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Decision 91-11-068 November 20, 1991

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 revise its Energy Cost Adjustment Clause Rate, to revise its Annual Energy Rate, and to revise its Electric Base Rates effective November 1, 1988 in accordance with the Electrical Revenue Adjustment Mechanism established by Decision 93892. (U 902-E)	Application 88-07-003 (Filed July 1, 1988)

ORIGINAL

(See Decision 88-12-093 for appearances.)

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O P I N I O N

I. Summary

This Phase III decision finds that San Diego Gas & Electric Company's (SDG&E) power purchase contracts and power purchase expenses during the record periods from May 1, 1986 to April 30, 1987, and May 1, 1987 to April 30, 1988 were reasonable, except for payments to qualifying facilities (QFs), which have been addressed in Phase II of this proceeding. Because the contract was in arbitration, the reasonableness of the Tucson Gas and Electric Company contract was deferred to the fall 1990 SDG&E Energy Cost Adjustment Clause (ECAC) reasonableness review proceeding.

Phase I of this annual ECAC proceeding resulted in Decision (D.) 88-12-093, which set electric revenue requirements, rates, and QF pricing levels for the forecast year ending October 31, 1989.

The Phase II decision, D.89-08-028, reviewed the reasonableness of SDG&E's fossil fuel and nuclear expenses, and its payments to QFs, for the record period of May 1, 1987 to April 30, 1988.

II. Reasonableness Review

The reasonableness review of SDG&E's five energy purchases contracts during the two record periods are the subject of Phase III. SDG&E filed a motion to bifurcate this proceeding to separately consider the contract between Tucson Gas and Electric Company and SDG&E signed in 1978, because of the pending arbitration proceeding dealing with that contract. Tucson Gas and Electric Company subsequently became Tucson Electric Power Company (TEP). We will grant SDG&E's request.

The five contracts considered in Phase III are with the following entities:

A. Washington Water and Power (WWP)

This contract, signed on April 1, 1968, provides 112 megawatts (MW) of capacity to SDG&E at all times. In exchange, SDG&E is required to return the amount of energy delivered, and to pay WWP annually 2,500 MW hours (MWh) of off-peak energy per megawatt of capacity. The Commission's Division of Ratepayer Advocates (DRA) states that this contract gave SDG&E access to Pacific Northwest (PNW) firm capacity and energy at below its avoided cost. DRA believes that the contract was reasonably administered and that SDG&E should be allowed to recover the costs.

We conclude that the WWP contract was reasonably administered during the reasonableness periods under review.

B. Public Service Company of New Mexico (PNM)

The PNM contract was signed on October 30, 1979, for 236 MW capacity and associated energy during the period May 1, 1982 to April 30, 1988. DRA examined SDG&E's administration of the contract to determine whether it adequately monitored contract performance, optimized takes and reduced contract costs when possible. When the contract became uneconomic in 1986, SDG&E attempted to renegotiate more favorable conditions with PNM. SDG&E concluded that the resulting renegotiated terms were more costly than continuing operation of the original contract. SDG&E did not agree to the renegotiated terms.

DRA believes that the negative economics of the contract were due to it being signed during a period of high gas and oil prices, rather than due to unreasonable action of SDG&E. DRA concludes that SDG&E operated properly in continuing operation under the contract, since the renegotiation between SDG&E and PNM would have resulted in increased costs to SDG&E. DRA concludes that SDG&E acted reasonably in continuing operations under the

existing contract, and recommends that SDG&E be allowed to recover the costs associated with the PNM contract.

We conclude that SDG&E operated properly and economically in administering the PNM contract, considering the contract restraints. SDG&E evaluated the costs and benefits of the renegotiation with PNM and properly declined to agree to it. We will not impose any disallowance for the administration of the PNM contract during the reasonableness periods under review.

c. Comision Federal de Electricidad (CFE)

The CFE contract provides for energy and capacity for a 10-year period beginning September 1, 1986. Although the contract costs now exceed avoided cost due to high demand charges, DRA concludes that SDG&E has been reasonable in administering the contract for the following reasons:

1. SDG&E has been analyzing options for modifying or replacing the contract.

   a. Termination of the contract is not cost-effective.

   b. SDG&E is currently attempting to renegotiate the contract as a result of CFE's request to allow more frequent adjustments of the operation and maintenance (O&M) component of the pricing. Some concessions have been reached through the negotiations with CFE, and more may be available during the remaining period of the contract.

2. SDG&E is concerned with maintaining a reasonable relationship with CFE.

   a. Mexico has severe economic problems.

   b. Conducting business with a foreign government is sensitive.

   c. There may be future benefits resulting from maintaining the existing business relationship with CFE.

DRA concludes that SDG&E's administration of the CFE contract was reasonable during the two record periods.

We conclude that SDG&E was reasonable in administering the CFE contract during the reasonableness periods under review. However, we expect SDG&E to aggressively negotiate any changes in the contract with CFE. If SDG&E makes concessions such as allowing CFE to change O&M more frequently, we will look at what it has negotiated for the ratepayer in return. Vague potential future benefits from maintaining the existing business relationship with CFE may not be viewed as adequate.

D. Escondido Mutual Water Company (EMWC)

This five-year contract, signed on June 8, 1983, provides for as-available energy to SDG&E. The quantity purchased is small at 12.37 gigawatt-hours at a total cost of $866,000, for an average cost of about 7¢/kwh for the two record periods. DRA concludes that the purchases under this contract were reasonable for the following reasons:

- The contract is small.
- There are benefits to maintaining good relations with EMWC.
- The Commission has found past purchases under this contract to be reasonable.

We conclude that SDG&E reasonably administered this contract during the reasonableness periods under consideration.

E. Portland General Electric (PGE)

This contract will be addressed in detail in the remainder of this decision.

III. The Issue

The only disputed issue in Phase III is the reasonableness of SDG&E signing the contract with PGE. The parties are in agreement on all other issues.

Hearings were first held in San Diego from October 10 through 13, 1989. After submission and before issuance of the Administrative Law Judge's (ALJ) draft decision, SDG&E filed a Petition to Set Aside Submission, based on material changes of fact occurring after submission which affect the economic value of the PGE contract. No party objected to the petition, but DRA objected to use of the new evidence either to support SDG&E's probabilistic methodology or to discredit DRA's deterministic methodology. The petition was granted by ALJ ruling without limitations on use of the new evidence.

Additional hearings were held in San Diego on April 22, 23 and 24, 1991.

SDG&E and DRA presented evidence on the reasonableness of these contracts. The City of San Diego (City) participated through cross-examination of SDG&E and DRA witnesses. Briefs were filed by SDG&E and DRA.

SDG&E argues that the contract will provide ratepayer benefits under most possible scenarios, including those using very conservative assumptions.

DRA believes that signing the contract was an unreasonable action, and recommends that SDG&E renegotiate, terminate, or take other action to avoid the negative effects of the contract. Unless appropriate action is taken, DRA recommends that the Commission put SDG&E on notice that it is subject to disallowances in future reasonableness reviews, if the costs under the contract exceed avoided cost during any year.

DRA further argues that SDG&E could have negotiated a more favorable contract with Bonneville Power Administration (BPA), as Southern California Edison Company (SCE) did in the same period the PGE contract was negotiated. DRA also believes that if it could not negotiate a satisfactory contract with BPA, SDG&E would be better off purchasing energy at its avoided costs for five years.

Although SDG&E presented evidence claiming significantly increased economic benefits to ratepayers from renegotiated coal costs, DRA recommends imposition of potential disallowances on SDG&E for years in which DRA's base case indicates negative benefits.

IV. The PGE Contract

A. Background

The contract consists of two parts, a transmission service contract, and a power purchase contract. Since the two are interrelated and a part of the overall agreement, we will refer to the two as the "contract," and will evaluate the reasonableness of the two as a whole.

The transmission service contract provides for delivery of the energy through the northern portion of the Pacific Intertie to the Malin substation at the Oregon-California border, effective November 5, 1985 through December 31, 2013. From Malin the energy must travel south through the Pacific Intertie to reach SDG&E's system. Under the Pacific Intertie Agreement, SDG&E has an entitlement to 7% of the investor-owned utilities' share of the Pacific Intertie from November 5, 1985 through December 31, 2007. SDG&E's current entitlement is 231 MW. (Ph. III Report, pp. 1-14.)

The power purchase contract provides for 75 MW of power and 75 MW of transmission service from January 1, 1989 through December 31, 2013. The power is based on capacity and energy from PGE's ownership share of the Boardman Unit 1 coal plant.

B. Standard of Review

It is important to define the standard of review to use in evaluating the PGE contract. SDG&E argues that the Commission should consider the same standard of review we used in D.89-02-074, 31 CPUC 2d 236, which, among other things, reviewed the reasonableness of SDG&E in connection with its contracts with

several other utilities for purchases of power transmitted over the Southwest Powerlink (SWPL). In that decision we stated, with regard to SDG&E's contract with PNM.

> "[A] reasonable and prudent act is not limited to the optimum act, but includes a spectrum of possible acts. As we have stated ... '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." (31 CPUC 2d at 245-246.)

SDG&E negotiated and agreed to the PNM contract in nearly the same period as the PGE contract.

