by \$164 million.

In its testimony, SDG&E revised its estimates of the excess costs in its most likely case to \$293 million for this period (Ex. 505). This figure includes a capacity credit for economy energy purchases, similar to the capacity payment made to as-available QFs under Standard Offer Number 1 (SO1). If this

capacity credit is removed, the result would be excess costs of about \$313 million.

2. DRA's Response

DRA estimates that the costs of purchases over SWPL will exceed avoided cost by \$313 million. DRA and SDG&E agree on this figure, except that SDG&E includes a capacity credit for economy energy.

DRA argues that including this credit is inappropriate. QFs are geographically and technologically diverse, and the capacity credit of SO1 is based on the probability that many of them will be supplying energy at any given moment, including system peak, despite the diverse outage patterns of individual facilities. In contrast, DRA argues, SWPL is the equivalent of a large resource and represents a large, single contingency. If this single resource fails, both firm and nonfirm power are interrupted, so no capacity credit should be awarded to nonfirm purchases over SWPL.

3. UCAN's Response

UCAN concurs with DRA's estimate. UCAN also believes that no capacity credit should be given for economy energy purchases for four reasons. First, nonfirm purchases are interruptible. Second, the amount of nonfirm power transmitted over SWPL could be large in relation to SDG&E's system. Third, Southwestern utilities selling nonfirm energy have similar load and resource conditions, and their times of energy shortage and surplus are highly correlated, unlike dispersed QFs. Fourth, the availability of nonfirm energy is low during summer periods of heavy load when SDG&E's need is high.

C. The Incentive Created by the Deferral of Cash Flow

The second question raised in D.86-06-026 was:
"Is the deferral of cash flows, by limiting SDG&E's revenue recovery for SWPL energy to the 'value' of that energy, a sufficient incentive to encourage the company to reduce its purchased power costs?"

1. SDG&E's Response

SDG&E's answer to this question seems to be that the deferral of cash flows is more than sufficient, and the balancing account mechanism is not needed to give SDG&E sufficient incentive to reduce its purchased power costs. SDG&E believes that existing ratemaking mechanisms are adequate to provide the required incentive. Throughout the life of a transmission line, the Commission has ample opportunity--in the general rate case that reviews the resource plan, in the Commission's review of the filings required by General Order 131, in the granting of the certificate of public convenience and necessity for the line, in the prudence review of the construction costs, and in ECAC proceedings--to review the construction, operation, and even salvage value of a transmission line. The threat of a disallowance of costs at any stage of the facility's life is a sufficient incentive to encourage SDG&E to keep its purchased power costs down.

2. DRA's Response

DRA believes that the balancing account mechanism is sufficient and necessary to give SDG&E the proper incentive to operate the line efficiently.

DRA disputes SDG&E's contention that more conventional regulatory mechanisms are adequate to ensure the proper operation of SWPL without the addition of the SWPL balancing account. DRA notes that most of the ratemaking mechanisms cited by SDG&E focus on the recovery of the capital cost of the line, but the capital cost is not at issue in this proceeding; rather, the cost-effectiveness of energy transmitted over SWPL is both the issue in this case and the target of the balancing account.

DRA also argues that ECAC reasonableness reviews are not always effective checks on management's actions, especially in the complex area of contract administration, because the utility controls the records of the most important acts. If documents of

important steps in the decision process are not retained, it becomes extremely difficult for the Commission to review the prudence of management's actions. Thus, any incentives that ECAC may provide in theory are eroded in practice.

DRA observes that SDG&E seems to have become more aggressive in its administration of the contracts after the Commission adopted the decision creating the balancing account. DRA sees this as evidence that the incentives created by the balancing account were and are needed to ensure efficient operation of SWPL.

3. UCAN's Response

UCAN also believes that SDG&E's actions since the balancing account was created demonstrate the effectiveness of the incentives created by the account. SDG&E's change in behavior demonstrates that traditional ratemaking mechanisms were not sufficient to produce desirable behavior.

UCAN points out that the balancing account establishes clear price signals for the market and gives SDG&E a clear target, the avoided cost standard, to guide its efforts in securing power purchases.

D. The Standard of Value

The third topic for this rehearing set forth in D.86-06-026 was:

"What is the appropriate standard by which to measure the value of SWPL power to ratepayers? Would pricing SDG&E's SWPL cash flow at current short run avoided cost discourage the utility from making long-term contractual commitments to purchase SWPL power?"

1. SDG&E's Response

SDG&E's short answer to the first of these questions is that SWPL should be evaluated as one resource of SDG&E's integrated system and should not be singled out for special treatment. SDG&E offers several reasons in support of its position.

According to SDG&E, SWPL was planned as a resource to be integrated with the rest of SDG&E's system. At SWPL's inception, SDG&E's overwhelming need was for a way to displace oil and gas from its system. SDG&E's extensive reliance on oil- and gas-fired generation had caused enormous rate increases during the price increases of the 1970s, and SDG&E had set a goal of diversifying its fuel mix. When the Commission rejected SDG&E's proposed Sundesert Nuclear Project, the Commission instructed SDG&E to pursue the possibility of building a transmission line to give SDG&E access to the coal-based generation resources in the Southwest (D.88758, 83 CPUC 707, 734 (1978)). SDG&E pursued SWPL because it offered the benefits of access to coal-fired firm capacity, displacement of oil- and gas-fired generation, improved system reliability, and the reduction of SDG&E's oil consumption. The Commission noted all of these benefits when it granted the certificate of public convenience and necessity for SWPL (D.93785).

In addition, SDG&E argues that its use of SWPL has been demonstrated to be cheaper than feasible alternatives. SDG&E identified four such alternatives: avoided cost (representing the price of purchases from QFs), other available firm power purchases, construction of new generation, and reliance on economy energy.

For its comparison with avoided cost, SDG&E modified the approach suggested in the rehearing decision somewhat to enable it to make a comparison over a longer period of time than contemplated in the decision: SDG&E calculated that from April 1979 through April 1986, SDG&E's purchases from the Southwest resulted in savings with a net present value of \$100.3 million for SDG&E's customers. (SWPL did not enter commercial operation until June 1984; some of the Southwest purchases in this comparison were not carried over SWPL.) For May 1984 through April 1986, the comparison shows a net present-value cost of \$45 million, but even in this period savings result if the levelized capital cost of SWPL is ignored.

SDG&E attributes the net cost of the later years of the comparison to the cost of Springerville Unit 1 demand payments and the drop in the price of oil and gas. SDG&E argues that the balancing account unfairly captures the worst years, the years after the unforeseen drop in oil and gas prices, for comparison against the avoided cost standard and ignores the years when Southwest purchases were clearly beneficial to ratepayers.

SDG&E next compares the cost of Southwest purchases with the only other firm purchases available in 1978-1980, the same time when SDG&E contracted with PNM and CFE. Purchases from Cholla 4 in 1984-85 cost Southern California Edison only about a tenth of a cent per kilowatt-hour less than SDG&E's purchases from PNM for the same time. Purchases for power from Magma Power Company's Niland geothermal plant cost Edison over 8 cents per kilowatt-hour in 1986, while SDG&E's costs under the CFE agreement were just over 4 cents per kilowatt-hour.

SDG&E also cites figures that showed that the installed cost of the plants that formed the basis for the demand charges in the contracts with PNM and TEP were not out of line with the installed costs of similar plants of the same vintage.

SDG&E concludes that the costs of ownership of a new generation plant would have increased SDG&E's revenue requirement by about \$200 million compared to current forecasts of the costs of purchased power transmitted over SWPL.

Finally, SDG&E argues that economy energy is not a feasible substitute for SWPL. Without SDG&E's firm purchases, construction of several plants in the Southwest would have been postponed; as a result, the economy energy market would have been considerably tighter, with correspondingly higher prices. Furthermore, SDG&E argues that the availability of economy energy is the lowest, and its price the highest, precisely during periods of high demand, when SDG&E most needs additional power.

SDG&E also addresses the question of value in an extensive argument against using avoided cost to judge the value of SWPL. SDG&E argues that avoided cost fails to capture the value of SWPL for two general reasons.

First, avoided cost fails to reflect many of the benefits that SWPL offers. The existence of SWPL has enabled SDG&E to cut its reserve margin from 20% to 15%, with an estimated savings of \$90 million. SWPL also gives SDG&E the ability to minimize outages, which saved SDG&E's customers \$70 million, according to SDG&E. Other short-term operational benefits amounted to \$1 million. In addition, avoided cost fails to reflect the value of fuel diversity that SWPL offers a system like SDG&E's. SWPL also gives SDG&E considerable flexibility in planning to meet future needs and establishes SDG&E as a presence in Southwest power markets.

Second, SDG&E argues that the gas turbine proxy used to estimate the avoided cost of capacity does not capture SWPL's long-term value. Gas turbines are designed to provide inexpensive peaking capacity, but they are relatively inefficient. SDG&E believes that it is inappropriate to apply such an expedient, short-run measure to the long-term capacity commitments carried over SWPL. SDG&E notes that the capacity measure used in the long-run standard offer (SO4) is substantially higher than capacity prices based on the gas turbine proxy. SDG&E thinks it significant that for the standard offer the Commission found that a projected short-run marginal cost approach fails to equal long-run avoided cost.

Moreover, SDG&E asserts that it is illogical and unfair to judge an individual facility by the short-run avoided cost standard. Logical use of its system may require SDG&E to contract for additional capacity over SWPL so that the Pacific Intertie remains available to transport economy energy from the Pacific Northwest, where economy energy costs are generally cheaper than in the Southwest. This arrangement would be cheaper from the system's

perspective, even though the purchases over SWPL would likely fail the short-run avoided cost test.

Finally, SDG&E observes that the avoided cost test does not recognize a credit for transmission costs that were avoided because of SWPL. By contrast, the Commission has held that valuing long-run avoided cost must include consideration of avoided transmission costs for displaced purchases from outside the service area (D.87-05-060, mimeo. pp. 31, 56). The balancing account as proposed also does not credit SDG&E for the benefits of increased system reliability resulting from the presence of SWPL. SDG&E believes that credits should be taken into account in setting the initial balance of any balancing account.

In answer to the second part of the Commission's question, SDG&E thinks the proposed balancing account would discourage it from committing to long-term purchases over SWPL. As already mentioned, ignoring the most efficient combined use of SWPL and the Pacific Intertie will lead to increased costs, and applying the avoided cost standard to SWPL in isolation will encourage SDG&E to purchase more economy energy over SWPL, even when cheaper energy may be available from the Pacific Northwest. The course suggested by the avoided cost criterion would be for SDG&E to construct gas turbines to meet any need for new capacity, and to keep SWPL in reserve exclusively for purchases of economy energy. SDG&E does not believe that this is a wise direction for its system planning to take.

Furthermore, use of the avoided cost standard creates some incentive for SDG&E not to take steps to reduce its avoided cost, since a higher standard is easier to beat. SDG&E does not think the Commission intended to create such an incentive.

2. DRA's Response

DRA believes that the Commission has already answered its own question:

"With respect to out-of-state power purchases, the Commission fully expects the states' [sic]

utilities to go below the threshold of cost-effectiveness and provide lower cost or inframarginal resources whenever possible." (D.85-12-108, mimeo. p. 120g.)

Based on this quotation, DRA argues that the Commission expects out-of-state purchases to be cheaper than system generation, and that the short-run avoided cost measure is therefore generous to SDG&E.

To answer the Commission's questions more thoroughly, DRA evaluated the value of each of the three separate "products" that SDG&E purchases over SWPL.

First, DRA believes that the value of capacity is a shortage value, and is appropriately estimated by the cost of a combustion turbine. The \$78 per kilowatt per year that the Commission adopted for 1986 logically applies only to utilities that need additional capacity. Since SDG&E does not need capacity in the 1980s, DRA thinks that applying the avoided cost standard to capacity is generous to SDG&E.

Second, DRA views purchased firm energy as essentially displacing generation on SDG&E's system. Therefore, the value of firm energy is the incremental cost of the marginal generation unit. This may be expressed as the price of gas multiplied by the system incremental heat rate, as the Commission has indicated. DRA concurs with the Commission's use of a heat rate of 12,000 BTU per kilowatt-hour.

Third, nonfirm energy is worth less than firm energy, since it is interruptible. The true value should be value of firm energy less about 2 mills per kilowatt-hour, the cost of spinning reserves. By not differentiating between firm and nonfirm energy for purposes of the balancing account, the Commission has again been generous to SDG&E.

DRA concludes that the avoided cost criterion is consistently generous to SDG&E. Thus, DRA believes that the avoided cost standard is sufficient to capture not only the direct

economic value of SWPL but also the indirect benefits that SDG&E has ascribed to the line.

