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Decision 93-06-092 June 23, 1993

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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| Application of San Diego Gas & Electric Company to Establish an Experimental Performance-Based Ratemaking Mechanism. (U 902-M) | ) ) ) ) | Application 92-10-017 (Filed October 16, 1992) |

(See Appendix E for appearances.)

OPINION ON PHASE ONE INCENTIVE PROPOSALS:
GAS PROCUREMENT; ELECTRIC GENERATION & DISPATCH

# I N D E X

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## OPINION ON PHASE ONE INCENTIVE PROPOSALS: GAS PROCUREMENT; ELECTRIC GENERATION & DISPATCH

### 1. Summary

In today's decision, we approve San Diego Gas & Electric Company's (SDG&E's) proposal for an experimental "performance-based ratemaking" (PBR) mechanism, which will apply to natural gas procurement activity by SDG&E's gas department and will largely govern our determination of revenue requirement in setting SDG&E's gas commodity rates during the period of the experiment.[1]

We also consider SDG&E's and other parties' proposed experimental PBR mechanism for SDG&E's electric generation and dispatch (G&D). We reject this proposal, but we describe certain modifications that, if SDG&E accepts them, would enable us to approve the mechanism on an experimental basis.

### 2. Procedural History

SDG&E's original goal in this application was to achieve a comprehensive and integrated restructuring of its utility operations in gas procurement, G&D, and long-term competitive electric resource procurement. SDG&E has since indicated it will also propose a PBR mechanism for base rates, however, that mechanism and the PBR mechanism for electric resource procurement are scheduled for our consideration in Phase Two of this proceeding. Phase One consists solely of the proposals for gas procurement and electric G&D.

#### 2.1 Collaborative Process

SDG&E, with our encouragement, has pursued this application through consultation rather than litigation. SDG&E has engaged in extensive discussions with the other parties to explain

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1 See Appendix A for explanation of each technical acronym or other abbreviation used in today's decision.

and, where appropriate, to refine its proposals. Many of these discussions occurred in intensive workshops held in January and February 1993. The January workshops were professionally facilitated. Workshop reports, previously circulated for review by the participants, have been received in the record of this proceeding. SDG&E also responded quickly to data requests, and we have also received these responses in the record. The proceeding was submitted with receipt of late-filed exhibits on April 22.

2.2 Standards for Experimental Proposals

To assist and focus this collaborative process, the Assigned Commissioner and Administrative Law Judge (ALJ) issued a joint ruling on January 6, 1993. The joint ruling explains the relation of SDG&E's experimental PBR proposals to our generic investigation of incentives in energy regulation (I.90-08-006), and suggests standards for judging SDG&E's proposals. We affirm this ruling and apply its approach in today's decision. We therefore review pertinent portions of the ruling.

Because this is an application, SDG&E "may reasonably insist on retaining essential characteristics of the experiment for which it has sought approval." (Joint Ruling, p. 2.) We bear this in mind, particularly in connection with the G&D proposal, which is unacceptable to us in its current form. We offer SDG&E certain options, as detailed in Section 6.1 below.

Also because of the nature of this proceeding, "SDG&E need not show that its proposals...are superior to all other conceivable experiments that parties could design. SDG&E should show, however, that the experiment it proposes has reasonable potential for improving on existing regulation, without unreasonable jeopardy to regulatory goals if the experiment proves disappointing." (Id.)

Specifically, the ruling (pp. 2-3) requires SDG&E to demonstrate the following:

"1. That the experiment reasonably responds to the Commission's ratemaking and other relevant regulatory goals (e.g., safe, reliable, environmentally sensitive service at reasonable, nondiscriminatory rates).

"It is particularly important for SDG&E to explain how its proposal achieves an appropriate risk/reward balance and reasonably responds to regulatory goals that are potentially in conflict (e.g., gas procurement that results in both low and stable prices to the utility customer). SDG&E should also discuss the alternatives it considered and why it prefers its proposal....

"2. That the experimental design enables the Commission to judge the success of the experiment when it is over.

"Many experiments provide no useful information because of flaws in the experimental design. The experiment should have a protocol, established at the outset, with criteria for success or failure and provisions for data gathering at appropriate times during and after the experiment. The criteria should be objective/quantitative to the extent possible and subjective/qualitative where appropriate. The criteria must also be able to screen out exogenous factors....

"3. That the experiment does not in itself create unreasonable risks.

"The Commission must be able to halt the experiment promptly if it goes awry. For the Commission to have this ability, the experimental design must include monitoring and evaluation procedures while the experiment is ongoing as well as at its conclusion.