DRA agrees with that standard of review, and believes that the reasonableness of a contract should be determined by comparing the costs under the contract with the utility's avoided costs.

C. Contract Negotiations

1. Position of SDG&E

SDG&E argues that it adequately and aggressively negotiated the contract. Having been criticized D.89-02-074 with regard to the PNM contract for not adequately considering the fuel price drop in later 1985, SDG&E has attempted to show that in this case it properly evaluated the effects of the fuel price drop.

SDG&E noted the fuel price drop occurred in late September or early October 1985. On October 4, 1985, SDG&E met internally to discuss the fuel price drop and its effect on the PGE

offer. SDG&E determined that it would negotiate for a reduction in the contract's cost, or alternatively, for additional features that would add value to the contract. Following is a recap of the meetings between October 4 and November 5, 1985.

- October 4; SDG&E met internally to discuss the effect of the fuel price drop on the contract.
- October 8-10; negotiations with PGE. On October 8 PGE walked out when it learned that SDG&E wanted either a price concession or value added features. Negotiations resumed later.
- October 11; conference calls to PGE.
- October 14; SDG&E Fuel and Purchase Power Committee reviewed the pending contract.
- October 15-16; further conference calls to PGE.
- October 18; final draft contract prepared by SDG&E for internal review.
- October 28; final draft ready.
- November 1; SDG&E Board of Directors approved entering into the contract.
- Prior to notifying PGE of board approval, and prior to signing the contract on November 5, SDG&E demanded and obtained usage of the transmission intertie upon execution of the contract, rather than January 1, 1986 as the contract draft provided.
- November 5; the contract is signed.

SDG&E argues that this sequence demonstrates its active and aggressive negotiations that reflect proper consideration of the economic impacts of the drop in fuel prices.

2. Position of DRA

DRA argues that SDG&E not only failed to properly consider the fuel price drop, but did not appreciate that something important was happening to fuel prices. Although it was aware that fuel prices could fall outside the range of probability used in its evaluations, SDG&E still proceeded with and entered into the PGE contract. DRA believes that SDG&E knew or should have have known that conditions in the fuel market were changing, yet SDG&E did not adequately reflect the changes in the contract negotiations.

DRA believes that both the PGE contract and the PNM contract were approved by SDG&E's Fuel and Purchase Power Committee at the same meeting on October 14, 1985. Since the Commission in the SWPL decision found some imprudence in negotiating the PNM contract, a similar result is warranted here, because the time period, circumstances, forecasts, and risk analyses were the same or similar for both contracts.

D. Need for Additional Capacity

1. Position of SDG&E

SDG&E argues that in 1984 when it was studying resource options, it properly perceived a need for capacity in 1989, due to termination of three power purchase contracts in 1988 and 1989. These three contracts, totaling between 618 and 748 MW, were with WWP (112 MW), TEP (400 MW), and PNM (106 MW or 236 MW depending on the status of the Palo Verde Nuclear Generating Station).

SDG&E had no identified replacements for these contracts. As part of its strategy of resource diversification, SDG&E adopted a 50/50 strategy for resource acquisition with regard to long/short lead time resources. The long lead time resources typically are committed for a long term to a specific powerplant, while short lead time resources may be based on short-term surplus resources

that are offered for only a few years or are subject to recall on short notice. On this basis SDG&E was looking for a long-term commitment of about 300 MW in 1989.

2. Position of DRA

DRA argues that there was no need for capacity until 1990 at the earliest, and that no capacity credit should be allowed for the PGE contract in 1989. DRA bases its argument on the SWPL decisions. Finding of Fact 40, in D.89-02-074 as modified by D.89-09-091, states, "According to the resource plans and demand forecasts the parties relied on in responding to the Commission's questions about the SWPL balancing account, SDG&E has no need for additional capacity until 1990 at the earliest."

DRA further points out that since the same resource plans and forecasts used in the SWPL proceeding were used by SDG&E here, the same conclusion must be reached, and the capacity credit should not be allowed for 1989.

E. Selection of the PGE Contract

1. Alternates to the PGE Contract

a. Position of SDG&E

SDG&E believes it fully considered alternates before entering into the PGE contract. In 1984 SDG&E commissioned Charles River Associates (River) to analyze electric generation opportunities for power purchase or ownership. The purpose was to identify and rank the opportunities, and to develop a resource data base that could be updated as new information became available. In preparing the December 1984 Market Study, River interviewed 22 utilities from Canada to Mexico and as far east as Colorado. Two types of resources were identified:

1. Those available by 1989; generally existing resources or those that were nearly complete.

2. Those that might be available in the mid-1990s or later. These were less certain resources that were usually in the planning stages.

The second group looked less promising than the first group, for the following reasons:

a. Fewer potential resources were expected to be available.

b. High risks of cost escalation, cancellation, and delay were apparent.

c. Parties frequently wanted equity partners to share risk.

d. Transmission development was necessary in order to access the resources.

Thirteen alternates were identified in the first group. All had risks and drawbacks, most required long-term agreements, and the starting date was often a problem, in that many desired to start deliveries prior to 1989. Seven lacked a transmission path, and 3 were 50 MW or less. Other utilities were also competing for many of these resources.

The Market Study subdivided the 13 resources into three categories:

Category 1: Resources showing no potential for meeting SDG&E's goal of long-term price stability and fuel diversity.

Category 2: Resources that could meet SDG&E's needs after significant compromise by either or both parties. Included in this category is BPA. Although BPA had potential resources, it could only commit to capacity on a five-year callback basis, and energy on a 60-day callback. In addition, BPA was attempting to handle other surplus PNW resources, which caused antitrust concerns and concerns of other PNW utilities. Finally, the proposed pricing was not viewed as favorable.

Category 3: These resources show an immediate potential of meeting SDG&E's needs, and include:

a. PNM indicated an interest in selling resources to SDG&E as early as 1982. After a year of negotiations, SDG&E signed the agreement with PNM. This contract was found reasonable by the Commission in the SWPL decision, D.89-02-074.

b. PGE and SDG&E reached agreement on this contract in late 1985, as more fully discussed herein.

c. Pacifc Power and Light Company (PP&L) was interested in selling a portion of the Colstrip 4 coal plant. However, SDG&E ceased negotiations as a result of the combination of uncertainty over PP&L's ability to schedule transmission through the Malin substation, PP&L's continued insistence that SDG&E purchase in the 1986-1989 timeframe, and the early 1986 uncertainty of oil/gas prices.

b. Position of DRA

(1) BPA Contract

DRA believes that SCE achieved more favorable terms in its contract with BPA than SDG&E achieved with PGE. DRA argues that SDG&E could have negotiated a contract with BPA having terms similar to the SCE/BPA contract, since it was negotiated in the same period and signed shortly after the SDG&E/PGE contract. While DRA acknowledges that SDG&E may not have been able to reach exactly the same agreement with BPA, it believes that a comparison of the two is valid for purposes of evaluating the PGE contract.

Table 1 shows DRA's comparison, using BPA's forecasted rate for a medium PNW demand growth case, and SDG&E's low estimated PGE costs. The results indicate less favorable terms for the SDG&E/PGE agreement during years 3 through 18, and levelized costs from 20% to over 31% higher over the contract life.

TABLE 1

COMPARISON OF PGE RATE TO SDG&E AND BPA RATE TO SCE
(Medium Case)
(mills/kWh)

Line No.	Year	PGE Rate to SDG&E	BPA Rate to SCE	PGE Over BPA
1	1986	33	0.0	NA
2	1987	36	36.9	-0.9
3	1988	39	40.0	-1.0
4	1989	67	46.7	20.3
5	1990	69	48.7	20.3
6	1991	75	53.6	21.4
7	1992	77	58.3	18.7
8	1993	85	62.1	22.9
9	1994	86	65.5	20.5
10	1995	101	68.7	32.3
11	1996	102	73.5	28.5
12	1997	104	77.4	26.6
13	1998	105	81.0	24.0
14	1999	106	85.8	20.2
15	2000	108	90.7	17.3
16	2001	111	96.2	14.8
17	2002	113	102.2	10.8
18	2003	115	108.6	6.4
19	2004	118	118.0	0.0
20	2005	121	127.4	-6.4
21	2006	126	135.6	-10.1
22	2007	130	144.4	-14.1
23	2008	135	153.8	-18.6
24	2009	140	163.7	-23.5
25	2010	146	174.3	-28.8
26	2011	151	185.6	-34.6
27	2012	157	197.6	-40.9
28	2013	163	210.4	-47.8

Line No.	Period	-----Levelized---- PGE	BPA	Diff.	Percent
		(m/kWh)			
1	1987-2005	74.35	59.31	15.04	25.4%
2	1989-2005	87.13	66.56	20.57	30.9
3	1987-2013	77.74	64.71	13.04	20.1
4	1989-2013	90.73	73.19	17.54	24.0

In Table 3-9 of exhibit 50 DRA expanded the comparison using BPA estimated low, medium, and high demand growth rates, which resulted in the PGE contract being more favorable in only one of the three cases, the BPA low demand growth case. In Table 3-10 of exhibit 50 DRA made a comparison using a high PGE estimate, which resulted in the PGE contract being more favorable than BPA in only the early years of the BPA low demand growth case.