DRA finds fault with SDG&E's evaluation of many of these indirect benefits. Minimization of outages and voltage support results from the addition of any generating resource, including QFs, but the Commission has not increased avoided cost-based prices to reflect these benefits. Thus, it is consistent to perform the comparison without consideration of these factors. DRA further questions whether SWPL should receive sole credit for the reduction of reserve margin by 5%. DRA thinks the revised reserved margin is a byproduct of SDG&E's first study of reserve requirements to be based on expected unserved energy (EUE). DRA believes that a study by the Energy Commission indicates that SWPL reduced reserve margins by only one to two percent. Moreover, problems with the way in which SDG&E ran its PROMOD (a production cost simulation model) runs undermines its estimate of the value of the reduction in reserve margins and its claim that SWPL lowered its cost of capacity and energy.

DRA concludes that SDG&E's purchases over SWPL are more expensive than increased generation from its system, and that avoided cost is a generous measure of the value of SWPL power.

3. UCAN's Response

UCAN believes that avoided cost is a satisfactory standard for evaluating SWPL's costs. UCAN finds support for its position in D.85-12-104, in which the Commission accepted UCAN's argument that a contract between SDG&E and its affiliate should be evaluated by an avoided cost standard, rather than a long-run standard urged by SDG&E. UCAN also notes that SDG&E has asserted that its long-run avoided costs are below its short-run avoided costs. If this statement is true, the short-run avoided cost approach is clearly more favorable to SDG&E.

UCAN also believes that over its life a long-run resource should show a substantial savings over short-run costs to justify the increased risk inherent in a long-run commitment.

UCAN suggests that a long-term purchase could be valued by a short-run standard until such time as it becomes a long-term substitute for a capital addition. The long-run evaluation standard could be either long-run avoided cost or a forecast of short-run avoided cost. UCAN believes that this treatment is consistent with the Commission's policy as expressed in D.86-07-004, which set up the auction approach to selecting new generating resources.

E. SDG&E's Needs

The fourth question posed in D.86-06-026 was "What are SDG&E's energy and capacity needs in the 1986 through 1996 time frame?"

1. SDG&E's Response

In an attachment to its brief, SDG&E presents a table which it labels a "deterministic" resource plan from 1986 through 1998. According to this table, a comparison of expected load with existing, committed, and nondeferrable resources shows a need for additional capacity beginning in 1991 and growing to 392 MW in 1996.

However, SDG&E also includes a related response to a data request that warns, "it would be inappropriate to use this deterministic estimate of energy and capacity needs for planning purposes, or evaluation of the Southwest Powerlink, at this time. Probabilistic analysis must be employed to determine prudent resource choices." SDG&E's answer to this question seems to be no more specific than its statement, "the range of potential energy and capacity requirements for SDG&E over the next 10 years is quite broad."

2. DRA's Response

DRA's opinion is that SDG&E will have significant excess capacity through 1989. A need for new capacity will begin in 1990, according to current demand forecasts and resource plans. DRA believes that SDG&E will be able to meet this need for new capacity by operating existing units and restarting Silver Gate.

Although DRA agrees that the need for energy and capacity will increase through 1995, it disputes SDG&E's plan to add 900 MW. DRA believes that much of this increased need can be met by QFs and cost-effective conservation and load management programs.

3. UCAN's Response

UCAN believes that SDG&E will not have a need for additional capacity until 1992 or later. It also thinks that restarting Silver Gate, in combination with purchases of economy energy, will satisfy much of SDG&E's need through 1994.

F. The Role of SWPL

The fifth topic of D.86-06-026 raised several key questions:

"What role in SDG&E's resource plan should the SWPL play? Should it continue to provide largely firm capacity? Should contracts for the purchases be flexible to enable the deliveries to meet SDG&E's resource needs as determined bi-annually [sic] in the OIR-2 proceeding?"

1. SDG&E's Response

SDG&E believes that SWPL's role should be that of a valuable and flexible resource in an integrated system. As SDG&E states in its brief:

"SWPL can be used to accommodate a vast range of short-term and long-term resources, the mix of which depends entirely on the future environment. For example, if high oil and gas prices return, SWPL would carry coal and hydro-based resources which would cost less than SDG&E's own on-system oil and gas generation.

On the other hand, if oil and gas prices stay relatively low, SWPL would carry a large portion of economy energy which would be backed up by SDG&E's on-system gas turbine capacity. Under this scenario, in the longer run, SWPL would also carry additional capacity, as SDG&E's ability to build and site additional gas turbines wanes." (Opening Brief, p. 51.)

SDG&E notes that its new planning strategy calls for filling only 50% of expected need with long/lead-time resources. The key to this strategy is maintaining flexibility, and it asks the Commission to permit it flexibility in operating SWPL.

Accordingly, SDG&E opposes the suggestion in the last part of the question that contracts for purchases of future resources should be limited to two-year terms.

SDG&E believes that it should have the flexibility to operate SWPL in a way that minimizes the total system's costs and not just the costs of purchases carried over a single transmission line.

2. DRA's Response

Since DRA believes that SDG&E will not need additional firm capacity until 1992, it recommends that SWPL should be used to transmit economy energy for the next five years. After 1992, SWPL could be used to carry additional firm resources, if the resources are needed and if they are less expensive than other options, including QFs, conservation, and load management.

DRA believes that any new agreements for firm capacity should be reviewed as part of the biennial OIR-2 process.

DRA finds some inconsistency in SDG&E's plea for flexibility and notes that the lack of flexibility in the use of the line led directly to this proceeding. Between 1984 and 1988, SDG&E loaded the line with firm capacity, leaving no opportunity for other, more flexible uses of the line. DRA points out that when it ordered this rehearing, the Commission found "loading SWPL

with firm purchases has constrained the room available for economy energy transactions" (D.86-06-026, mimeo. p. 4).

3. UCAN's Response

UCAN agrees with the general proposition that flexibility is needed to allow the utility to choose the least-cost option. However, UCAN believes that SDG&E has used this flexible resource in an inflexible manner in loading the line with firm capacity purchases.

UCAN thinks that SWPL will play the role of securing low-cost economy energy through 1996. If inframarginal firm energy is available, SDG&E could also transmit such purchases over the line.

G. Interest

The final question raised in D.86-06-026 was "Should the balance in the SWPL account accrue interest?"

1. SDG&E's Response

SDG&E's response is short and direct: If there is a balancing account, all balances should accrue interest. Otherwise, the balancing account, which was designed as a revenue deferral mechanism, would become punitive.

2. DRA's Response

DRA's response is closely related to its proposals for modifying the balancing account, which will be discussed later in this decision. In short, DRA would exclude interest from the annual excess costs of the PNM and TEP contracts between July 1, 1987 and May 30, 1989. Other SWPL costs in the balancing account would accrue interest.

DRA believes that excluding interest on the balances associated with these two contracts would give SDG&E a strong incentive to take steps to reduce future costs under the contracts. In addition, excluding interest reduces the amount that is deferred and thus lessens the long-term financial burden on SDG&E.

3. UCAN's Response

UCAN agrees with DRA's proposed treatment of interest. In addition to the reasons given by DRA, UCAN thinks excluding interest for a portion of the account's balance is justified as part of a compromise. Under the proposed modifications to the account, shareholders would bear a portion of the interest in exchange for a reduction of risk that results from setting a fixed date for terminating the account. UCAN also believes that SDG&E's potential exposure from excluding interest is relatively small.

H. Proposed Modifications to the Balancing Account

1. DRA's Proposal

DRA proposes four modifications to the balancing account as originally described in D.85-12-108, and its positions on the balancing account issues are related to its proposed modifications.

DRA's modifications stem from a concern about the large potential balance that could accrue in the balancing account. Because of the decline of oil and gas prices, DRA estimates that up to \$570 million in excess costs could accumulate in the account. If a large revenue deferral represented by the account balance requires long-term external financing, SDG&E's cost of capital could rise, to the detriment of both shareholders and ratepayers. DRA's modifications are designed to limit the accumulations in the account while preserving the incentives that were the original purpose of the account.

First, DRA recommends that the account should begin on July 1, 1987, rather than January 1, 1986, as required by D.85-12-108. This later start would reduce the account balance considerably.

Second, DRA proposes that the annual excess costs of the TEP and PNM contracts should be amortized over five years, starting in the year the excess costs are incurred. Under DRA's proposal, the deferred excess costs from these contracts would not receive

interest. Excluding interest would give SDG&E a great incentive to reduce future costs under these contracts. Other costs in the balancing account would receive interest, however.

Third, the balancing account would terminate when the balance reached zero or after ten years, whichever occurs earlier. Any remaining balance after ten years would be amortized over one or two years. Limiting the term of the balancing account would reduce the long-term financial burden on SDG&E and give greater certainty to investors, according to DRA.

Fourth, DRA recommends that the account use base rate revenue requirements associated with SWPL's fixed charges, rather than levelized costs ordered in D.86-06-026. Base rate revenue requirements are actually used in rates and are derived from straight line original cost (SLOC) accounting practices. The front-loaded nature of SWPL's fixed cost recovery was one of the reasons the Commission adopted the balancing account, argues DRA, and use of a levelized fixed charge distorts the yardstick of ratepayers' welfare. DRA's recommended substitution results in a better match of the costs and benefits to ratepayers, according to DRA.

2. UCAN's Proposal

UCAN supports DRA's proposed modifications and proposes an additional change.

If a balance remains in the account after the account is terminated after ten years, UCAN would adjust the amortization period so that rate increases resulting from amortizing the balance would be limited to 5% per year. If necessary, amortization under this proposal could extend beyond the two-year limit of DRA's recommendation.

3. City's Position

City supports DRA's modifications and does not oppose UCAN's additional modification.

4. SDG&E's Position

SDG&E opposes the balancing account in any form, and the proposed modifications do not lessen its opposition. Certain of the arguments SDG&E raises against the balancing account are pertinent to the proposed modifications.

SDG&E views the proposed modifications as a concession by DRA and UCAN of the validity of SDG&E's point that the burden of financing revenue deferrals under the balancing account would raise rates. SDG&E presented testimony that the need for additional financing created by the balancing account could cause SDG&E's debt and commercial paper to be downgraded and could also increase its cost of equity.

The point of the proposed modifications is to prevent the financing burdens from harming ratepayers, according to SDG&E. SDG&E is not convinced that the modifications remove this danger. According to SDG&E, even DRA's witness could not testify that the proposed modifications would ensure that the balancing account would not increase SDG&E's financing costs.

SDG&E also opposes the recommendation that certain portions of the balancing account would not accrue interest. SDG&E thinks that this recommendation is contrary to the Commission's practice for all other balancing accounts. SDG&E argues that this recommendation makes it clear that DRA's primary motive in supporting the balancing account is to reduce SDG&E's revenue requirement arbitrarily and not to create incentives.

I. Financial Accounting Standard 92

Another issue related to the balancing account was raised late in this proceeding with the issuance of Financial Accounting Standard (FAS) 92 by the Financial Accounting Standards Board (FASB). FAS 92 caused SDG&E to petition for reopening of the proceeding, and its petition was granted. An additional day of hearing on FAS 92 was held on December 3, 1987, and supplemental briefs were filed by SDG&E and City on December 14, 1987.

1. SDG&E's Position

SDG&E summarizes FAS 92 as forbidding a utility from booking as assets all revenues deferred under a phase-in plan for recovering expenditures "in connection with a major, newly completed plant" if any portion of the deferred revenues are not "scheduled for recovery within ten years of the date when deferrals begin."

SDG&E believes that there is a strong possibility that FAS 92 would be applied to the balancing account and that SDG&E would be barred under FASB's accounting principles from booking any of the deferred revenues as assets. The result would completely disrupt SDG&E's financial status.

SDG&E argues that the SWPL balancing account qualifies as "a phase-in plan...ordered by a regulator." Moreover, since the balancing account, as originally stated or as modified by DRA and UCAN, neither "specifies the timing of recovery" of the deferred revenues nor schedules "recovery within 10 years of the date when the deferrals begin," FAS 92 would prohibit booking deferred SWPL revenues as assets.

SDG&E construes the reference to "plant" in FAS 92 to include transmission lines as well as generation plants. It supports its interpretation by referring to a conversation with the FASB's project manager for FAS 92. Similarly, SDG&E argues that the standard's reference to phase-in plans "in connection with plant" indicates an intention to give the standard a broad application, and FAS 92 would likely apply to system power purchases when the selling utility has major, newly completed generating plants on its system.