DRA notes that under most assumptions, the PGE costs are higher than for BPA, and that SDG&E was overly concerned with the callback provisions of BPA agreements. DRA points out that despite the callback provisions, BPA forecast surplus peaking capacity for 50 hours per week through 2004 to 2005. BPA further forecast a firm energy surplus until between 1993 and 2003, depending on how much of the Pacific Northwest investor-owned utilities' load growth during that period is placed on BPA.

Once the callback took effect, BPA would offer capacity/energy exchanges. DRA notes that although SDG&E states that an agreement requiring payback of capacity and/or energy is not desirable, SDG&E nevertheless was satisfied with its capacity/energy exchange with WWP. It was unable to negotiate a satisfactory extension of that agreement.

DRA further notes that an agreement with BPA would have bought five years' time for SDG&E, during which it could have assessed other opportunities. The five years would also have allowed SDG&E to learn more about the market before entering into a long-term contract.

DRA concludes that although the agreement with BPA would have been less predictable than the contract with PGE, it could have substantially met SDG&E's needs at lower cost. DRA further concludes that SDG&E exhibited little initiative in negotiating with BPA.

(2) Avoided Cost

DRA also argues that if SDG&E were not successful in negotiating a beneficial contract with BPA or others, its ratepayers would be better off by generating or purchasing at SDG&E's avoided costs rather than purchasing under the PGE contract. Relying on avoided cost would allow more operational flexibility, and allow SDG&E to take advantage of other opportunities, rather than being confined to the PGE contract. If fuel prices remain soft, avoided cost could be cheaper in the long run than the PGE contract, which has relatively high capacity costs as a result of the capital costs of the Boardman coal plant.

2. Economic Analysis

Because the PGE and PNM contracts were negotiated and consummated during the same approximate period, in the following section we sometimes will refer to the Commission's discussion and conclusions on the PNM contract, which was reviewed for reasonableness in D.89-02-074, as modified by D.89-09-091.

a. Criteria for Evaluation

(1) Avoided Gas Cost

We consider this criterion separately, since it is potentially a pivotal issue in evaluating the benefits of the contract. The difference in benefits of the contract between assuming the rates of Schedule G-61 versus Schedule GN-5 as the avoided gas cost is about $28 million.

(a) Position of SDG&E

SDG&E argues that Schedule GN-5, rather than Schedule G-61, sets the proper gas rate for evaluating the cost of gas displaced. SDG&E states that it originally used the G-61 rate for a conservative preliminary evaluation of the contract, realizing that if the contract looked favorable on that basis, it would be more favorable using Schedule GN-5. Schedule G-61 contains the commodity rate that is the wholesale rate SDG&E pays Southern California Gas Company (SoCal) for gas. Included in

the wholesale rate is a capacity or demand charge on SoCal's system. SDG&E uses the G-61 gas rate for dispatching its plants, since it is the cost that can be avoided in the short term if gas is not used.

Schedule GN-5 sets the effective rate to SDG&E's gas department. It includes both a commodity rate (G-61), and a capacity charge that reflects the cost of SDG&E facilities used for transporting the gas. SDG&E argues that Schedule GN-5's rate is the proper rate to use in evaluating long-term contracts that replace gas, since such contracts avoid not only the cost of gas but also the need for new or upgraded gas facilities on its own system. Avoiding purchases of gas through a long-term contract results in less long-term system upgrade and maintenance costs.

As evidence of the propriety of using Schedule GN-5, SDG&E cites D.82-12-120 in Order Instituting Rulemaking No. 2, the Commission proceeding investigating appropriate pricing for QFs, such as cogenerators and small power producers. In that decision we stated, "When the electric department of SDG&E purchases electricity from a QF, ratepayers avoid electric production with costs derived from the GN-5 rate for the purposes of calculating SDG&E's electric rates. By establishing QF prices using the GN-5 rate, ratepayers are indifferent between purchases from QFs and utility generation, consistent with avoided cost principles. To base prices on the G-61 rate would result in underdevelopment of QF resources, leading to uneconomic use of natural gas in utility boilers." (10 CPUC 2d 553, 622-23)

SDG&E argues that the G-61 capacity cost, like the capacity charge of GN-5, is avoided in the long term because a long-term contract reduces SDG&E's long-term gas demand. With the reduced demand for gas from SoCal, less of SoCal's system costs would be allocated to SDG&E, and more to other customers. This argument may be stated another way. Reducing long-term

purchases from SoCal will not increase the G-61 rate to SDG&E, because the reduced volumes will be taken by other customers of SoCal. Those customers will pay the normal G-61 rate, which includes both a capacity charge on SoCal's system and a commodity rate.

(b) Position of DRA

DRA argues that G-61, not GN-5, is the proper gas rate to use. DRA's argument is based on SDG&E not being able to avoid the capacity charge of GN-5.

DRA explains that G-61 is SDG&E's corporate cost of gas, which it uses to dispatch its system on a day-to-day basis. The G-61 rate is the rate SDG&E pays SoCal for gas. G-61 includes both a fixed monthly capacity charge, and a volumetric rate. The fixed charge is intended to recover SoCal's cost of serving gas to SDG&E.

DRA argues that the facilities charge on SDG&E's system cannot be avoided since SDG&E's gas facilities are already in place, and there is no additional major capacity expansion expense needed by SDG&E to produce additional energy at the margin. DRA believes that reduced purchases of gas from SoCal will result in increased capacity charges per unit of gas. As a result, GN-5 overstates the avoided gas cost, since the remaining purchases would be at a higher unit price.

DRA also believes the GN-5 rate subsidizes SDG&E's gas department at the expense of the electric department, and, therefore, using GN-5 for evaluating the contract benefits is unrealistic. DRA cites D.85-10-050, which reviewed Pacific Gas and Electric Company's (PG&E) accounting procedures and treatment of profit as related to economy energy sales transactions. This decision eliminated a subsidy of gas customers at the expense of electric customers in the amount of approximately one percent of revenue related to economy energy sales. DRA believes that this subsidy still exists in the case of SDG&E.

DRA notes that using G-61 instead of GN-5 reduces the contract benefits calculated by SDG&E by $28 million. (Ex. 50, pp. 3-5, 6.)

(2) Other Contract Provisions and Benefits

Following are the other contract provisions or benefits that are in dispute between SDG&E and DRA, with regard to potential benefits.

(a) Storage Services

This provision enables SDG&E to store low cost economy energy for later use in displacing energy during higher cost periods. The provision is in effect for a 10-year period beginning January 1, 1989.

SDG&E quantifies this benefit through its PROMOD (a production cost computer model) analyses, which calculate the extent that lower cost energy is expected to displace higher cost energy.

DRA argues that although this is a beneficial provision, it should not be assumed and quantified when evaluating the contract, since the contract should not depend on such probabilistic and uncertain benefits.

(b) PGE Acting as an Energy Broker for SDG&E

Under this provision, PGE acts as an energy broker for SDG&E, to purchase economy energy at cost plus five percent from January 1, 1986 through December 31, 1988, and at cost plus 10% from January 1, 1989 through the end of the contract. SDG&E assumes the effect of this provision in its analyses.

DRA believes that a proper conservative analysis should not consider any melding of contract costs with these potential economy purchases. DRA cites uncertainties such as transmission availability and possible energy emergencies during which the Oregon governor may halt any energy exports. (Ex. 50, pp. 3-6, 7.)

(c) SDG&E May Assign its Rights

Under this provision, SDG&E may assign its rights under the contract to another electric utility, without the consent of PGE.

Both SDG&E and DRA agree that this provision is beneficial. Since neither party has attempted to quantify its benefits, no dispute exists relative to contract benefits.

(d) PP&L Contract

At the time of evaluating the PGE contract, SDG&E did not know if its negotiations with PP&L would result in a contract. As a result SDG&E assumed probabilities of entering into the PP&L contract in its decision tree analyses.

The benefits of the PGE contract are greater if the PP&L contract is not entered into, since there is greater need to purchase power under that condition.

DRA argues that since there was no way of knowing in advance whether the PP&L contract would be consummated, the conservative assumption should be used, i.e., assume the PP&L contract.

(e) Coal Cost Savings

SDG&E assumes a probability of coal cost savings resulting from renegotiation of the coal contract between PGE and AMAX, the coal supplier to the Boardman plant. The negotiation has been underway for several years.

DRA believes this benefit to be highly speculative, considering the length of negotiations to date with no results.

b. Benefits

(1) Position of SDG&E

(a) Decision Tree Analysis

The decision tree is a method to assist in reaching a rational decision when many variables are involved. The analysis requires the user to assign probabilities of occurrence for each branch of the decision tree, as well as the quantification of the benefits, positive or negative, of each result.

SDG&E used the decision tree in Figure 1, below, in its evaluation of PGE contract benefits, concluding that in 2/3 of the possible outcomes, benefits to ratepayers result. SDG&E concludes that the most likely result is a savings of $51 million over the term of the contract. SDG&E's analysis is based on present value life cycle benefits. The five variables most likely to affect the agreement's economic viability were identified as:

1. Oil/gas prices, which were varied from expected to high and low estimated values.

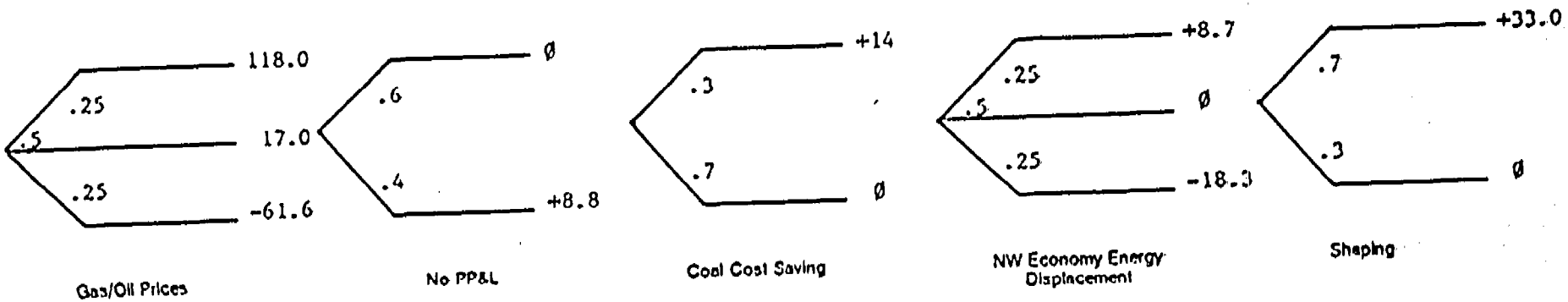
2. Availability of economic PNW displacement energy, varied from expected to high and low estimated values.

3. A contract or no contract with PP&L, which varies the PGE benefits. If a contract is reached with PP&L, SDG&E's benefits from the PGE contract reduce as a result of it having less need for the energy and capacity.

4. Coal cost savings which may be achieved if PGE is successful in negotiating price concessions with AMAX, the coal supplier for Boardman. Those negotiations are in progress.

FIGURE 1

PGE SAVINGS PROBABILITY TREE



EXPECTED VALUE SAVINGS = $51 Million

5. "Shaping" benefits or storage energy savings resulting from banking of low cost energy to be used later when the energy can displace more costly energy.

SDG&E assigned probabilities to each outcome for each variable in the decision tree. For example, the gas/oil price probabilities are:

25% probability that the prices will be higher than forecast, resulting in a savings of $118 million.

50% probability that the prices will be as forecast, for a savings of $17 million.

25% probability that the prices will be lower than forecast, for a net cost (negative savings) of $61.6 million.

Similarly, probabilities are assigned to each other variable, along with the benefits, positive or negative, for each outcome, as shown in Figure 1.

The decision tree can be used in two basic manners. First, each branch can be combined with each possible subsequent branch, and the resulting benefit determined. Each of the three possible gas/oil prices combines with each of the two possible outcomes for the PP&L contract, each in turn combines with two possible outcomes for coal cost savings, with three outcomes for NW economy energy displacement, and finally with the two outcomes for shaping. In this case there are 72 possible permutations. One-third of the permutations show net costs or negative benefits, while two-thirds show positive benefits. Benefits range from $182.5 million positive, to $79.9 million negative. This indicates the possible range of outcomes, and their relative benefits. While this process could be used in reaching a

decision, the second method of evaluation provides further information.

The second method determines the most likely result, which SDG&E calls the base case. The expected value of benefits is determined by multiplying each probability by its benefit, then summing the results. In this case the expected value is $51 million, derived as follows:

Gas/oil prices:
.25 x 118.0 + .5 x 17.0 + .25 x (-61.6) = $22.6 million

No PP&L:
.6 x 0 + .4 x 8.8 = 3.5

Coal cost savings:
.3 x 14 + .7 x 0 = 4.2

NW economy energy displacement:
.25 x 8.7 + .5 x 0 + .25 x (-18.3) = -2.4

Shaping:
.7 x 33.0 + .3 x 0 = 23.1

Expected Benefit (Total) = $51.0 million

This is the level of benefit that the decision tree process determines is most likely to occur, based on the assumptions used. This value then is used to make a decision, such as whether to enter into a contract. The decision tree result does not specifically recommend the action to take. Rather, the user must exercise a degree of judgment in using the decision tree results. For example, if the most likely result is only slightly beneficial, the user may decide not to take that course of action. Other more beneficial opportunities may be available later. If the benefits appear significant based on conservative assumptions, with greater benefits possible, the user may decide that the course of action is worthwhile. The user may also consider the range of

possible outcomes discussed above, and in this case 2/3 are positive, 1/3 negative.

(b) Increased Benefits

SDG&E argues that additional provisions of the contract and more realistic assumptions increase the benefits to ratepayers.

The contract provisions are:

- Storage capability, which allows SDG&E to store 50 MW of firm energy for 10 years of the contract term. SDG&E estimates that this feature will add $29.7 million in ratepayer benefits.

- Good performance under the PGE contract could add to ratepayer benefits through reducing payments to QFs. SDG&E calculates this benefit at $12.2 million, which assumes purchasing sufficient displacement energy in addition to Boardman energy, to achieve a 95% capacity factor.

(c) Quantification of Uncertainties

SDG&E performed further evaluations of the contract to consider the effect of uncertainties on the economic benefits. The evaluations assume that SDG&E will be unable to renew its Pacific Intertie entitlement and have no post-2007 transmission capacity, with and without sale of the contract, and with and without a need for capacity in 1989.

Scenario 1 assumes that capacity was not needed in 1989, that no post-2007 transmission capacity will be available, and that the contract benefits for the remaining years of the contract, 2007 to 2013, cannot be sold. SDG&E presents this as the worst expected case.

Scenario 2 is the same as Scenario 1 except that it assumes capacity was needed in 1989, and that the remaining years of the contract are sold at cost.

Scenario 3 is the same as Scenario 2 except that no contract sale is assumed.

The results of the scenarios are summarized below:

	Present Value Savings-millions	
Scenario	Minimum Expected	Maximum Expected
1	$35.1	$74.3
2	47.5	88.2
3	37.9	78.6

SDG&E argues that even under the most pessimistic Scenario 1, the ratepayers will save a minimum of $35.1 million. Furthermore, the savings to ratepayers could be as great as $88.2 million under Scenario 2. Scenario 3 results in savings similar to Scenario 1. SDG&E further notes that the contract has non-monetary benefits, including less price volatility than relying on gas/oil, unencumbered transmission access to the northwest, use of a diversified resource (coal), and no adverse environmental impact to California.

(d) Update-Coal Cost Reduction

At the additional Phase III hearings SDG&E presented its analysis of the improved economic benefits of the PGE contract that result from PGE's renegotiation of the coal contract with AMAX, and renegotiation of the rail transportation rates for coal.

The renegotiated coal contract includes a termination cost of $5,611,290 to SDG&E. SDG&E quantifies the improvement in energy costs for Boardman at $56,884,000 for the period 1989 through 1999, using DRA's base case scenario, upon which DRA bases its recommendation for potential disallowances.

(2) Position of DRA

(a) Decision Tree Analysis

DRA argues that the decision tree analyses used by SDG&E are improper for a number of reasons.

- Rather than 72 permutations, only the most conservative case should be used, since the other cases include speculative savings that may not materialize.

- The probabilities assigned to the decision tree variables are subjective, and not based on historical fact.

- The ability to assign numerical probabilities to future occurrences is not very good, as witnessed by the decline in oil prices.

- Even a properly done decision tree may not consider a worst case scenario. An infinite number of branches would be required.

- SDG&E erred in not testing the sensitivity of its decision tree assumptions.

- The decision tree ignores certain risks, such as the renewal of the Pacific Intertie entitlement, the availability of economy energy, and the Oregon governor calling a curtailment on energy exports.

DRA further points out what it considers to be a danger of the decision tree; a party may rig the decision tree by using probabilities to justify a contract, rather than to objectively evaluate it. (DRA Brief, pp. 11-16.)

(b) Contract Benefits

Using SDG&E's basic benefit evaluations, but with Schedule G-61 instead of Schedule GN-5, and without the estimated benefits of probabilistic contract provisions discussed above, DRA concludes that the contract is unreasonable. DRA emphasizes that only the last eight years prior to 2007 provide benefits, and only $16.8 million in benefits accrue over the entire period. DRA concludes that this is inadequate justification for entering into the PGE contract, considering its uncertainties. Table 2 demonstrates DRA's quantification of benefits and costs. Column 10 of Table 2 demonstrates the potential disallowances DRA recommends.

DRA does not recommend current disallowances because of the uncertainties surrounding the actual outcome of the contract. Rather, DRA recommends that the Commission disallow future energy costs as they occur in future reasonableness periods to the extent the costs exceed avoided cost. DRA presents its recommendation at this time to make SDG&E aware, and to allow it the opportunity to consider actions to avoid potential future disallowances.

DRA believes that SDG&E has the opportunity to negate the potential disallowances by either renegotiating or terminating the contract, or by improving operational efficiency sufficient to offset the estimated negative savings.

If the actual conditions show benefits in every year, DRA would not recommend any disallowances for the PGE contract.