The only hesitation SDG&E appears to have about the application of FAS 92 to the balancing account has to do with whether a comparatively low-cost transmission line like SWPL qualifies as a "major" plant. SDG&E concludes that the potential harm to SDG&E and its ratepayers is so great that the Commission

should not gamble on whether or not a quarter-of-a-billion-dollar plant is considered major.

SDG&E disagrees with DRA's argument that FAS 92 would not apply to the balancing account because, since the costs of SWPL were included in SDG&E's rate base in 1984, no phase-in plan exists. SDG&E points out that SWPL's investment costs are included in the debit side of the balancing account ledger. Unless those costs are arbitrarily separated from other debit entries, some investment costs would necessarily be deferred. Even with such an arbitrary separation, the balancing account mechanism carries with it the possibility, if avoided costs drop low enough, that some of the segregated investment costs would be deferred.

SDG&E concludes that FAS 92 is likely to exacerbate further the financial harm already present in the balancing account proposals.

2. DRA's Position

DRA believes that FAS 92 does not apply to the SWPL balancing account.

DRA states that the balancing account does not phase SWPL into SDG&E's rate base, so FAS 92 has no application. SWPL was fully included in rate base starting in 1984, according to DRA, and the balancing account acts to defer only a small portion of the cost of energy and capacity transmitted over SWPL in 1987-89. The amounts deferred are costs that would, except for the existence of the balancing account, be charged to the ECAC account. Thus, no phase-in is involved, and FAS 92 does not apply.

Furthermore, the deferred revenues may be capitalized under FAS 92. Although there is no specific reference to the deferral of fuel or purchased power costs in FAS 92, DRA argues that the "probability of recovery" standard applied to investment costs will probably also apply to capitalization of other cost deferrals, judging from the background to the development of FAS 92 and the related FAS 90. DRA's forecasts demonstrate that all

deferrals will be recovered by 1995, well within the ten-year limit. In addition, the ten-year sunset provision that DRA has proposed as a modification to the balancing account would make it more likely that the balancing account would meet the "probability of recovery" standard.

3. City's Position

City joins DRA in concluding that FAS 92 does not apply to the balancing account.

First, City also points out that SWPL was placed in rate base in 1984; thus, no phase-in of SWPL's investment costs is proposed or will occur.

Second, no reference to transmission lines appears in FAS 92. All examples given in the standard refer to electric generating plants.

Third, a reading of Appendix C, which gives background information on the development of FAS 92, leaves the strong impression that FAS 92 was primarily aimed at phase-in proposals for nuclear power plants costing several billion dollars. SWPL, with its \$250 million cost, would not qualify as a major plant in comparison to the nuclear plants.

Fourth, even if the FASB later holds that deferral of purchased power costs associated with a transmission line are subject to FAS 92, the standard provides transition rules that the Commission may use.

~~City concludes that the Commission should not withhold~~
approval of the balancing account solely because of concerns about financial reporting requirements.

J. Intertemporal Equity

Although the Commission did not specifically call for comments on intertemporal equity in its earlier decision defining this rehearing, several parties addressed this issue.

SDG&E argues that the balancing account does not promote intertemporal equity. SDG&E believes that selecting one particular

resource and deferring the revenue requirements for that resource unfairly shifts costs from today's ratepayers to tomorrow's. Under conventional straight-line original cost depreciation, today's ratepayers benefit from resources, including fully depreciated resources, paid for by previous generations of ratepayers, and today's ratepayers' concomitant responsibility is to pay for resources that come on line during their times. It is equitable, in SDG&E's view, for each generation to receive the flow of benefits from previous generations and to pay its fair share for continuing that flow to future generations. The effect of the balancing account would be to disrupt that flow, and to unfairly force future ratepayers to bear part of the responsibility of today's ratepayers along with the responsibility appropriate to their times.

DRA and UCAN believe that the balancing account fosters intertemporal equity. They believe that there should be a close link between ratepayers' burdens and benefits at all times. The incentive created by the balancing account will cause SDG&E to take steps to make use of SWPL cost-effective in future years. In the meantime, however, the costs of SWPL will continue to be greater than its benefits. The revenue deferral mechanism is merely a way of shifting costs from the line's early years, when costs exceed benefits, to later years when benefits will exceed costs. Intertemporal equity will be served because both groups of ratepayers will pay rates that more accurately reflect the benefits they receive from SWPL.

K. Discussion

As the preceding section has demonstrated, the parties' responses to the questions posed in D.86-06-026 raise issues that extend far beyond the narrow question of how the balancing account should operate. To impose some order on our discussion of these issues, we will first address the effect of FAS 92 on the balancing account. Then we will address the six questions of D.86-06-026 in

sequence, with extensive digressions to consider the implications of the parties' positions. Next, we will react to the modifications to the balancing account proposed by DRA and UCAN. Finally, we will summarize our conclusions on the balancing account issues.

1. FAS 92

We are not persuaded that the issuance of FAS 92 should prevent us from adopting the SWPL balancing account.

First, we agree with City that the standard's intended application is to large electric generating plants. There is no indication that "plant" as used in FAS 92 should be construed to include transmission lines like SWPL. Second, although SWPL's \$250 million cost seems large by almost any standard, it is only a small fraction of the multi-billion dollar costs of the large generating plants that appear to be the focus of FAS 92. Thus, even if "plant" is interpreted as including transmission lines, it is not clear that SWPL qualifies as a "major" plant. Third, the balancing account is not designed to recover SWPL's capital costs. We have already found the costs of constructing SWPL to be prudent, and these costs have been included in SDG&E's rate base since 1984. The only costs that are proposed for deferred recovery are a portion of the energy and capacity costs of purchases that are transmitted over SWPL. Thus, no phase-in plan, as the term is used in FAS 92, is being considered or adopted here. In addition, because of the vagueness of the standard, we think it likely that even if the FASB concludes that the balancing account is covered by FAS 92, some provision would be made to avoid the financial consequences feared by SDG&E.

We conclude that FAS 92 should not prevent the Commission from applying the balancing account to the costs of purchased power transmitted over SWPL.

2. The Balance Through 1988

The parties are in essential agreement in their answers to the first question of D.86-06-026. They estimate that the difference between the costs of purchased power and avoided cost between January 1, 1986, and December 31, 1988, is \$313 million.

The only dispute is whether economy energy purchases should receive a \$20 million capacity credit. We rejected this argument in our response to SDG&E's application for rehearing of D.85-12-108, and we again reject the argument.

SDG&E argues that purchases from multiple sources in the Southwest are analogous to purchases under SO1 from multiple QFs, who receive a capacity payment based on their actual production. However, it is obvious that economy energy purchases do not possess the characteristics of such QFs. We agreed to allow capacity payments to as-available QFs because these independent generators were viewed as a large group of small, geographically dispersed facilities using diverse technologies. Because of their diversity, these generators carried a high probability that a proportion of them would be operating on-peak, when the utility needs capacity, even if individual units were out of operation. Thus, the utility could rely on a peak-period contribution by QFs as a group for planning purposes. By contrast, Southwest economy energy would be completely curtailed by an outage of SWPL. More important, in its discussion of alternatives to SWPL, SDG&E itself argues that, unlike QFs, Southwestern economy energy cannot be relied on to meet peak demand. Thus, SDG&E supplied the most persuasive argument against its position.

We conclude that no capacity credit should be awarded for economy energy purchases, and the balance from 1986-88 will be \$313 million.

3. Incentives

Our original question focused on incentives to reduce purchased power costs over SWPL. We still think that the

incentives provided by the balancing account are adequate to encourage SDG&E to minimize the cost of power transmitted over SWPL. However, we are less certain that minimizing SWPL's costs should be the only goal of our system of incentives.

We are concerned that both the Commission and SDG&E have been considering SWPL in conventional terms, which are proving to be too narrow. The construction of SWPL, the abandonment of the Sundesert nuclear plant, and the policy of reducing reliance on oil- and gas-fueled resources have essentially committed SDG&E to meet its additional generating requirements--whether by means of constructing a plant, owning part of a plant, or purchases from other utilities--from generating resources outside of its geographical service area. To a greater extent than other transmission lines, SWPL should accordingly be viewed as part of the generating resource, whether that generation is represented by ownership of a plant or by contracts for firm capacity. Therefore, the costs of SWPL cannot be separated from the costs of the generation unit, and both costs should be evaluated together.

Although the decision that granted the certificate of public convenience and necessity for the construction of SWPL projected that the savings from energy purchases justified the construction of the line (D.93785, mimeo. p. 83), it is now apparent that we have tended to view SWPL and sources of generation as two separate elements of the system, when in fact they are intertwined. We believe that one of the virtues of the balancing account is that it includes a consideration of the capital costs of SWPL and requires SDG&E to operate SWPL in a way that offsets some of those costs.

At the same time, we think we have been mistaken in viewing the Southwestern purchases separately from the rest of SDG&E's system. SDG&E's most pointed criticisms of the SWPL balancing account are that it could lead to inefficient operation of the utility's system and that the balancing account creates

incentives to reduce the costs of Southwestern purchases at the expense of the lowest cost operation of the system as a whole.

This criticism is illustrated by reference to the Pacific Intertie. SDG&E points out that the cheapest available economy energy is often from the Pacific Northwest, not from the Southwest. If the balancing account encourages SDG&E to load SWPL with economy energy, the utility may be forced to meet new capacity needs by contracting with Northwest utilities. But as increased capacity purchases from the Northwest take up a larger portion of SDG&E's share of the Pacific Intertie, less of the line's capacity will be available for economy energy purchases. Thus, the incentives of the balancing account may lead to a replacement of cheaper economy energy over the Pacific Intertie by comparatively more expensive economy energy over SWPL, with the result that overall costs to the system will be higher, although the balance in the SWPL account may decline. Reducing the costs of power transmitted over SWPL may not lower the system's overall costs. And under some circumstances it would be a rational least-cost strategy for SDG&E to fill SWPL with firm capacity in order to use the Intertie for the cheapest available economy energy, although this course of action would violate the incentives established by the balancing account.

SDG&E has assured us that it would not ignore cheap purchases from the Pacific Northwest merely to reduce the balance in the SWPL account, but we believe that we should try to align our regulatory incentives with the behavior we are trying to encourage. The goal of both our regulation and SDG&E's operation should be to meet customers' needs for electricity at the lowest possible price. To the extent that the SWPL balancing account gives different signals or encourages different goals, it should be altered.

One possible modification suggested by SDG&E's example would be to include purchases transmitted over the Pacific Intertie in the balancing account. This modification would permit the utility the freedom to operate its two major transmission lines for

out-of-state purchases in the most efficient manner. If efficient operation dictated purchasing capacity over SWPL and economy energy over the Pacific Intertie, this modification would not stand as a barrier to such an arrangement.

On the other hand, even this modification would tend to encourage SDG&E to regard its system in a segmented fashion that we do not believe is appropriate. We would prefer to have SDG&E devote its efforts to operating its entire system in the most efficient manner possible. Even singling out two major transmission lines might tend to distract SDG&E from this goal. SDG&E should view all of its facilities and purchases as an integrated system, with the paramount goal of meeting customers' electricity needs at the lowest possible price.

The bland way in which we have stated this goal should not obscure the important implications that accompany this concept. Several of these implications deserve further elaboration.

If SDG&E continues to rely on firm capacity contracts in combination with its major transmission facilities to meet rising demand, then this combination should at some point become the avoided unit that establishes avoided cost. We developed the concept of the combustion turbine as a proxy for the avoided generation unit to enable us to quantify avoided capacity costs at a time when none of our major utilities was planning new generation units. Since we could not identify a specific avoided plant, we were forced to estimate avoided capacity costs by reference to the proxy. But if firm capacity contracts are SDG&E's choice for meeting increased demand, then the cost of these contracts, with an appropriate portion of the associated transmission line's costs, should assume the role of the avoided plant and serve as the benchmark avoided cost.

This notion gains credence because of the way in which SDG&E has in fact used SWPL. As we noted in D.85-12-108, SDG&E has

out-of-state purchases in the most efficient manner. If efficient operation dictated purchasing capacity over SWPL and economy energy over the Pacific Intertie, this modification would not stand as a barrier to such an arrangement.

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This notion gains credence because of the way in which SDG&E has in fact used SWPL. As we noted in D.85-12-108, SDG&E has

filled the line's capacity with firm capacity contracts, which were pursued to meet expected shortfalls in peak generation.