TABLE 2

PGT BASE ASSUMPTIONS -- 10/7/05

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
				4 - 3		5 + 6			5-819	2 * 10				6/14	8/14	7/14	9/14	15+16	17+18
YEAR	DISCOUNT FACTOR	BASE CASE PROD. COST	PROD. COST W/O PGE	ENERGY COST SAVINGS	PGE ENERGY COST	AVOIDED ENERGY COST	PGE CAPACITY COST	AVOIDED CAPACITY COST	NET SAVINGS (COST)	PRESENT VALUE	CUMULATIV PRESENT VALUE	YEAR	PGE ENERGY -GWH	PGE ENERGY COST	PGE CAPACITY COST	AVOIDED ENERGY COST	AVOIDED CAPACITY COST	PGE TOTAL COST	AVOIDED TOTAL COST
1986	1.3119	648740	651399	7659	5475	8134	1613	1505	2557	3345	3345	1986	215	25	8	38	7	33	45
1987	1.1450	633352	635093	1741	5094	6835	1613	944	1072	1227	4573	1987	185	28	8	37	5	36	42
1988	1.0000	666574	668214	1640	4872	6512	1613	1518	1546	1546	6118	1988	165	30	10	39	9	39	49
1989	0.8734	664388	669806	5418	8773	14191	15050	7150	-2487	-2168	3950	1989	353	25	43	40	20	67	60
1990	0.7628	860940	864818	3878	9443	13321	15050	7150	-3072	-2342	2608	1990	355	27	42	43	20	69	63
1991	0.6662	759978	765925	5947	9949	15896	16125	7150	-3078	-2049	391	1991	347	29	46	46	21	75	66
1992	0.5818	832180	838772	6592	10745	17337	16125	7150	-2385	-1388	-996	1992	349	31	46	50	20	77	70
1993	0.5081	924552	932011	7459	11425	18884	16725	7150	-3666	-1863	-2858	1993	349	33	52	54	20	85	75
1994	0.4438	1018000	1025879	7879	12156	20035	16725	7150	-3746	-1661	-4299	1994	353	34	52	57	20	86	77
1995	0.3876	1143254	1152708	9454	13043	22497	22844	7150	-6240	-2418	-6717	1995	357	37	64	63	20	101	83
1996	0.3385	1261672	1271475	9803	13783	23584	22844	7150	-5891	-1994	-8711	1996	358	39	64	66	20	102	86
1997	0.2956	1401018	1412745	11727	14650	25877	22844	7150	-4467	-1321	-10032	1997	362	40	63	71	20	104	91
1998	0.2582	1520169	1531929	11760	15532	27292	22844	7150	-3934	-1016	-11047	1998	365	43	63	75	20	105	94
1999	0.2255	1734303	1748585	14282	16578	30860	22844	7150	-1832	-323	-11370	1999	371	45	62	85	19	104	103
2000	0.1969	1880056	1897190	17134	17508	34642	22844	7150	1442	284	-11086	2000	373	47	61	93	19	108	112
2001	0.1720	2135535	2155499	19964	18176	38290	22844	7150	4270	734	-10352	2001	372	49	61	103	19	111	122
2002	0.1502	2391198	2416790	25592	19150	44746	22844	7150	6898	1036	-9316	2002	372	51	61	112	19	113	131
2003	0.1312	2640828	2664872	24044	20076	44460	22844	7150	8470	1110	-8175	2003	372	54	61	120	19	115	139
2004	0.1146	2926193	2952761	26568	21182	47730	22844	7150	10878	1246	-6929	2004	373	57	61	128	19	118	147
2005	0.1001	3256828	3288300	31472	22177	53639	22844	7150	15768	1578	-5352	2005	372	60	61	144	19	121	165
CUMULATIVE PRESENT VALUE				67566	95387	162948	121865	48947	-5352										
EXTRAPOLATED EIGHT YEARS				25747			10429	3764	16582										
TOTAL PRESENT VALUE				91313	107549	198893	132294	52211	11231										

(50 MW) x 1.5 = $16,847 (75 MW)

(c) Risks and Uncertainties

DRA is concerned with the following contract risks and uncertainties, as they affect contract benefits:

(a) SDG&E may lose its entitlement to the Pacific Intertie. If it does, it will not be able to transmit the purchased power to its system, and it may not be able to sell the remainder of the contract to another utility.

(b) SDG&E has improperly extrapolated the last eight years of the contract, by using the first three years of the contract when only the transmission contract was in effect. The purchased power contract went into effect January 1989. DRA believes that if the first three years were eliminated, the effect would be a reduction in energy cost savings, which would reduce the overall savings of the contract.

(c) There is no escape clause or renegotiation clause in the contract. Despite all its risk analysis, SDG&E failed to provide a means of terminating the contract. DRA believes that there should be some protection for the ratepayer in the event that the important variables go out of range of the analyses.

(d) Conclusion

DRA concludes that entering into the PGE contract was imprudent. SDG&E should either have negotiated more favorable terms, as discussed earlier, or it should have relied on shorter term options to meet its capacity and energy needs. Either a short-term contract with BPA or reliance on avoided cost would have given SDG&E five years to learn more about the market before entering into such a long-term contract as the PGE contract. The renegotiated coal costs have no bearing on the decision since this occurred four years after the contract was entered into.

F. Contract Operations

DRA reviewed the purchases under the PGE contract during both record periods. During the first record period 627 Gwh of energy were purchased at an average price of 1.3¢/kwh. The corresponding purchases for the second record period were 326 Gwh at an average price of 1.7¢/kwh.

DRA considers these purchases to be reasonable since the average costs are well below SDG&E's avoided cost during those periods.

G. Discussion of the Terms of the PGE Contract

1. Standard of Review

There is little dispute between SDG&E and DRA on the basic standard of review, although how they recommend it be applied varies considerably.

We believe the citation we mentioned earlier clearly defines our standard. We do not expect an optimum decision necessarily, but we do expect a well reasoned decision process.

2. Contract Negotiations

We criticized SDG&E for not adequately reacting to the falling fuel prices that occurred late in the PNM contract negotiations, believing that SDG&E had essentially decided to enter into the contract by that time. In D.89-02-074, we stated, "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." (31 CPUC 2d at 274.)

SDG&E apparently acted more timely and aggressively to the fuel price drop in negotiating the PGE contract. The fuel price drop was noted around the beginning of October 1985. On October 4, 1985 SDG&E met internally to discuss the fuel price drop and its effect on the PGE offer. As a result, SDG&E decided that it would negotiate for a reduction in the contract's cost, or alternatively, for additional features that would add value to the contract.

Finally, after the negotiations ended, and SDG&E's Board of Directors approved entering into the contract on November 1, 1985, SDG&E's negotiators did not immediately notify PGE of this fact. Rather SDG&E demanded and obtained usage of the transmission intertie upon execution of the contract, rather than January 1, 1986 as the contract draft provided. This additional benefit, although not of great consequence, seems to demonstrate an aggressive negotiating stance.

We now consider what SDG&E actually negotiated in the last month before entering into the contract, in attempting to offset the drop in fuel prices and insure that the contract would be beneficial. Since no firm commitment had been reached before the signing, the gains cannot be quantified; rather they are conceptual.

SDG&E obtained the following during the period from October 8 to November 5, 1985:

a. 75 MW as available storage from 1986 to 1988.

b. 50 MW firm storage from 1989 to 1998.

c. Storage allowed in third party systems at SDG&E's option.

d. Ability to assign the contract to another electric utility without PGE's consent.

e. Use of the transmission allocation upon execution of the contract, rather than January 1, 1986. This allowed additional savings as well as the opportunity for SDG&E to become familiar with the new operations at no cost.

f. Right of first refusal to purchase the remaining useful life of 75 MW of the Boardman facility and to contract for associated transmission, if PGE does not need this capacity to serve its native load.

g. Purchase option for an additional 25 MW at the same terms as the contract, but subject to change in price due to interest rate changes.

h. Storage service of 50 MW may be negotiated, if PGE has it available.

We conclude that SDG&E considered the effect of lower fuel prices on benefits in the month before the final contract was signed, and pressured PGE into agreeing to further contract provisions that increased the benefits to SDG&E. Whether the resulting contract is beneficial to SDG&E and its ratepayers will be considered later in this decision.

3. Need for Additional Capacity in 1989

DRA points out that we earlier concluded regarding the SDG&E contract with PNM, that no capacity was needed by SDG&E until 1990. In D.89-02-074, we stated 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...." "Rather than a need for 600 MW in 1989, the ... resource plan shows additional purchases of only 215 MW from 1988 through 1990." (31 CPUC 2d at 272.)

D.89-09-091 modified D.89-02-074, finding that "...SDG&E has no need for additional capacity until 1990 at the earliest."

However, our determination relative to entering into the PNM contract was that SDG&E knew or should have known ..."that it would not need additional capacity until 1989 at the earliest." (D.89-02-074 at mimeo p. 94). DRA's reference to our determination that SDG&E had no need for capacity until 1990 at the earliest was based on a later assessment of SDG&E's need for capacity in the 1986 to 1990 time frame. This was based on information submitted by SDG&E on October 15, 1986, well after the PNM (and PGE) contract was entered into: the information used the added capacities of the PNM and PGE contracts, since by then they had been entered into.

4. Selection of the PGE Contract

a. Alternates

SDG&E commissioned the Market Study to assess the opportunities for purchased power through the end of the century. We concluded in D.89-02-074 that SDG&E was reasonable in commissioning the Market Study. We similarly conclude that the Market Study was helpful in the PGE contract process.