If the combination of purchased energy and transmission lines has become SDG&E's avoided unit, then the costs of this "unit" should also be considered in making offers to QFs and in evaluating conservation and load management opportunities. If QFs can provide needed capacity at less cost than the combination of purchases and the transmission line, then SDG&E should contract with them before turning to Southwestern utilities. If conservation and load management can avoid the need for purchasing new capacity and can beat the price of available contracts, then SDG&E should pursue those programs before contracting with Southwestern utilities.

In fact, the very considerations that motivated the construction of SWPL--SDG&E's geographical location in a corner of the country, in what SDG&E describes as an "energy desert," with few opportunities for generation other than oil and gas; its desire to become less reliant on oil and gas; its rapidly growing population and inevitable increase in demand for electricity--should also lead SDG&E to be diligent, creative, and innovative in pursuing conservation and load management. SDG&E's limited ability to construct additional generating facilities in its service area has left it largely unable to control its future sources of generation. The more it can do to slow load growth through conservation, load management, and more efficient use of energy, the more control over its destiny it retains. In our view, because of its situation SDG&E should become one of the most innovative and aggressive utilities in pursuing conservation and load management.

Moreover, SDG&E's decision not to own generation units in the near future removes one of the barriers to promoting conservation. When a utility has a prospect of owning a generating unit, it may have a slight incentive to favor increasing generation over controlling load growth, since it earns a return on its

prudent investment in generating units. However, when a utility relies on purchases for additional capacity, as SDG&E appears to have done, its costs are recovered through its ECAC, and it earns no return on its expenditures. If SDG&E recovers its investment in conservation on a current basis, it should be economically indifferent to whether it increases its purchases to meet rising demand or limits the rise of that demand through conservation expenditures.

For similar reasons, we believe that SDG&E should view QFs with new eyes. QFs represent a diversified source of generation, and SDG&E should pursue contracts with all projects that can help it to meet its capacity needs at less than the cost of alternatives. Furthermore, SDG&E should consider using SWPL as a means of expanding its ability to purchase power from QFs. Although it may not be required to make such purchases under federal law, and although our standard offers do not require such purchases, nothing prevents SDG&E from contracting with QFs outside of its service territory. We note with approval that SDG&E's ROC plan was considering purchases from out-of-territory QFs as early as 1985. QFs not fueled by oil or gas, in particular, could help SDG&E meet its goal of diversification. If such QFs can provide power to SDG&E at competitive rates and if they can interconnect with SWPL, SDG&E could use SWPL to broaden the pool of potential QFs that can supply power to it, again furthering the overall goal of meeting its customers' needs at the lowest possible cost.

We have digressed considerably from our original consideration of the incentives created by the balancing account. We have agreed with SDG&E's primary point that SWPL should not be viewed in isolation but should be considered and operated as part of an integrated system. We have not agreed with SDG&E's apparent conclusion that operation of an integrated system means a return to business as usual. We have followed the implications of SDG&E's arguments far beyond the purpose for which they were advanced and

found that they suggested a better way to view SDG&E's system and its operations. We may abandon the balancing account because of its failure to offer the proper incentives, but SDG&E should not view this as a return to the regulation of the recent past. We intend to pursue ways to create new incentives to encourage the efficient operation of SDG&E's integrated system.

4. The Standard of Value

SDG&E objects to the application of short-run avoided cost measures to what it views as long-term commitments. However, it is not clear that SDG&E's purchases over SWPL should be considered long-term commitments. In other contexts we have defined the long term as 15 years or more. For example, when we adopted a long-run standard offer to QFs, we required a minimum commitment of 15 years (D.83-09-054, mimeo. p. 23). None of the current firm capacity contracts--the subjects of the balancing account--extend more than 13 years.

Moreover, SDG&E has used these contracts in much the way it would have used a gas turbine. The contracts can be called on to provide energy if needed, particularly at peak, but in practice they have frequently provided only capacity, only the potential to provide energy during times of peak demand or in emergencies. The clearest example of this use is the testimony that from April 1986 through May 1987, SDG&E paid over \$97 million for capacity from the Springerville 1 plant but took energy only one month during that period (Tr. 64:7379-81). Comparison with the gas turbine proxy--a relatively cheap but inefficient way to provide peaking capacity--seems particularly appropriate in light of SDG&E's actual use of the firm capacity contracts.

SDG&E's point may be that the pricing structure of its contracts differs from the costs of the gas turbine proxy. Gas turbines provide relatively cheap capacity, but fuel costs are high because of the turbine's low efficiency. Prices under the firm capacity contracts are modeled after the costs of baseload coal

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units, which have high capacity costs and relatively cheap fuel costs. But SDG&E's objection ignores the purpose of choosing coal units: the cost of energy is supposed to be low enough to compensate for the higher capacity costs over the plant's--or in this case the contract's--life. Especially when the contract is used to provide peaking capacity and extends over a term comparable to the useful life of a gas turbine, a cost comparison with a gas turbine is particularly fitting. If the contract price cannot beat the expected cost of a gas turbine, then, if this measure of avoided cost has any validity, the utility should seriously consider constructing a gas turbine rather than entering into the contract.

SDG&E has mentioned various reasons why a gas turbine alternative was not feasible. We need not decide the soundness of these reasons because the more important point is that SDG&E should always have some standard readily available for measuring the various generation and purchase opportunities that come along. If the avoided costs approved by the Commission do not fit SDG&E's needs, then SDG&E should have developed an alternative measure in some detail. Avoided costs, after all, are just a reflection of the expected costs of the next source of generation that the utility would build or purchase. The utility should always have a clear conception of what its best next choice would be so that it can determine whether opportunities that arise are better or worse than the next source the utility has tentatively selected. A well-developed conception of the utility's next choice provides a clear standard for negotiations and gives the utility considerable bargaining leverage in such negotiations: if adequate concessions are not made in negotiations, the utility can break off negotiations and proceed with its original plan.

SDG&E has argued that the avoided cost standard was not appropriate for its purposes, but it has failed to describe in detail what standard, if any, it used to guide the course of its

units, which have high capacity costs and relatively cheap fuel costs. But SDG&E's objection ignores the purpose of choosing coal units: the cost of energy is supposed to be low enough to compensate for the higher capacity costs over the plant's--or in this case the contract's--life. Especially when the contract is used to provide peaking capacity and extends over a term comparable to the useful life of a gas turbine, a cost comparison with a gas turbine is particularly fitting. If the contract price cannot beat the expected cost of a gas turbine, then, if this measure of avoided cost has any validity, the utility should seriously consider constructing a gas turbine rather than entering into the contract.

SDG&E has mentioned various reasons why a gas turbine alternative was not feasible. We need not decide the soundness of these reasons because the more important point is that SDG&E should always have some standard readily available for measuring the various generation and purchase opportunities that come along. If the avoided costs approved by the Commission do not fit SDG&E's needs, then SDG&E should have developed an alternative measure in some detail. Avoided costs, after all, are just a reflection of the expected costs of the next source of generation that the utility would build or purchase. The utility should always have a clear conception of what its best next choice would be so that it can determine whether opportunities that arise are better or worse than the next source the utility has tentatively selected. A well-developed conception of the utility's next choice provides a clear standard for negotiations and gives the utility considerable bargaining leverage in such negotiations: if adequate concessions are not made in negotiations, the utility can break off negotiations and proceed with its original plan.

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negotiations. We fear, from this omission and from its frequent assertion that it had no leverage in its negotiations with other utilities, that SDG&E had no clear concept of its best generation choices and thus no way of knowing where to draw the line in its negotiations. If this fear is accurate, SDG&E has failed to assimilate the lessons of avoided cost, and the imposition of the avoided cost standard through a mechanism like the balancing account may be necessary.

SDG&E appears to have rejected the avoided costs derived from the gas turbine and to have dismissed several alternative sources of generation on the ground that these sources would not further SDG&E's goal of diversifying its fuel sources.

Although we acknowledge that diversity can be an important goal for SDG&E, we hope that SDG&E has pursued and will pursue this goal in a thoughtful and intelligent manner. The goal, of course, is not diversity for diversity's sake. The goal of SDG&E's pursuit of diversity should be to find and follow a course that is most likely to lead to the lowest costs over a reasonable planning horizon. We have previously discussed our thoughts on how diversity should have entered into the consideration of the 1985 PNM contract.

Once again we stress that the policy of diversification must be pursued rationally and intelligently. In addition, we note that other actions provide the same insurance that fuel diversity does. For example, by reducing demand, conservation and increased efficiency can provide protection against rises in fuel prices by increasing the benefit extracted from a unit of electricity, regardless of the fuel that produced it. The goal of diversity--finding a course of action that is most likely to lead to the lowest costs over the planning horizon--can be met by several such options that are not directly tied to generation.

Diversity, then, does not remove a resource decision from the requirement of meeting some standard of value; it is merely

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Diversity, then, does not remove a resource decision from the requirement of meeting some standard of value; it is merely

another element that should go into the utility's determination of the value of a particular option. Diversity in itself does not eliminate the need for a comparison with the best alternative, or the unit represented by avoided cost. Although SDG&E may quibble with the particular way in which avoided cost has been defined and applied to the contracts carried over SWPL, it should have no reservations about the concept underlying the calculation of avoided cost. Thus, if a particular resource provides greater benefits in the form of fuel diversity than the target avoided plant and if those benefits exceed any extra cost connected with that resource, then the resource meets the avoided cost test. But the point is that such a resource should meet the test of avoided cost, not evade the comparison provided by such a test.

We conclude that that the concept behind the avoided cost standard is appropriate, and that the utility should always be weighing an ownership or purchase opportunity against its best alternative, the option that defines its avoided cost. Moreover, in light of the specific firm capacity contracts that SDG&E has entered into and the way in which those contracts have been used, the standard adopted in D.86-06-026 is a reasonable one for use in connection with the balancing account.

5. SDG&E's Needs for Energy and Capacity

The parties seem united in concluding that SDG&E has no need for additional capacity until at 1990 at the earliest. Future capacity appears to be SDG&E's most important need, and no party has commented on the system's need for energy.

DRA has argued that when a need for capacity arises, SDG&E should restart its Silver Gate units to meet part of the need. As load grows, DEA believes that conservation and the contributions of QFs will be sufficient to meet need through at least 1995.

We do not agree with the specifics of DRA's program. As we have discussed, SDG&E should fill any expected need with the

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resources that provide for the lowest costs over the planning horizon. Obviously, restarting Silver Gate is a cheap possibility, but we will not assume that SDG&E will be unable to find even cheaper options. Our point here is not to emphasize specific options but to encourage SDG&E constantly to undergo the process of surveying all potential sources to meet need and all possible options to reduce need.

SDG&E's response to this question was not particularly thorough, but we find it encouraging that it is using a probabilistic process and looking at a range of outcomes rather than relying too heavily on a single forecast. We see the primary value of a probabilistic approach as forcing the utility's planners to consider a variety of possible events that could influence the forecast. Consideration of the wide range of circumstances that can affect the forecast should encourage a healthy flexibility and should help SDG&E develop strategies to reduce large risks. Like any forecasting approach, of course, the probabilistic approach requires an enormous amount of informed judgment and should not be applied mechanically. An intelligent and experienced consideration of the many factors that can influence a forecast's outcome should lead to more accurate forecasts.

The contracts under consideration in this case illustrate the importance of accuracy in all aspects of a utility's forecasts of its needs. A utility that forecasts a need for capacity too early will waste considerable sums in securing capacity in advance that, under the provisions of many contracts, must be paid for even if it is not needed. While foretelling the future will never be entirely accurate, in the electric utility industry, even slight improvements in accuracy can save a utility and its ratepayers hundreds of millions of dollars.

6. The Role of SWPL

As we have already indicated, we believe that SWPL is best used as part of SDG&E's integrated system, as one of a set of

tools SDG&E may use in its efforts to minimize the system's costs. As such, we are reluctant to prescribe a specified use for the line; it should be used to take advantage of sources of energy that are likely to lead to the lowest costs over a reasonable planning horizon. These sources of energy should include not only Southwestern utilities, but also QFs who are capable of interconnecting with SWPL.

Recent experience should teach some lessons about the sort of contracts that are likely to render SWPL cost-effective. Long-term contracts are only as good as the forecasts that support them, and recent experiences with demand and fuel price forecasts have not been comforting. Although we will not require all contracts to be specifically tied to the biennial determination of need in what is referred to as the OIR-2 proceeding, past experience and especially the large variances in fuel prices suggest that some flexibility is a desirable feature of long-term contracts. Again, the intelligent exercise of informed judgment should guide SDG&E in determining the proper degree of flexibility that is needed in a particular contract. If a particular offer is clearly a good deal, then SDG&E should seek to lock in the benefits for as long a period as possible. But in the more common situation when a proposed contract offers not a near certainty but only a reasonable probability of turning out well, SDG&E should attempt to build some flexibility into the contract.