SDG&E argues that the Market Study clearly indicated that the opportunities for purchased power were better in the near term than later, implying that the PGE contract is superior to a later agreement that might be available. However, the Market Study also acknowledged that additional opportunities may be available in the mid-1990s, especially if SDG&E indicated an interest. Utilities that postponed decisions on new resources would be reassessing their strategies at that time.

DRA argues that the long-term nature of the PGE contract is not reasonable, considering that SDG&E could have achieved a contract with BPA similar to the SCE/BPA contract. The

BPA contract would have bought five years' time for SDG&E to assess other opportunities, and to learn more about the market.

We believe that the BPA option is highly speculative. We have no way of knowing whether SDG&E could have achieved the same, better, or worse terms with BPA than SCE achieved. SCE and SDG&E are quite different in terms of size, resources and needs. Although SDG&E has had agreements in the past that required payback of capacity or energy, such an agreement may not now be desirable as a long-term resource. In addition, BPA may not have wanted to enter into an additional contract with the same terms as the SCE contract, since it may not have had adequate reserves to do so.

The five years in which to assess and learn could be beneficial to SDG&E, but whether the future would be more clear at that time is uncertain. Gaining five years of history may not assist in predicting the future. The future of gas and oil prices has remained uncertain in recent years, depending heavily on the ability of the producers to limit production sufficiently to maintain high prices.

We conclude that SDG&E was not necessarily unreasonable in securing a long-term resource that might not be available as readily later in the 1990s. Relying on short-term resources could prove to be more costly as well as less certain than long-term resources.

b. Economic Analysis

SDG&E and DRA agree that the proper method of evaluation of the economic benefits is to compare costs under the contract with avoided cost.

SDG&E and DRA strongly disagree on the use of decision tree analyses in evaluating the likely benefits of a contract of this type.

SDG&E uses estimates of benefits, positive and negative, for each provision in the contract that has an economic impact. SDG&E then further modifies the results to reflect adders

or subtractors to the benefits. In this manner it attempts to quantify a range of benefits and a level of expected benefits.

DRA believes that probabilistic assessments of future benefits that are not based on history are speculative and useless in evaluating the contract. DRA takes what it perceives is a more conservative approach, i.e., quantifying only the base case or deterministic provisions, and disregarding the potential economic effect of the other provisions. DRA believes that the other provisions are "probabilistic" and therefore too uncertain to be used in evaluating the reasonableness of the contract. It is on this basis that DRA concludes that the contract relies on the last eight years for benefits, with the first 20 years having negative benefits. If this were the case, we might well share DRA's concern.

However, we believe that all contract provisions should be quantified where it is practical, and where the benefits, positive or negative, are reasonably likely to occur.

We believe that a decision tree type of analysis is useful in bracketing the likely effects of a contract. For example, knowing that a contract is more likely to have positive benefits, and that the decision tree's highest positive benefit is much greater than its highest cost, is of some value in determining the reasonableness of a contract. One can then test the assigned probabilities, and assign other probabilities to determine the effect on benefits. The number of branches can be increased or decreased.

DRA argues that assigning probabilities is subjective and unreliable. However, we observe that quantifying these contract provisions is similar to many other utility regulatory processes that necessarily rely on forecasts. Recognizing that the results will not prove to be entirely accurate, utilities and regulators nevertheless must rely on such analyses in determining the likely range of ratepayer effects resulting from various

actions. Long-term avoided costs are perhaps no more certain or predictable than the benefits of these contract provisions." Avoided costs are subject to the influence of fuel costs and the amount of surplus generation and transmission capacity available. Forecasting is as essential for estimating future avoided costs as for evaluating contracts.

Parties may disagree with the assumptions and probabilities assigned, but in doing so must offer reasonable alternates. We do not believe that contract provisions of any type should be disregarded if they can be quantified. We have no intent to disregard provisions that appear negative; similarly, we will not disregard those that appear positive. In this case, SDG&E apparently achieved beneficial provisions that it believes overcome the effect of the fuel price drop on contract benefits. To disregard these or any other provisions would be unfair, and would potentially deprive ratepayers of reduced costs.

We will evaluate the contract benefits or ranges of benefits, positive or negative, that can be expected under varying future conditions, considering all the contract provisions.

DRA also argues that SDG&E improperly extrapolated the last eight years of the contract by using the first three years when only the transmission contract was in effect. DRA believes that this overstates the benefits, but has not quantified the effect. We believe that the effect would not be great, and would not be significant in our determination of the contract's reasonableness.

(1) Criteria for Evaluation of Benefits

We now consider the actual criteria we will use in evaluating and determining whether the contract is reasonable.

(a) Gas Rate

SDG&E used the Schedule G-61 gas rate in its initial evaluations of contract benefits, arguing that it knew that if the contract were beneficial using G-61, it would be more

beneficial using the proper rate, GN-5. SDG&E witness E. E. Brown states, "SDG&E elected to use G-61 ... because if the contract made sense using G-61, it would, in fact, make substantially more sense based on the actual long-term avoided cost savings using GN-5. SDG&E's conservative approach was an effort to increase the likelihood that the contract would be economic if entered into, even if some reasonable expectations did not materialize." (Exhibit 46 at p. A-21.)

SDG&E further argues that GN-5 is the proper rate to use in evaluating the economics of long-term power purchase contracts, since it reflects the costs of maintaining and improving the gas system, which is a continuing long-term effort. The gas that is avoided by the long-term contract reduces the demands that would otherwise be placed on the gas system over the long term. Gas system planning can reflect this with lesser or deferred improvements and resulting lower costs.

DRA argues that G-61 is the appropriate rate because it is the rate used by SDG&E for dispatch. DRA also argues nothing in the record supports SDG&E's claim that it knew GN-5 was the appropriate rate to use. DRA notes that the demand charge of GN-5 is not totally avoidable, since GN-5 is based on G-61 which includes a monthly capacity charge to SoCal. Since the total capacity charge is fixed, reducing the volume of gas taken from SoCal will increase the monthly capacity charge per unit of gas for the remaining gas.

DRA also argues that SDG&E's gas facilities are in place and will not be affected by the PGE contract, since no major system upgrade is planned.

Finally, DRA argues that the decisions cited by SDG&E are not applicable, since they deal with QFs, which are entitled to preferential gas rates.

We observe that SDG&E presented no compelling evidence that it intended to later adjust the evaluation

of the contract by using GN-5 rates. No documentation was offered, although witnesses Cotton and Brown testified that they believed the differential between G-61 and GN-5 was approximately 15% to 20% at the time of negotiations.

It would seem more straightforward for SDG&E to have used the proper avoided gas rate rather than adjust the evaluation later. However, we conclude that the intent of SDG&E is not the issue here. Rather, the issue is the rate that SDG&E should have used based on what it knew or should have known at the time, consistent with the standard of review discussed earlier.

We addressed this issue with regard to avoided gas cost for purchases from QFs in D.82-12-120, as SDG&E notes. We believe that the same principles apply here. Long-term contracts and QFs are equivalent in their ability to reduce the need for long-term gas and facilities. Perhaps a shorter term contract should not use GN-5 rates, but the PGE contract, in our view, is clearly long enough to affect the gas facilities costs, whether or not any major upgrades are planned. Over the 28-year period of the contract, SDG&E will almost certainly incur some facilities costs, which should be reduced by the contract, as compared to not having the contract.

DRA argues that G-61 includes a monthly capacity charge from SoCal which is unavoidable and, therefore, the GN-5 capacity charge, which includes the G-61 capacity charge, cannot be avoided. We disagree. If SDG&E takes less gas from SoCal over the long term, SoCal will attempt to use the difference in capacity to serve other customers. In doing so, those customers, and not SDG&E, will pay the capacity charge for that change of capacity.

DRA's argument that QFs have preferential rates does not apply here. GN-5 is not necessarily the rate QFs pay for gas; rather it is the cost used for gas that is displaced by utility purchases from QFs.

Finally, we have no evidence that the GN-5 rate subsidizes SDG&E's gas department at the expense of the electric customers.

We conclude that GN-5 is the proper gas rate to use in considering the cost of gas displaced by the contract.

(b) Economy Energy

SDG&E argues that over the contract period there will be significant amounts of economy energy available to meld with or displace Boardman energy. SDG&E has estimated amounts of economy energy in its benefit analyses.

DRA, on the other hand, argues that this economy energy is speculative, and subject to uncertainties such as transmission availability and possible energy emergencies called by the governor of Oregon, which would prevent energy exports to California.

We believe that over the term of the PGE contract there will be significant opportunities to substitute surplus hydroelectric energy and possibly other types of surplus energy that are less costly than Boardman energy. This would not likely be significantly impacted by unavailability of transmission capacity or possible energy emergencies, which would be expected to be short term. This contract provision, in our view, offers a significant opportunity for savings. Whether or not there will be a significant surplus of capacity in the Northwest over the period of the contract, we believe there will be significant opportunities for SDG&E to purchase economy energy during off-peak periods and seasons.

We conclude that a mix of Boardman and economy energy should be used in evaluating the contract economics.

(c) Fuel Diversity

Both SDG&E and DRA agree that fuel diversity is a benefit, but neither party attempts to assign a value to it.