We recognize that a more flexible approach may mean that the chance for some outstanding outcomes may be sacrificed for the assurance of merely good results, but we think that SDG&E will be able to develop the best overall results with contracts that relinquish some chances for very large benefits in exchange for an opportunity to avoid very large losses. This approach seems particularly appropriate when SDG&E's own analysis shows only marginal benefits are likely under the contract under consideration.

7. Interest on the Account Balance

The discussion of whether or not the balancing account should accrue interest on its balance focused on one of DRA's proposed modifications. DRA proposed that deferred revenues associated with the Tucson and PNM contracts should not receive interest.

We disagree with DRA's position. Although DRA argues that barring recovery of interest on the amortized amounts from these two contracts would create a strong incentive for SDG&E to reduce the costs of these contracts, we believe that the balancing account's existing incentives are sufficient for that purpose. In addition, excluding interest would amount to a disallowance of expenses that have been found reasonable; SWPL's capital costs have been found reasonable, and only the reasonable costs of the PNM and TEP contracts will be recovered in rates and included in the account. Any of the contracts' costs that are determined to be imprudent will be barred from the outset and will not be entered in the account. Thus, the proposal to exclude interest becomes punitive, and we have consistently maintained that the sole intent of the balancing account is merely the deferral of revenues, not the disallowance of prudently incurred expenses. We conclude that interest should be allowed on all amounts in the balancing account.

8. DRA's Other Proposed Modifications

DRA has proposed several other modifications to the original concept of the balancing account.

We agree with the rationale behind the recommendation that the account should begin on July 1, 1987, rather than January 1, 1986, as originally stated. Since one of the main purposes of the balancing account is to give SDG&E an incentive to improve the cost-effectiveness of its purchases over SWPL, it is only fair to allow the utility some time to react to the incentives the balancing account provides. The original starting date allowed only 11 days between the time the balancing account was adopted and

the beginning of recording of the account's credits and debits. Delaying the start of the account until mid-1987 offers the utility a fair opportunity to respond to the account's incentives. In addition, as DRA points out, this delay also substantially reduces the amount of revenues that are deferred by the operation of the account and thus eases the financial burden on SDG&E.

We also find merit in DRA's proposal to amortize the excess costs of the TEP and PNM contracts over five years. This proposal recognizes that, for a variety of reasons, these contracts are likely to result in large excess costs in the next few years, but that lower excess costs and eventually benefits should result from these contracts in the future. Amortizing the costs from these contracts will ensure that neither ratepayers nor the utility is inadvertently harmed by the operation of the account.

Both DRA and UCAN have proposed limitations on the recovery of any balance remaining in the account after the expiration of its ten-year maximum life. DRA's proposal is designed to ensure that recovery is achieved reasonably rapidly, in one or two years, so that SDG&E may put the balancing account behind it. UCAN's proposal is concerned with the effect on ratepayers if the balance is still large after ten years.

The incentives of the balancing account should be sufficient to lead SDG&E to operate SWPL in a way that will eliminate the balance in the account, and thus terminate the account, before the ten-year limit is met. We agree that a balancing account designed to accomplish the purposes of the SWPL account should have a definite termination date. Both DRA and UCAN have presented reasonable proposals for ways of amortizing any balance remaining at termination of the account.

DRA recommends that the balancing account use base rate revenue requirements associated with SWPL's fixed charges, rather than the levelized costs ordered in D.86-06-026. We authorized the use of levelized ownership costs of SWPL in that decision to better

match expected avoided costs. Although we acknowledge that base rate revenue requirements provide a more accurate reflection of costs and benefits from the line in the short term, we think that use of levelized costs is appropriate for a revenue deferral mechanism like the balancing account.

9. Conclusion on the Balancing Account Issues

The SWPL balancing account has many desirable qualities. We discussed some of these benefits in our original decision establishing the account, D.85-12-108, and we listed the purposes of the account as providing an avoided cost cap on SWPL power costs and giving SDG&E an incentive to lower its power purchase costs. This proceeding has added to our understanding of these purposes.

One of the balancing account's more practical benefits is that it establishes a better relation between the costs of SWPL power and the value of that power for ratepayers than would otherwise occur. The importance of this alignment between cost and value to ratepayers has increased from the time of our original decision. At that time we estimated the excess costs to be \$90 million for 1986-88; current estimates are over \$300 million.

The increase in the discrepancy between costs and value resulted primarily from the decline in oil and gas prices, which determine the energy portion of SDG&E's avoided cost. SDG&E entered into several power purchase arrangements with Southwestern utilities just before the collapse in oil prices in the mid-1980s. Although the prices under these contracts seemed reasonable to SDG&E at the time, the oil price decline made the account's comparisons of the price of these purchases with avoided cost extremely unfavorable. The continued stability of the oil market is the primary reason that we have estimated the excess costs of power transmitted over SWPL to be \$313 million from 1986 through 1988.

The balancing account would shift some of the revenues required during this extremely unfavorable period to later years,

when a tightening of the regional power market and more favorable purchases should increase the effectiveness of SWPL. As DRA points out, the costs of SWPL will better match its value to ratepayers if these early revenues are deferred.

The balancing account also gives SDG&E a clear standard, avoided cost, against which to judge both its opportunities for purchases that would be transmitted over the line and its other resource options, including conservation and load management. The presence of a clear standard should help SDG&E focus its analyses of its various opportunities and should aid in its negotiations of contracts with other utilities.

Nevertheless, one important consideration which we had earlier overlooked persuades us to withdraw our previous adoption of the SWPL balancing account. As we have discussed, the balancing account focuses too much on one resource of SDG&E's system, and the account's incentives may not always encourage SDG&E to operate its entire system at the minimum cost consistent with proper reliability. The balancing account prods SDG&E to use SWPL to transmit the cheapest possible energy, usually economy energy, but the lowest cost operation of the system may sometimes dictate a different use for SWPL, as shown in the example of the interaction between SWPL and the Pacific Intertie.

SDG&E has stated that it would ignore the incentives of the balancing account to minimize the overall costs of its operations, but we believe that regulatory incentives should be consistent with the desired behavior, and should not require the utility to ignore the incentives to live up to its public obligations. The balancing account as presently structured focuses too narrowly on a single resource and therefore diverts SDG&E from devoting its attention to the most efficient operation of the entire integrated system.

Although the balancing account could be modified to overcome the problem with the Pacific Intertie, we suspect that

other discrepancies in the incentives would soon become apparent. Rather than continuing to patch up the balancing account, we prefer to withdraw our earlier authorization.

The removal of the balancing account should not be read as an indication that we are lessening our scrutiny of SDG&E's transactions in the the Southwest or its operation of SWPL. We are still very concerned about SDG&E's failure to operate the line in a way that will result in the promised savings that originally justified the line. Obviously, economy energy purchases from a region with much excess capacity are an important element of a program for reasonable use of SWPL, and this opinion should not in any way be read to relieve SDG&E of our conviction that such purchases should be an important element of the line's use. Our decision merely says that SWPL is an important resource that should be used in coordination with SDG&E's other resources to minimize costs for its ratepayers, and that we choose not to restrict SDG&E's flexibility by imposing the incentives of the balancing account.

We conclude that the SWPL balancing account created in D.85-12-108 should be eliminated. In D.86-06-026, we established the balancing account as a tracking mechanism with no revenue effects on SDG&E, pending the rehearing that led to this decision. Since this account has so far been a tracking mechanism that merely recorded the power costs that were in excess of avoided cost, no rate adjustment is required to reflect our conclusion.

IX. Other Issues

In its Opening Brief, SDG&E raised several legal objections to the Commission's authority to take certain proposed actions in this case.

A. SDG&E's Position

First, SDG&E argues that this Commission's assertion of authority over rates filed with the Federal Energy Regulatory Commission (FERC) is improper. According to SDG&E, the Federal Power Act grants FERC exclusive and exhaustive jurisdiction over interstate power transactions. The Commission trespasses on FERC's exclusive jurisdiction when the Commission considers the reasonableness of FERC-filed rates paid under the Tucson and PNM contracts and implies that some of these costs could be disallowed. Similarly, the balancing account's avoided-cost limit on recovery of these costs also disregards FERC's authority to set interstate rates and also violates the Federal Power Act, says SDG&E.

In the recent case of Nantahala Power and Light Company v Thornburg (1986) 476 U.S. 953, the United States Supreme Court held:

"[A] state utility commission setting retail prices must allow, as reasonable operating expenses, costs incurred as a result of paying a FERC-determined wholesale price." (476 U.S. at 965.)

Thus, SDG&E believes that the Commission is compelled, under the authority of the Federal Power Act and the Nantahala case, to accept as reasonable the FERC-filed wholesale rates which SDG&E pays under its contracts with PNM and TEP.

Second, SDG&E argues that the Commission's decisions relating to SWPL place an unlawful burden on interstate commerce, in violation of Constitutional protections. The effect of the Commission's decisions is to order SDG&E to breach or renegotiate its contracts with PNM and TEP. The effect would be to lower costs

to Californians at the expense of citizens of New Mexico and Arizona. This sort of economic protectionism is barred by the commerce clause of the Constitution, according to SDG&E. Moreover, the Commission's decisions are aimed entirely at interstate contracts and would penalize SDG&E for complying with its obligations under interstate contracts. Such orders are patently invalid under the Constitution, asserts SDG&E.

Third, SDG&E believes that the balancing account is discriminatory in violation of the Constitutional guarantee of equal protection. SDG&E points out that the same day that the Commission adopted the balancing account for SDG&E, it rejected a proposal to hold Southern California Edison's investment in the Palo Verde nuclear generating station to the standard of avoided cost. Moreover, even though Edison's purchases from the Southwest have exceed its short-run avoided cost, no balancing account has been imposed, or even proposed, to govern Edison's purchases. SDG&E believes that there is no compelling reason to justify the different treatment of similarly situated utilities. Singling out SDG&E is unfair, it argues, and a violation of the Fourteenth Amendment.

SDG&E supplemented its arguments on July 17, 1988, by serving all parties with copies of the recent case of Mississippi Power & Light Co. v Mississippi, No. 86-1970 (U.S. Supreme Ct., June 24, 1988).

B. DRA's Response

DRA disputes SDG&E's legal arguments.

First, DRA believes that neither the Federal Power Act nor the Nantahala case prohibits the Commission from taking any of its recommended actions in this case. DRA distinguishes the Nantahala case from this case by pointing out that the proposed disallowances in this case are not based on a finding that a FERC-approved rate is unreasonable; rather, proposed disallowances are based on SDG&E's agreement to purchase additional quantities of

power when it was not needed. In the Nantahala case, the Supreme Court voided a state utility commission's order that directly contradicted FERC's finding on the same issue. In this case, no party has challenged the contracts' rates, and the argument has focused on whether the power was needed in the first place and whether other, cheaper sources of power were available. Other issues relate to SDG&E's administration of the contracts, an area not remotely affected by the Nantahala ruling, according to DRA.

DRA concludes that the Supreme Court has not yet reached the issue whether a state utilities commission may lawfully deviate from FERC-approved wholesale rates when the commission finds the rates are imprudent. In these circumstances, there is no reason for the Commission to refrain from issuing whatever orders it finds appropriate in this case.

DRA also supplemented its arguments on February 10, 1988, by serving all parties with copies of the recent case of Kentucky West Virginia Gas Co. v Pennsylvania Public Service Commission (3d Cir. 1988) 837 F.2d 600.

C. City's Response

City also disputes SDG&E's legal arguments.

City notes that Nantahala, even if it is read to give FERC exclusive jurisdiction over a interstate contract's price, did not prohibit state commissions from ruling on whether purchases from a particular source were reasonable. If other, cheaper sources of generation were available, a disallowance could be made.

In addition, the balancing account does not affect SDG&E's ability to recover its costs under the various contracts. Rather, it merely adjusts the timing of the recovery of those costs. The wholesale rates set by the contracts are unaffected by the balancing account.

Finally, the actions proposed in this case do not affect out-of-state customers. All of SDG&E's retail customers are within

California, and the Commission's setting retail rates for SDG&E does not discriminate against customers in other states.

City responded to SDG&E's letter on the Mississippi Power & Light case with a letter of July 11, 1988, disputing SDG&E's reading of that case.

D. UCAN's Response

UCAN makes arguments similar to City's in opposing SDG&E's legal interpretations. It too points out that the issue of the reasonableness of SDG&E's administration of the contracts is not affected by SDG&E's arguments. Like City, UCAN notes the balancing account is designed to allow SDG&E to recover all of its FERC-approved wholesale rates; thus, the balancing account does not trespass on FERC's jurisdiction. UCAN also mentions the distinction between the price and quantity of power. Unlike the factual situation in the Nantahala case, UCAN argues, nothing proposed in this case would directly contradict any FERC ruling. Thus, UCAN concludes that the Commission may lawfully take any of the proposed actions in this case.

E. Discussion

After a review of the legal authorities cited by the parties, we conclude that neither the Federal Power Act nor Nantahala and related cases bar us from taking the actions that have been proposed in this proceeding.

The facts in Nantahala are quite different from the facts presented in this case. In brief, in Nantahala a contract allocated rights to a cheap power source between two affiliated entities, including a utility. The contract provided the utility a 20% share. However, FERC ruled that a 22.5% share would result in just and reasonable rates. The state commission then found that the share should be 24.5%. Thus, in Nantahala the state commission acted on the same issue as FERC, and the state commission's action amounted to an overruling of FERC's action.

No similar facts exist in this proceeding. First, many of the issues relate to contract administration, which is not mentioned in the Nantahala case. Second, the Nantahala court specifically left open the possibility of the type of actions that are contemplated here:

"Without deciding this issue, we may assume that a particular quantity of power procured by a utility from a particular source could be deemed unreasonably excessive if lower-cost power is available elsewhere, even though the higher-cost power actually purchased is obtained at a FERC-approved, and therefore reasonable, price." (476 U.S. at 972. Emphasis in original.)

Later decisions have applied this reasoning to actual controversies (Kentucky West Virginia Gas Company v Pennsylvania Public Service Commission (3d Cir. 1988) 837 F.2d 600), aff'g 650 F.Supp. 659 (M.D.Pa. 1986).

The facts in the Mississippi Power & Light case are also distinguishable from those in this case. In Mississippi Power & Light, FERC had approved an allocation of responsibility for the costs of a newly constructed nuclear power plant among several affiliated utility-owners from different states and had determined the reasonableness of the wholesale rates resulting from its allocation. The state commission approved the corresponding retail rates for one of the utilities, but the state supreme court ruled that the commission could not lawfully do so without first determining that the expenses were prudently incurred.

On appeal, the U.S. Supreme Court held that in these circumstances the state commission was preempted by the FERC proceedings and by FERC's determinations of reasonableness. The Court ruled that the determination of whether the costs of constructing the plant were prudent was within the jurisdiction of FERC, not the state commission. The allocation of cost responsibility among several entities from different states was

also within FERC's jurisdiction. The state commission could not lawfully reexamine FERC's determination of the reasonableness of the wholesale rates resulting from its allocation.

We are confident that the operation of the balancing account would not be affected by these cases. The account was designed to provide for eventual recovery of all prudently incurred costs, no matter which regulatory body determined prudence. Even if we had continued the balancing account, it would have survived SDG&E's legal challenges.

Similarly, we believe the distinction in the Nantahala case between a state's role in reviewing rates and in reviewing a utility's decision to purchase certain quantities of power allows the sort of review that we have conducted of the PNM contract. Our eventual disallowance was based on a conclusion that SDG&E should not have purchased capacity under the PNM contract for the first year of the contract's life, because it could not demonstrate that it would need the capacity during that period. Nantahala and Mississippi Power & Light both permit a review of a utility's decision to purchase a certain quantity of power, even when that power is purchased at FERC-approved rates.

The TEP contract presents a different question. Although the facts are very different from either Nantahala or Mississippi Power & Light, some of the wording of the Mississippi Power & Light case could be read as affecting our ability to make the disallowances we have made in this case. The Court stated that "States may not regulate in areas where FERC has properly exercised its jurisdiction to determine just and reasonable wholesale rates or to insure that agreements affecting wholesale rates are reasonable....The reasonableness of rates and agreements regulated by FERC may not be collaterally attacked in state or federal courts." Mississippi Power & Light, slip op. at 19-20. Since our disallowances of some of the costs of the TEP contract are of rates, rather than the quantities of power SDG&E may prudently

purchase under the contract, this passage suggests that we are preempted by FERC's determinations.

However, we believe that a review of our reasons for imposing the disallowance will illustrate that we have acted within our proper jurisdiction. Our review and the resulting disallowances focused almost exclusively on SDG&E's management's activities in negotiating various amendments of the TEP contract with TEP and Alamito, TEP's assignee. We have found that the actions or omissions of SDG&E's managers and negotiators influenced the level of rates that were eventually incorporated in the parties' agreement. Our focus was on the decisions of SDG&E, which clearly are a proper subject for state regulators to consider. The fact that these instances of imprudence had an effect on contractual rates that were eventually approved by FERC does not deprive us of our right to engage in this review. FERC's review of the reasonableness of the contractual rates takes a very different approach. We cannot agree with SDG&E's apparent point that FERC's approval of the rates negotiated between two utilities implies its disapproval of all other rates that the parties might have agreed to. This conclusion is particularly appropriate when, as in this case, the negotiations arose out of Alamito's desire to avoid detailed examination of the agreement by FERC.

We conclude that neither the Federal Power Act, the Nantahala case, nor the Mississippi Power & Light case prevents us from taking appropriate action in this case.

Nor do we think that the commerce clause bars us from taking the actions proposed in this proceeding. As City has pointed out, nothing suggested in this case would have the effect of shifting costs to ratepayers in other states. If a disallowance is ordered, it would be borne by the shareholders of SDG&E, not by customers in the Southwest. SDG&E's suggestion that we are prohibited from reviewing the prudence of any interstate contracts or purchases, merely because they originate out-of-state, even when

other cheaper sources are available goes well beyond the bounds of present law or reason.

Finally, we also reject SDG&E's argument that its right to equal protection of law has been violated. The circumstances that led to our decision to set up the SWPL balancing account are very different from the facts in the examples SDG&E cites. Different circumstances justify different treatment, and in this sense SDG&E is not similarly situated to Edison.

We conclude that the authorities presented by SDG&E do not prevent us from taking any of the actions proposed in this case.

This conclusion is not intended to assert that FERC has no influence over our determinations. Our disallowance of some of the costs of the TEP/Alamito contract is keyed to the capital costs assumed in the contract, and any modification of those terms by FERC could affect the amount of our disallowance. Similarly, any action by FERC that affected the demand charges or the commencement date of the PNM contract could also influence our disallowance related to the PNM contract.

X. SDG&E's Petition to Set Aside Submission

After this case was submitted, SDG&E on May 5, 1988, filed a Petition to Set Aside Submission and to Bifurcate Proceeding.

SDG&E believes that the portion of the case addressing the 1985 PNM contract should be reopened and that the proceeding should be bifurcated to allow the remainder of the case to proceed to decision while more evidence is taken on issues related to the PNM contract.

Specifically, SDG&E believes that the Commission should consider the actions of FERC before it renders a decision on the PNM contract. PNM filed the contract for approval by FERC on

March 1, 1988, and SDG&E protested the filing on March 21. SDG&E believes that FERC may reduce the charges called for under the contract as a result of its review and may even void the contract entirely. SDG&E argues that the Commission's decision should await the outcome of the FERC proceeding.

DRA filed its response on May 31. DRA opposes the petition. DRA fears that if the Commission delays action until FERC has rendered its decision, the Commission exposes itself to a preemption argument that SDG&E has already made in this proceeding. In addition, SDG&E has not demonstrated the material change in fact or law has occurred that would justify reopening this proceeding. Furthermore, DRA believes that SDG&E may directly benefit from any delay because of the operation of the Annual Energy Rate (AER). The Commission joined several ECAC issues with the consideration of the SWPL balancing account, DRA notes, because it believed that the operation of the account could best be evaluated with concrete examples at hand. SDG&E's proposal violates the Commission's logic, DRA argues, and would prejudice DRA's presentation of its positions.

UCAN filed its opposition to the petition on June 6. Delaying the Commission's decision on PNM issues would amount to a concession of preemption by FERC, which UCAN thinks is inadvisable. Moreover, the issues addressed in the eventual FERC decision may not be at all material to the issues addressed in this proceeding, in which case a delay would not serve even the purposes advocated by SDG&E. Like DRA, UCAN argues that SDG&E has not alleged a material change or law or fact that would justify reopening the record, and UCAN also believes that it would be prejudiced by separating the PNM-related issues from the consideration of the balancing account.

SDG&E filed a reply to DRA's response on June 17, 1988.

We will deny SDG&E's petition. We see no purpose in delaying the decision on the PNM contract any further. The nature of our review of the PNM contract has been quite different from FERC's review, and we believe that any action that FERC may take would complement, rather than contradict, our decision. As we have discussed, our disallowance focused on the quantity of capacity that SDG&E agreed to take from PNM during a period when it needed no additional capacity. The Nantahala and Mississippi Power & Light cases both indicate that states may review questions of the quantity of power that utilities purchase in interstate transactions without conflicting with FERC's jurisdiction. We have not determined that the charges called for in the PNM contract were unreasonable, a determination that would bring us closer to the facts of the Nantahala and Mississippi Power & Light cases.

Thus, we conclude that our decision would be unaffected by any action that FERC might take and that therefore no purpose would be served by reopening this proceeding to take notice of FERC's eventual action.

Findings of Fact

1. In D.85-12-108, we established a balancing account for purchased power transmitted over SWPL. The balancing account designed to limit SDG&E's immediate recovery of the costs of such purchases to SDG&E's avoided cost.

2. In D.86-06-026, we granted SDG&E's request for rehearing of the balancing account portion of D.85-12-108, we posed six questions for the parties to address in the rehearing, and we directed SDG&E to present an affirmative showing of the reasonableness of the costs of its purchases from PNM, TEP, and CFE.

3. In D.86-09-010, we directed all SWPL-related issues to be considered in the rehearing proceeding.

4. In Amendment 3 of the TEP contract, SDG&E's obligation to take 100 MW during the former Extended Phase 3 was transferred to

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XI. Comments on the Proposed Decision

Because of the length and complexity of the proposed decision, the time for filing comments on the proposed decision will be extended from the 20 days set forth in Rule 77.2 to 25 days. In addition, the 25-page limit that Rule 77.3 permits for general rate cases will apply. Parties are reminded that the function of comments is strictly limited by Rule 77.3:

"Comments shall focus on factual, legal or technical errors in the proposed decision and in citing such errors shall make specific references to the record. Comments which merely reargue positions taken in briefs will be accorded no weight and are not to be filed."

the new Revised Phase 4. No actual increase of SDG&E's obligations occurred as a result of this restructuring of the contract.

5. SDG&E agreed to set contract demand for Phase 5 of the TEP contract at 400 MW before TEP conveyed its intention to exercise its option to set contract demand at 500 MW.

6. It is unlikely that TEP would have had the ability to deliver more than 400 MW during Phase 5.

7. In Amendment 3 of the TEP contract, the agreement to set contract demand at 400 MW for Phase 5 involved neither SDG&E's imprudence nor extraordinary bargaining skills.

8. SDG&E's contemporaneous analysis showed that a 24-month Phase 5 with a demand of 400 MW was more beneficial than a 19-month Phase 5 at 500 MW.

9. The benefits of Amendment 3 outweighed the cost of accepting an additional 21 MW of capacity in Phase 4 of the TEP contract.

10. SDG&E's analysis of the change in the assignment clause of the contract with TEP focused on the effects of an assignment of the contract to a wholly owned subsidiary of TEP, rather than on what rights it was being asked to give up as a result of the change.

11. On June 1, 1984, TEP assigned its contract with SDG&E to Alamito. SDG&E was informed of the assignment on June 8. On July 6, TEP filed for approval of the assignment by FERC. SDG&E became aware of this filing on July 23. SDG&E did not protest the filing or intervene in the FERC proceeding. FERC approved the assignment on October 1. SDG&E met with TEP to obtain information about the assignment on October 5.

12. The assignment took place on November 1, 1984. In December 1984, TEP spun-off Alamito as an independent company.

13. After the spin-off, Alamito's capital structure was 80% debt and 20% equity. SDG&E agreed to set Alamito's capital structure at 70% debt and 30% equity for purposes of the contract.

Findings of Fact

1. In D.85-12-108, we established a balancing account for purchased power transmitted over SWPL. The balancing account designed to limit SDG&E's immediate recovery of the costs of such purchases to SDG&E's avoided cost.

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4. In Amendment 3 of the TEP contract, SDG&E's obligation to take 100 MW during the former Extended Phase 3 was transferred to the new Revised Phase 4. No actual increase of SDG&E's obligations occurred as a result of this restructuring of the contract.