We note that this contract, based on the Boardman coal plant, offers the fuel diversity that SDG&E seeks.

However, we agree with DRA that the value of fuel diversity cannot be reasonably quantified, especially considering the uncertain future of gas and oil prices relative to coal. The benefit of fuel diversity is somewhat of an insurance policy against rapid fuel price increases, as compared to relying primarily on gas and oil. The benefit is not readily quantifiable.

We conclude that any potential benefits of fuel diversity should not be included in our analysis.

(d) Load Shaping

SDG&E argues that the load shaping provision of the contract adds to the benefits of the contract by reducing the need for less efficient resources, such as peaking units, to follow load.

DRA includes load shaping in its category of those contract provisions that are probabilistic, and argues that any potential benefits should be ignored in a conservative analysis.

We disagree with DRA's position on benefits of provisions of this type. DRA characterizes its position as conservative. We believe it is unrealistic. A beneficial provision should not be disregarded any more than a negative provision should be disregarded in evaluating a contract. There may be disagreement between parties on the level of benefits, positive or negative, but in our view, disregarding the effects of contract provisions of this type is not realistic.

We conclude that load shaping is a tangible benefit to the contract that will result in ratepayer savings.

(e) Storage Capacity

Storage capacity allows energy to be stored from low cost energy periods, to be used later during periods of

high cost energy. This provision allows 50 MW of firm storage for 10 years beginning January 1, 1989.

DRA includes this provision in its category of probabilistic features that should not be considered in a conservative evaluation of benefits.

Similar to our conclusion about load shaping, we conclude that this provision should be considered, since it will allow low cost energy to displace higher cost energy, thereby resulting in savings to ratepayers over the duration of the contract.

(f) Good Performance Effect on QFs

SDG&E argues that there is a reasonable probability that this provision may add to the benefits of the contract.

While this is a potentially beneficial provision, we agree with DRA that any potential benefit from it is too speculative to use in determining the economics of the contract. In order to achieve a 95% capacity factor that SDG&E's benefit of $11 million benefit is based on, substantial economy energy may need to be purchased in addition to Boardman energy. While this high level is possible, we believe that it may be optimistic. We encourage SDG&E to pursue this benefit, but we conclude that the viability of the PGE contract should not be dependent on this uncertain outcome.

We will disregard any potential benefit of this provision in our analysis.

(g) Post-2007 Transmission Availability

SDG&E believes that it will be able to retain entitlement to the Pacific Intertie after 2007. The Federal Energy Regulatory Commission would have to act before SDG&E would lose its entitlement, and the effect on SDG&E's ratepayers would be substantial.

DRA argues that the post-2007 conditions relative to SDG&E's transmission entitlement are so uncertain that one cannot reasonably assume that the entitlement, or any portion of it, will continue. Similarly, there is no way of knowing whether a market would exist at that time, which would allow SDG&E to sell the balance of the contract to another electric utility.

We conclude that DRA's concerns are valid. Because of the uncertainty, we believe that the PGE contract benefits should not be dependent on unpredictable post-2007 conditions. If SDG&E has no post-2007 transmission entitlement, there is no way of reliably knowing whether there would be a market for the balance of the PGE contract.

We observe that even SDG&E has considered the possibility that it will have no post-2007 transmission entitlement, and that it may be unable to sell the remainder of the contract. SDG&E has quantified this impact under various assumptions regarding its ability to sell off its remaining transmission entitlements and capacity and energy.

In evaluating the contract, we will use the conservative assumption that SDG&E will have no post-2007 transmission capability, and that it will not be able to sell the remainder of the PGE contract benefits.

(h) Coal Savings

SDG&E argued that there was a reasonable possibility that this benefit could occur, with active ongoing negotiations taking place between PGE and AMAX.

DRA pointed out that despite several years of the negotiations, no firm benefits had yet been achieved. This attested to the uncertainty of any potential benefit in coal cost savings.

The evidence presented prior to the additional hearings suggested that there was only a slight chance that significant coal savings could be achieved. SDG&E itself

assigned only a 30% probability of success. The viability of the contract should not depend on such as uncertain benefit. We believe the effect of renegotiation should be considered as an aspect of the administration of the contract, since the renegotiation culminated several years after contract signing.

(2) Summary of Criteria

(a) GN-5 is the appropriate avoided gas rate.

(b) A mix of economy energy and Boardman energy should be assumed.

(c) Fuel diversity is a benefit that cannot be reasonably quantified.

(d) Load shaping is a quantifiable benefit.

(e) Storage capacity is a quantifiable benefit.

(f) The good performance effect on QF pricing is too speculative a benefit to be credited to the contract.

(g) It is reasonable to conservatively assume that SDG&E will have no transmission entitlement after 2007 and that it will be unable to sell the remaining portion of the contract to another utility.

(h) The possibility of reduced coal costs resulting from renegotiations between PGE and AMAX was too speculative to assume in evaluating the PGE contract.

(3) Quantification of Benefits

(a) Initial Phase III Hearings

Exhibit 51 most closely corresponds to our assumptions; it assumes no need for capacity in 1989, no post-2007 transmission entitlement and no sale of the remaining contract. However, to properly correspond to our assumptions, the table must be modified as follows:

- Eliminate column I- coal savings.
- Eliminate column N- savings from good performance.

Table 3 summarizes the results:

TABLE 3

EXPECTED VALUE SAVINGS OF PGE CONTRACT IF NO 1989 CAPACITY NEED, NO POST-2007 TRANSMISSION, NO POST-2007 SALE

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		----- INCREMENTAL PRESENT VALUE SAVINGS TO BASE--$1000 -----												
YEAR	PV TOTAL BASE SAVINGS	SHAPED	HIGH GAS/OIL	LOW GAS/OIL	HIGH DISTL	LOW DISTL	W/O PT&L	COAL SAVINGS	EXPECTED PRESENT VALUE SAVINGS	PV GN-5 MARK-UP SAVINGS	MINIMUM EXPECTED PRESENT VALUE SAVINGS	PV SAVINGS FROM STORAGE CAPACITY	PV SAVINGS FROM GOOD PERFORM	MAXIMUM EXPECTED PRESENT VALUE SAVINGS
1986	5017	0	1711	-2313	0	0	0	0	4866	0	4866	0	0	4866
1987	1841	0	1008	-1316	0	0	0	0	1764	0	1764	0	0	1764
1988	2318	0	1131	-1335	0	0	0	0	2267	0	2267	0	0	2267
1989	-6658	2262	3500	-1990	2255	282	140	0	-4006	3668	-338	3974	0	3636
1990	-2828	1556	4190	-2749	2062	240	186	0	-729	3204	2475	4424	0	6899
1991	-3475	1518	3941	-2564	1330	81	394	0	-1558	2798	1240	3864	0	5104
1992	-2472	1318	3959	-3143	1107	-149	337	0	-972	2444	1472	3374	0	4846
1993	-3137	1311	4241	-3417	1206	-410	130	0	-1763	2134	371	2947	0	3318
1994	-2460	1396	3939	-3178	772	-284	178	0	-1100	1864	764	2574	0	3338
1995	-3889	1373	4356	-3529	612	-525	248	0	-2601	1628	-973	2248	0	1275
1996	-3220	2461	3880	-3281	454	-626	380	0	-1235	1422	187	1963	0	2150
1997	-2180	1217	3933	-3313	321	-795	114	0	-1247	1242	-5	1715	0	1710
1998	-1698	1356	3888	-2969	246	-807	385	0	-505	1084	579	1498	0	2077
1999	-637	1199	4033	-3237	173	-910	331	0	351	947	1298	0	0	1298
2000	293	837	4206	-3673	86	-937	158	0	863	827	1690	0	0	1690
2001	986	1074	4210	-3275	-21	-983	314	0	1845	722	2567	0	0	2567
2002	1453	1032	4211	-3473	-83	-1083	529	0	2280	631	2911	0	0	2911
2003	1622	1110	3980	-3547	-121	-1068	281	0	2322	551	2873	0	0	2873
2004	1792	1074	3736	-3321	-144	-1026	223	0	2444	481	2925	0	0	2925
2005	2299	1286	3881	-2768	-162	-1086	545	0	3384	420	3804	0	0	3804
2006	2544	1269	3830	-2732	-159	-1071	538	0	3614	367	3981	0	0	3981
2007	2751	1252	3780	-2696	-157	-1057	531	0	3807	321	4128	0	0	4128
2008	-2170	0	0	0	0	0	0	0	-2170	0	-2170	0	0	-2170
2009	-1895	0	0	0	0	0	0	0	-1895	0	-1895	0	0	-1895
2010	-1655	0	0	0	0	0	0	0	-1655	0	-1655	0	0	-1655
2011	-1446	0	0	0	0	0	0	0	-1446	0	-1446	0	0	-1446
2012	-1263	0	0	0	0	0	0	0	-1263	0	-1263	0	0	-1263
2013	-1103	0	0	0	0	0	0	0	-1103	0	-1103	0	0	-1103
TOTAL	-19272	25900	79543	-63819	9775	-12214	5948	0	4559	26755	31,314	28581	0	59,895

The minimum expected present value ratepayer savings are $31.3 million, with a maximum expected savings of $59.9 million. Under the minimum savings column L, only three years have a negative savings, except for the post-2007 years which must be negative due to the assumption that no transmission would be available and no sale would be made. Under the maximum savings column O, only the post-2007 years have negative savings.