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14. If SDG&E had not agreed to the change in the assignment clause, it is reasonable to conclude that it would have been able to negotiate a capital ratio of about 75/25 with Alamito or to have obtained comparable concessions.

15. SDG&E's definition of decremental cost for repayment of the balance of the dollar banking account with CFE ensured that energy repayments were the cheapest source of energy at the time of the repayment.

16. Delays in the completion of Units 1 & 2 of the Palo Verde nuclear power plant were beneficial in reducing SDG&E's obligation to purchase capacity under the 1979 PNM contract.

17. The GRC resource plan of November 8, 1984, showed a need for additional purchases totaling 215 MW from 1988 through 1990. The GRC plan showed no need for additional capacity in 1988. An "undetermined resource" of 100 MW scheduled for 1989 could be deferred until 1990 by accelerating the planned return of two of the Silver Gate units by one year.

18. The GRC plan was SDG&E's most recent resource plan when it began negotiations with PNM.

19. PNM's draft letter of understanding of November 29, 1984, proposed a sale of 100 MW at \$23.40 per kilowatt-month, beginning May 1, 1988.

20. SDG&E never attempted to negotiate a lower demand charge than the one proposed in the draft letter of understanding. On April 25, 1985, SDG&E proposed reducing contract demand to 50 MW. On May 21, 1985, SDG&E proposed delaying the start of the contract.

21. When compared to the GRC plan, the ROC plan of June 25, 1985, delayed the return of 100 MW from Encina 1 from 1988 to 1989 and accelerated a undetermined purchase of 100 MW from 1989 to 1988.

22. The ROC plan did not show a need for additional capacity in 1988; rather, it assumed that the PNM purchase would begin in 1988.

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23. SDG&E's economic analysis of May 16, 1985, showed that the PNM contract would cost more than generation fueled by oil and gas if oil and gas prices remained at 1985 levels or decreased.

24. SDG&E's economic analyses of April 5 and May 16, 1985, contained simplifying assumptions that tended to overstate the benefits of the PNM contract.

25. The September analysis was the first economic analysis to consider the actual terms of the PNM contract.

26. The September analysis concluded that the expected savings of the PNM contract compared to avoided cost were \$5 million.

27. The capacity values used in the September analysis were adjusted to reflect probability of need, were less than SO2's avoided capacity payments for 1988 and 1989 for a contract of equal term beginning in 1988, and were less than the capacity values adopted in D.85-12-108.

28. The \$5 million expected benefit that resulted from the September analysis was within or nearly within PROMOD's margin of error.

29. The September analysis showed that under any of the fuel price forecasts used in the analysis the PNM contract would be more costly than avoided cost in 1988.

30. The 1984 market study expected that few opportunities for baseload purchases would be available in the early 1990s, but it also noted that SDG&E's actions could generate new opportunities.

31. Many of the coal plants investigated by SDG&E had high prices or lacked a transmission path to SDG&E.

32. In 1985, the primary risk that diversity in fuel sources would protect SDG&E against was the risk of increases in oil and gas prices.

33. To the extent that SDG&E's fuel forecasts in its September analysis reflects the upper range of reasonably likely

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34. Oil prices declined steadily from \$35.50 per barrel in March 1981 to \$27 a barrel in 1985.

35. Oil prices fell from \$27.60 per barrel in November 1985 to \$12.65 per barrel in April 1986.

36. After the fall of oil prices in early 1986, SDG&E revised its fuel forecasts and concluded that the PNM contract would have an expected present-value cost of \$33.7 million more than avoided cost over its term.

37. Any price concessions PNM would have granted SDG&E for its agreement to extend the deadline for securing transmission arrangements would have been limited by PNM's expectations of the cost of making the extra efforts needed to complete the arrangements and to execute the transmission agreement with SRP before the May 1 deadline. It would have been reasonable to expect that these expenses would not exceed \$20,000, and PNM's offer of a rate reduction to SDG&E would not have exceeded \$20,000.

38. No capacity credit should be awarded for economy energy purchases over SWPL.

39. The balance in the SWPL balancing account from 1986 through 1988 will be \$313 million.

40. According to the record in this case, SDG&E has no need for additional capacity until 1990 at the earliest.

41. The SWPL balancing account focuses too much on one resource of SDG&E's system, and the account's incentives may not always encourage SDG&E to operate its entire system at the minimum cost consistent with proper reliability.

42. On May 3, 1988, SDG&E filed a Petition to Set Aside Submission and to Bifurcate Proceeding. DRA and UCAN filed responses opposing the petition on May 31 and June 6, respectively. SDG&E replied to DRA's response on June 17, 1988.

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Conclusions of Law

1. The prudence of SDG&E's entering into the CFE, TEP, and 1979 PNM contracts are not at issue in this proceeding.

2. The term, "reasonable and prudent," means that at a particular time a utility's practices, methods, and acts followed the exercise of reasonable judgment in light of facts known or which should have been known at the time the decision was made. It means that the utility reasonably expected the act or decision to accomplish the desired result at the lowest reasonable cost consistent with good utility practices. Good utility practices are based upon cost-effectiveness, reliability, safety, and expedition.

3. A decision may be found to be reasonable and prudent if the utility shows that its decision making process was sound, that its managers considered a range of possible options in light of information that was or should have been available to them, and that its managers decided on a course of action that fell within the bounds of reasonableness, even if it turns out not to have led to the best possible outcome.

4. Decisions involving large amounts of money, high degrees of risk, and greater levels of uncertainty will require proportionately greater care than routine decisions. ✓

5. SDG&E was imprudent to relinquish the right to withhold its consent to unreasonable assignments of the TEP contract to TEP's subsidiaries, without obtaining a corresponding concession from TEP in Amendment 3.

6. SDG&E should not recover \$5.9 million corresponding to the difference between its costs under the TEP contract assuming a 80/20 capital ratio for Alamito as compared with a 75/25 ratio. SDG&E has recovered excess funds since June 1, 1985, and this excess recovery, with interest at the contemporary ECAC rate, should be removed from the ECAC balance. As shown in Appendix B, the total disallowance connected to the TEP/Alamito contract amounts to \$7.1 million as of December 31, 1988. SDG&E should be

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3. A decision may be found to be reasonable and prudent if the utility shows that its decision making process was sound, that its managers considered a range of possible options in light of

permitted to recover all other costs incurred under the TEP/Alamito contract from May 1, 1984, through April 30, 1986.

7. SDG&E's purchases from CFE from February 1, 1986, through April 30, 1986, were reasonable.

8. SDG&E's administration of the 1979 PNM contract from May 1, 1984, through April 30, 1986 was reasonable.

9. SDG&E's strategy of limiting its commitment to long lead-time resources to half of its expected need was a reasonable approach in the period considered in this decision.

10. SDG&E was imprudent in allowing important terms of the PNM contract to be set in negotiations before it had analyzed their costs and benefits.

11. SDG&E's decision makers were unreasonable in not giving more weight, during negotiations with PNM, to the possibility that oil and gas prices would remain stable or decline.

12. The capacity values used in the September analysis were reasonable for purposes of that analysis.

13. In light of the small net benefit projected by the September analysis, a prudent manager would have questioned the basis for the oil and gas price forecasts, would have considered the effect of larger variations in oil prices than those used in the analysis, and would have closely examined the soundness of the \$5 million projected net benefit of the PNM contract.

14. QFs could not reasonably have been expected to meet the need projected by the ROC plan.

15. The PNM contract was preferable to relying on purchases from Edison and PG&E.

16. SDG&E was reasonable in not relying on conservation to displace the PNM contract.

17. DRA presented a reasonable alternative to the PNM contract that would have permitted SDG&E to postpone its decision on acquiring additional baseload capacity for at least a year.

information that was or should have been available to them, and that its managers decided on a course of action that fell within the bounds of reasonableness, even if it turns out not to have led to the best possible outcome.

4. Decisions involving large amounts of money, high degrees of risk, and greater levels of uncertainty will require proportionately greater care than routine decisions.

5. SDG&E was imprudent to relinquish the right to withhold its consent to unreasonable assignments of the TEP contract to TEP's subsidiaries, without obtaining a corresponding concession from TEP in Amendment 3.

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10. SDG&E was imprudent in allowing important terms of the PNM contract to be set in negotiations before it had analyzed their costs and benefits.

18. In the circumstances existing in November 1985 and in light of the facts that SDG&E knew or should have known, SDG&E should have delayed its commitment to purchase baseload capacity from PNM.

19. SDG&E acted reasonably in recognizing that the fuel diversity represented by the PNM contract provided SDG&E's system with insurance against dramatic rate increases prompted by high oil and gas prices.

20. In light of the facts available in November 1985, delay could have reasonably been expected to provide better information about the likely future of OPEC and thus about the course of oil and gas prices.

21. SDG&E should not be allowed to recover the demand charges under the PNM contract from May 1, 1988, through April 30, 1989, totaling \$28,080,000. However, SDG&E should receive credit, at current avoided cost rates, for the one year of capacity provided by the PNM contract during this period, including an appropriate bonus payment reflecting the contract's 95% capacity factor. As calculated in Appendix C, this credit amounts to \$6,946,000. Thus, the net disallowance related to the timing of the PNM contract is \$21,134,000. ✓

22. After the fall in oil prices in early 1986, SDG&E should have taken advantage of every opportunity to renegotiate or terminate the PNM contract. ✓

23. SDG&E acted imprudently in not informing PNM when the transmission difficulties were first mentioned that SDG&E intended to enforce its rights under the contract, including the right to terminate if PNM did not produce the required proof of transmission arrangements on time.

24. SDG&E's imprudence led to its losing the opportunity to reduce its costs under the contract by about \$20,000, and SDG&E should not be allowed to recover this amount from its ratepayers.

18. In the circumstances existing in November 1985 and in light of the facts that SDG&E knew or should have known, SDG&E should have delayed its commitment to purchase baseload capacity from PNM.

19. SDG&E acted reasonably in recognizing that the fuel diversity represented by the PNM contract provided SDG&E's system with insurance against dramatic rate increases prompted by high oil and gas prices.

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22. After the fall in oil prices in early 1986, SDG&E should have taken advantage of every opportunity to renegotiate or terminate the PNM contract. ✓

23. SDG&E acted imprudently in not informing PNM when the transmission difficulties were first mentioned that SDG&E intended to enforce its rights under the contract, including the right to terminate if PNM did not produce the required proof of transmission arrangements on time.

11. SDG&E's decision makers were unreasonable in not giving more weight, during negotiations with PNM, to the possibility that oil and gas prices would remain stable or decline.

12. The capacity values used in the September analysis were reasonable for purposes of that analysis.

13. In light of the small net benefit projected by the September analysis, a prudent manager would have questioned the basis for the oil and gas price forecasts, would have considered the effect of larger variations in oil prices than those used in the analysis, and would have closely examined the soundness of the \$5 million projected net benefit of the PNM contract.

14. When the ROC demand forecast proved to be too high for 1985, SDG&E should have reconsidered the assumptions underlying its forecast and reexamined the desirability of the proposed purchase from PNM.

15. QFs could not reasonably have been expected to meet the need projected by the ROC plan.

16. The PNM contract was preferable to relying on purchases from Edison and PG&E.

17. SDG&E was reasonable in not relying on conservation to displace the PNM contract.

18. DRA presented a reasonable alternative to the PNM contract that would have permitted SDG&E to postpone its decision on acquiring additional baseload capacity for at least a year.

19. In the circumstances existing in November 1985 and in light of the facts that SDG&E knew or should have known, SDG&E should have delayed its commitment to purchase baseload capacity from PNM.

20. SDG&E acted reasonably in recognizing that the fuel diversity represented by the PNM contract provided SDG&E's system with insurance against dramatic rate increases prompted by high oil and gas prices.

25. SDG&E should have had its attorneys review the PNM-SRP transmission agreement to see if PNM had met its legal obligations under Section 5.3 of the PNM contract, and SDG&E should have pressed any legal contentions resulting from that review.

26. FAS 92 does not prevent the Commission from applying the balancing account to the costs of purchased power transmitted over SWPL.

27. SDG&E should view all of its facilities and purchases, including SWPL and the purchase transmitted by SWPL, as an integrated system, with the paramount goal of meeting customers' electricity needs at the lowest possible price.

28. The avoided cost standard adopted in D.86-06-026 was a reasonable one for use in connection with the balancing account.

29. The SWPL balancing account should be eliminated.

30. Neither the Federal Power Act nor Nantahala and related cases bar us from taking the actions that have been proposed in this proceeding. The commerce clause of the constitution does not bar us from taking appropriate action in this case. SDG&E's right to equal protection of the laws has not been violated in this case.

31. SDG&E's Petition to Set Aside Submission and to Bifurcate Proceeding should be denied.

ORDER

IT IS ORDERED that:

1. San Diego Gas & Electric Company (SDG&E) shall reduce its Energy Cost Adjustment Clause (ECAC) account to reflect our disallowance of \$5,928,000 of the costs SDG&E has incurred under its contract with Alamito Company, with appropriate interest at the ECAC rate, as illustrated in Appendix B.

2. SDG&E shall further reduce its ECAC balancing account by the amount it has and will pay under its contract with Public Service Company of New Mexico (PNM) in demand charges from May 1,

24. SDG&E's imprudence led to its losing the opportunity to reduce its costs under the contract by about \$20,000, and SDG&E should not be allowed to recover this amount from its ratepayers.

25. SDG&E should have had its attorneys review the PNM-SRP transmission agreement to see if PNM had met its legal obligations under Section 5.3 of the PNM contract, and SDG&E should have pressed any legal contentions resulting from that review.

26. FAS 92 does not prevent the Commission from applying the balancing account to the costs of purchased power transmitted over SWPL.

27. SDG&E should view all of its facilities and purchases, including SWPL and the purchase transmitted by SWPL, as an integrated system, with the paramount goal of meeting customers' electricity needs at the lowest possible price.

28. The avoided cost standard adopted in D.86-06-026 was a reasonable one for use in connection with the balancing account.

29. The SWPL balancing account should be eliminated.

30. Neither the Federal Power Act nor Nantahala and related cases bar us from taking the actions that have been proposed in this proceeding. The commerce clause of the constitution does not bar us from taking appropriate action in this case. SDG&E's right to equal protection of the laws has not been violated in this case.

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21. In light of the facts available in November 1985, delay could have reasonably been expected to provide better information about the likely future of OPEC and thus about the course of oil and gas prices.

22. SDG&E should not be allowed to recover the demand charges under the PNM contract from May 1, 1988, through April 30, 1989, totaling \$28,924,000. However, SDG&E should receive credit, at current avoided cost rates, for the one year of capacity provided by the PNM contract during this period, including an appropriate bonus payment reflecting the contract's 95% capacity factor. As calculated in Appendix C, this credit amounts to \$6,946,000. Thus, the net disallowance related to the timing of the PNM contract is \$21,978,000.

23. After the fall in oil prices in early 1986, SDG&E should have taken advantage of every opportunity to renegotiate or terminate the PNM contract.

24. SDG&E acted imprudently in not informing PNM when the transmission difficulties were first mentioned that SDG&E intended to enforce its rights under the contract, including the right to terminate if PNM did not produce the required proof of transmission arrangements on time.

25. SDG&E's imprudence led to its losing the opportunity to reduce its costs under the contract by about \$20,000, and SDG&E should not be allowed to recover this amount from its ratepayers.

26. SDG&E should have had its attorneys review the PNM-SRP transmission agreement to see if PNM had met its legal obligations under Section 5.3 of the PNM contract, and SDG&E should have pressed any legal contentions resulting from that review.

27. FAS 92 does not prevent the Commission from applying the balancing account to the costs of purchased power transmitted over SWPL.

28. SDG&E should view all of its facilities and purchases, including SWPL and the purchase transmitted by SWPL, as an

1988, through April 30, 1989, with appropriate interest at the ECAC rate for any such payments made from May 1, 1988, to the effective date of this decision. However, SDG&E shall credit its ECAC account by the amount that SDG&E would pay qualifying facilities for 100 MW of capacity under a one-year Standard Offer No. 2 contract beginning May 1, 1988, including any appropriate bonus payments for the 95% capacity factor required under the PNM contract, as illustrated in Appendix C. This credit should also reflect appropriate interest at the ECAC rate for any amounts that would have been credited between May 1, 1988, and the effective date of this decision.

3. SDG&E shall further reduce its ECAC balancing account by \$20,000.

4. SDG&E's Petition to Set Aside Submission and to Bifurcate Proceeding is denied.

This order is effective today.

Dated _____, at San Francisco, California.

2. SDG&E shall further reduce its ECAC balancing account by the amount it has and will pay under its contract with Public Service Company of New Mexico (PNM) in demand charges from May 1, 1988 through April 30, 1989, with appropriate interest at the ECAC rate for any such payments made from May 1, 1988, to the effective date of this decision. However, SDG&E shall credit its ECAC account by the amount that SDG&E would pay qualifying facilities for 100 MW of capacity under a one-year Standard Offer No. 2 contract beginning May 1, 1988, including any appropriate bonus payments for the 95% capacity factor required under the PNM contract, as illustrated in Appendix C. This credit should be adjusted to reflect the actual date that the PNM contract takes effect. This credit should also reflect appropriate interest at the ECAC rate for any amounts that would have been credited between the date the contract takes effect and the effective date of this decision. Further adjustments to the ECAC balancing account to reflect the benefits received from SDG&E's energy purchases under the PNM contract between May 1, 1988 and April 30, 1989 may be ordered in future ECAC proceedings.

3. SDG&E shall further reduce its ECAC balancing account by \$20,000.

integrated system, with the paramount goal of meeting customers' electricity needs at the lowest possible price.

29. The avoided cost standard adopted in D.86-06-026 was a reasonable one for use in connection with the balancing account.

30. The SWPL balancing account should be eliminated.

31. Neither the Federal Power Act nor Nantahala and related cases bar us from taking the actions that have been proposed in this proceeding. The commerce clause of the constitution does not bar us from taking appropriate action in this case. SDG&E's right to equal protection of the laws has not been violated in this case.

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4. SDG&E's Petition to Set Aside Submission and to Bifurcate Proceeding is denied.

This order is effective today.

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would have been credited between May 1, 1988, and the effective date of this decision.

3. SDG&E shall further reduce its ECAC balancing account by \$20,000.

4. SDG&E's Petition to Set Aside Submission and to Bifurcate Proceeding is denied.

This order is effective today.

Dated _____, at San Francisco, California.

APPENDIX A

List of Appearances

Applicant: William L. Reed, James F. Walsh, C. Edward Gibson, E. G. Barnes, and Michael R. Weinstein, Attorneys at Law, for San Diego Gas & Electric Company.

Interested Parties: Richard K. Durant and Frank J. Cooley, Attorneys at Law, for Southern California Edison Company; Steve Geringer and Dane Dauphine, Attorneys at Law, for California Farm Bureau Federation; William B. Marcus, for JBS Energy, Inc.; William S. Shaffran and Leslie J. Giraud, Attorneys at Law, for City of San Diego; Gary D. Simon, for El Paso Natural Gas Company; Morrison & Forester, by Jerry Bloom, Attorney at Law, for San Diego Energy Alliance; Gary Estes, for Hunter Industries; Kathryn Stein, for Barakat, Howard & Chamberlin, Inc.; Roger J. Peters, and Mark R. Huffman, Attorneys at Law, for Pacific Gas and Electric Company; and Michael Shames, Attorney at Law, for Utility Consumers' Action Network (UCAN).

Public Staff Division: Timothy E. Treacy, Attorney at Law, William F. Dietrich, and Gregg Wheatland.

Public Advisor's Office: Natalie Hanson.

(END OF APPENDIX A)

APPENDIX B

REVENUE REDUCTION BASED ON THE ASSUMED
CAPITALIZATION FOR ALAMITO
(See Exhibit 523, Appendix 11)

		Debt	Equity
Negotiated capital structure		70%	30%
Assumed capital structure		75%	25%

Period	Springerville Months	Rate Base	Tax Rate	Net-to-gross multiplier
A	6/85 - 12/86	19 \$504,900,000	50.00%	2.00000
B	1/87 - 5/87	5 \$28,754,000	44.57%	1.80408

SDG&E share of Springerville Rate Base	=	251/360
	=	0.69722
Weighted avg. cost of debt (from 4/1/87 FERC filing)	=	9.03%
Negotiated return on equity	=	15.00%

PERIOD A

Changes in annual revenue requirement:

(a) Due to incr. in debt capitalization	\$1,584,124
(b) Due to dec. in equity capitalization	(\$5,280,413)

Total annualized change	(\$3,696,289)
Average monthly change	(\$308,024)
Total change over the 19-month period	(\$5,852,457)

PERIOD B

Changes in annual revenue requirement:

(a) Due to incr. in debt capitalization	\$90,216
(b) Due to dec. in equity capitalization	(\$271,260)

Total annualized change	(\$181,044)
Average monthly change	(\$15,087)
Total change over the 5-month period	(\$75,435)

PERIOD A+B

Change in revenue requirement over the 24-month period (in nominal \$)	(\$5,927,892)
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Month	Annual ECAC rate	Average revenue change during month	Cumulative Future Value at end of month
Jun 1985 (actual)	8.08%	(\$308,024)	(\$309,061)
Jul	7.35%	(308,024)	(619,921)
Aug	7.56%	(308,024)	(932,821)
Sep	7.72%	(308,024)	(1,247,837)
Oct	7.83%	(308,024)	(1,565,008)
Nov	7.80%	(308,024)	(1,884,206)
Dec	7.77%	(308,024)	(2,205,428)
Jan 1986	7.75%	(308,024)	(2,528,690)
Feb	7.71%	(308,024)	(2,853,950)
Mar	7.63%	(308,024)	(3,181,100)
Apr	7.20%	(308,024)	(3,509,135)
May	6.60%	(308,024)	(3,837,306)
Jun	6.62%	(308,024)	(4,167,349)
Jul	6.71%	(308,024)	(4,499,537)
Aug	6.33%	(308,024)	(4,832,108)
Sep	5.92%	(308,024)	(5,164,730)
Oct	5.68%	(308,024)	(5,497,930)
Nov	5.68%	(308,024)	(5,832,706)
Dec	5.76%	(308,024)	(6,169,467)
Jan 1987	6.10%	(15,087)	(6,215,953)
Feb	5.84%	(15,087)	(6,261,328)
Mar	6.05%	(15,087)	(6,308,021)
Apr	6.16%	(15,087)	(6,355,528)
May	6.45%	(15,087)	(6,404,816)
Jun	6.93%	0	(6,441,804)
Jul	6.92%	0	(6,478,952)
Aug	6.65%	0	(6,514,856)
Sep	6.71%	0	(6,551,285)
Oct	7.37%	0	(6,591,521)
Nov	7.89%	0	(6,634,860)
Dec	7.17%	0	(6,674,503)
Jan 1988	7.61%	0	(6,716,831)
Feb	6.87%	0	(6,755,285)
Mar	6.58%	0	(6,792,326)
Apr	6.62%	0	(6,829,797)
May (forecast)	6.62%	0	(6,867,475)
Jun	6.62%	0	(6,905,360)
Jul	6.62%	0	(6,943,455)
Aug	6.62%	0	(6,981,760)
Sep	6.62%	0	(7,020,276)
Oct	6.62%	0	(7,059,004)
Nov	6.62%	0	(7,097,946)
Dec	6.62%	0	(7,137,103)

APPENDIX C

CALCULATION OF ANNUAL FIRM CAPACITY PAYMENTS

This calculation is based on SDG&E Standard Offer 2, Option 1, with prices from Firm Capacity Payment/schedule. Assumptions are a 100 MW facility, 95% on-peak capacity factor, and a one year agreement in effect from May 1, 1988 to April 30, 1989.

Monthly payment = $1/12 \times CP \times FC \times CBF$, and

$$CBF = \frac{ED}{C \times (PP - SP) \times 0.85}$$

where CP = firm capacity price
FC = C = firm capacity
CBF = capacity bonus factor
ED = energy delivered during on-peak hours of peak months
PP = peak hours in peak months
SP = scheduled maintenance during peak hours of peak months

Peak months for SDG&E are June, July, August and September. The available days are 22 in June, 20 in July, 23 in August and 21 in September, for a total of 86 days. On-peak hours are from 11 a.m. to 6 p.m., or 7 hours per day. Therefore:

CP = \$ 65
FC = 100 MW = 100,000 KW
PP = 86 x 7 = 602 hours
SP = 0
ED = 0.95 x 100,000 x 602 = 57,190,000 KWH
CBF = 57,190,000 / (100,000 x (602 - 0) x 0.85) = 1.11765

Monthly payment = $1/12 \times 65 \times 100,000 \times (1, \text{ or } 1.11765)$
= \$ 541,667, or \$ 605,394

Annual capacity payments
= $1/12 \times 65 \times 100,000 \times ((4 \times 1.11765) + (8 \times 1))$
= \$ 6,754,908

(END APPENDIX C)