We now look at the decision tree analyses relative to our assumptions. Figure 1 without the coal cost savings would result in an expected value savings of $4 million less, or $47 million.

If we further adjust Figure 1 to reflect a greater probability of lower fuel prices, the expected savings decrease further. For example, if we assume that the probability of the lower prices is 50% instead of 25%, that the mid-range and high range probabilities are 25% each, the expected value savings further reduce by $19 million, to $28 million.

If we then compare these expected savings levels to the contract cost, we can determine the approximate percentage of savings. According to SDG&E estimates, the cost of the contract is approximately $240 million. (Ex. 44, Att. 6, Tab 3c.)

The savings discussed above are somewhat greater than 10% of the $240 million cost; $28 million is about 12%. The $47 million savings estimate is much greater than the $31 million we determined earlier, which is about 13% savings.

Next, if we consider the above scenario relative to outcomes on the decision tree, we find that we now have 36 permutations, or half the number SDG&E had when assuming a coal cost savings branch. Of the 36 permutations, 22 are now positive, 14 negative. The savings range from a positive $160 million to a negative $80 million.

(b) Additional Evidence on Renegotiated Coal Costs

At the additional hearings SDG&E provided evidence on the changed economic benefits of the PGE contract due to the renegotiated lower coal costs. SDG&E also provided additional evidence on the decision-making process prior to entering into the PGE contract.

(1) Economic Benefits

SDG&E was not able to calculate the economic changes on a year-by-year basis since the earlier computer data was not retained. Instead, SDG&E calculated the incremental change over the 10-year period, 1990 through 1999. This is the period of concern to DRA, because of its base case determination of negative savings for the entire period. SDG&E calculates a total economic benefit improvement of $56.8 million, which reduces DRA's calculated negative savings for the 10-year period from $58.2 million to a $1.4 million. SDG&E does not agree with DRA's base case, but nevertheless shows that even under its assumptions, the benefits for the 10-year period are only slightly negative. Over the contract duration the benefits are clearly positive, as they are for more realistic scenarios, in SDG&E's view.

(2) Decision Making Prior to Contract

SDG&E also presented additional evidence on the events leading up to the decision to enter into the contract with PGE, perhaps believing the record had not been adequately developed in this area at the earlier hearings. The additional evidence presented nothing new; rather it amplified the earlier testimony with regard to quantifying the impact of the late 1985 fuel price drop and future price uncertainty.

H. Conclusion

In a long-term contract of this type, it is desirable to have terms that insure, as much as possible, that economic benefits will result under all foreseeable conditions. Such terms may not

always be achievable. The selling utility has certain minimum requirements, and other parties may be competing for the resource or contract. As a result, a party may not be able to negotiate a contract that will assure ratepayer benefits under all conditions. The purchasing utility should attempt to minimize the risk that the contract will have negative benefits.

We believe that SDG&E was successful in countering the effect of lower gas and oil prices in late 1985 by negotiating additional beneficial provisions in the contract.

DRA correctly points out that the PGE contract does not have an escape clause. We agree that this is a desirable feature that should be negotiated when practical. However, when the basis of the contract is a sale/leaseback of an interest in a new powerplant, demanding such a provision could prevent the culmination of the contract. We find that under these circumstances it is reasonable to not have an escape clause when the overall contract appears beneficial to ratepayers.

We believe the PGE contract even before the reduced coal costs were achieved would benefit the ratepayer under most conditions, most likely with ratepayer savings of $28 million or more, which is 12% of the contract costs. We believe our analyses are realistic and conservative. In addition to the above likely benefits, if some of the conditions that we judged uncertain occur, the benefits should increase. For example, SDG&E may be able to continue its entitlement to the Pacific Intertie, in whole or in part. If that were to happen, the benefits to ratepayers would be expected to increase by $9 million or more. The good performance effect on QF pricing could further increase benefits. While achieving any of these benefits is uncertain, all are possible, as demonstrated by the significant reduction in coal costs achieved through renegotiation.

Considering these qualifications, we agree with SDG&E that the PGE contract will provide ratepayer benefits under most

conditions. We conclude that SDG&E was prudent in negotiating the contract, and that no disallowances are appropriate.

We note that although DRA believes that the contract is not beneficial, it finds that operations under the contract during the two review periods were reasonable, with average costs well below avoided cost.

In summary, we conclude that SDG&E acted reasonably in signing the PGE contract, and administering it during the record periods under review.

Comments

Comments were filed by SDG&E and DRA. Reply comments were filed by SDG&E.

SDG&E correctly points out that the reference to our determination that SDG&E had no need for capacity until 1990 at the earliest is incorrect for use in evaluating the PGE contract. That determination was made later, and is based on the knowledge that the PGE, and PNM contract had been consummated. The decision has been corrected in this regard.

DRA requests that the Conclusion of Law stating that the Commission should not adopt potential disallowances for future record periods be deleted, since it may cause problems in future proceedings. We agree, and have deleted it.

Other minor typographical errors have been corrected.

None of the changes resulting from the comments are substantive.

Findings of Fact

1. Phase I of this proceeding resulted in D.88-12-093 which set electric revenue requirements, rates, and QF pricing levels for the forecast year ending October 31, 1989.

2. Phase II resulted in D.89-08-028 which addressed the reasonableness of SDG&E's fossil fuel and nuclear expenses and its payments to QFs, for the record period of May 1, 1987 to April 30, 1988.

3. This Phase III decision addresses the reasonableness of purchased power contracts and expenses during two record periods, May 1, 1986 to April 30, 1987, and May 1, 1987 to April 30, 1988, except for payments to qualifying facilities which were addressed in Phase II.

4. SDG&E requests that the reasonableness of the TEP contract, which is in arbitration, be addressed in SDG&E's 1990 ECAC reasonableness review.

5. The parties agree that SDG&E reasonably administered the contracts with WWP, PNM, CFE, and EMWC during the period under review.

6. The only disputed issue in Phase III is the reasonableness of SDG&E entering into the PGE contract.

7. The PGE contract provides for 75 MW transmission service to the Malin substation from November 5, 1985 through December 31, 2013, and 75 MW power from January 1, 1989 through December 31, 2013, based on the Boardman Unit 1 coal plant.

8. The agreement that allows SDG&E 7% of the investor-owned utilities' share of the Pacific Intertie capacity expires July 31, 2007.

9. SDG&E negotiated the PGE contract over a 20-month period ending November, 1985.

10. SDG&E negotiated additional contract provisions after the fuel price drop occurred in late September 1985.

11. D.89-02-074, as modified by D.89-09-091, determined that in 1985, SDG&E had no need for capacity until 1990 at the earliest.

12. The PGE contract provides for capacity beginning January 1, 1989.

13. SDG&E negotiated and entered into the PGE contract and the PNM contract at nearly the same time.

14. Schedule G-61 sets the rate SDG&E pays for gas from SoCal, which includes a SoCal fixed capacity charge and a commodity rate.

15. Schedule GN-5 sets the gas rate SDG&E's gas department charges its electric department. The rate consists of a SDG&E capacity charge in addition to the G-61 rate.

16. A contract's benefits should be evaluated on a life cycle basis, considering all of the contract provisions.

17. SDG&E's purchases under the PGE contract during both record periods were reasonable, and their costs were well below SDG&E's avoided costs.

18. PGE renegotiated its coal contract with AMAX and the rail transportation costs for coal, with new contracts executed on June 21, 1990. SDG&E shares the costs and benefits of the renegotiations.

19. The benefits of the renegotiated coal costs were achieved after SDG&E signed the PGE contract and were not assured at the time of contract signing.

20. The PGE contract is expected to most likely provide ratepayer benefits of 12% or more of the contract's costs. Negative benefits would result under certain conditions.

21. The PGE contract does not have an escape clause to allow termination or renegotiation of the contract if it becomes uneconomic to SDG&E.

Conclusions of Law

1. SDG&E was reasonable in administering the WWP, PNM, CFE, and EMWC contracts during the periods under review.

2. The reasonableness of the TEP contract should be addressed in SDG&E's 1990 ECAC reasonableness review.

3. The appropriate standard of review for utility contracts considers the soundness of the utility's decision making process, the options considered, and whether the course of action decided on fell within the bounds of reasonableness, even if it did not result in the best possible outcome.

4. GN-5 is SDG&E's long-term avoided gas cost.

5. SDG&E acted reasonably in its negotiations with PGE after the fuel price decline late in 1985.

6. SDG&E's contract with PGE will most likely be beneficial to ratepayers. SDG&E was reasonable in entering into the PGE contract.

7. The Commission should not disallow any ECAC expenses for the two record periods under review.

O R D E R

IT IS ORDERED that:

1. San Diego Gas and Electric Company's Phase III operations under the Energy Cost Adjustment Clause were reasonable for the record periods May 1, 1986 to April 30, 1987, and May 1, 1987 to April 30, 1988.

2. This proceeding is closed.

This order becomes effective 30 days from today.

Dated November 20, 1991, at San Francisco, California.

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

Commissioner John B. Ohanian, being necessarily absent, did not participate.

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

NEAL J. SHULMAN, Executive Director