"The Commission must also be able to effect a smooth transition to whatever regulatory regime it adopts for SDG&E at the end of the experiment...."

## 2.3 Development of Joint Testimony

Early in the collaborative process, a broad consensus emerged among the parties in support of SDG&E's gas procurement PBR mechanism essentially as originally proposed. By the end of the workshops, only one gas procurement issue remained, and the parties agreed to address this issue through briefing only.

In contrast, the parties were unable to resolve in the workshops many issues concerning the G&D mechanism. The bulk of these issues relate to the division of risks under that mechanism.

Under SDG&E's original proposal, SDG&E divided into two roughly equal parts the electric service cost categories we address in our Energy Cost Adjustment Clause (ECAC) proceedings. A benchmark would be established for one part of these cost categories, and SDG&E would share in the savings or losses, depending on how its actual performance for those categories compared to the benchmark. The other part of ECAC costs, however, would be "trued up," such that SDG&E would bear no risk for their recovery, on the rationale that the level of actual expenditure for those cost categories was driven by exogenous factors over which SDG&E management could exert little or no influence.

Many parties raised concerns over this division of ECAC cost categories. These concerns generally take two forms. First, parties feel that SDG&E management has some (albeit less than total) control over many of the categories of cost subject to true up, so that SDG&E should have some incentive (risk of loss and opportunity for gain) regarding those categories. Second, parties object in various ways to risk allocation under the proposal, i.e., the risk shifted to ratepayers through true ups may be disproportionate to the risk SDG&E would assume for costs subject to the benchmark.

The assigned ALJ scheduled hearings for the G&D issues, but negotiations continued and hearings were delayed (as requested by the parties) to allow the parties to develop a joint position on

the disputed portions of the G&D mechanism. Eventually, all but one party joined SDG&E in supporting a substantially modified G&D mechanism. As we discuss in the following sections, we cannot approve the modified G&D mechanism. Although the modifications improve SDG&E's original proposal in some respects, we continue to have problems with the allocation of risk, and the joint position inappropriately sacrifices one of the prime objectives of incentive regulation.

## 3. Analysis of the G&D Mechanism

### 3.1 Summary

We reject SDG&E's revised G&D proposal. However, we provide adaptations to the proposal that would make it acceptable on an experimental basis. Specifically, we suggest refinements in the treatment of nuclear generation, and we deny SDG&E's requested treatment of litigation expenses. We also reject both the "Z factor" element in SDG&E's revised proposal and another party's counterproposal that would institute a sharing mechanism similar to the Annual Energy Rate (AER).

### 3.1.1 Balancing Account vs. Incentive Regulation

Under the Commission's current regulatory program, SDG&E receives balancing account treatment for all generation, dispatch and purchased power costs reviewed during the ECAC proceeding. These include fuel and fuel-related costs for electric operations. "Balancing account treatment" means in essence that SDG&E's actual expenses are recorded, and any overcollections or undercollections resulting from differences between billed amounts and actual expenses are reflected in rates, subject to reasonableness review.[2]

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2 The proposal before us only affects those costs presently considered in ECACs. Base rate revenues, such as depreciation expenses, are not an aspect of the incentive proposals we are considering in this phase.

A long-standing criticism of balancing accounts and their correlative reasonableness reviews is that they do not provide the utility with any positive incentive to control costs subject to such treatment. The utility has only a negative incentive, viz., to perform in a manner that minimizes the potential for disallowance.

The goal of incentive regulation is to provide the positive incentive missing in strict balancing account treatment. Ideally, incentive regulation aligns the interests of shareholders and ratepayers. Ratepayers would no longer have all the gains resulting from skilled management, nor would they bear all the costs resulting from unskilled management.

3.1.2 The Debate over Truing Up

The transition from comprehensive Commission review of cost items, as presently conducted in ECACs, to a limited review of specified items under any of the G&D proposals involves many challenges. One critical tension concerns how the incentive mechanism should treat factors that are partly or entirely beyond the effective control of utility management.

The parties all agree that many areas of utility operation closely reflect the degree of skill shown by utility management, and that a ratemaking treatment providing incentives for skilful performance in those areas makes sense. Such treatment benefits ratepayers, who thereby share in successful cost containment and escape the full impact of managerial mistakes. Such treatment also fairly allocates risks and rewards to shareholders.

Thus, the parties refined but did not change the fundamentals of the incentive portion of SDG&E's original G&D proposal, which is based on a forecast for specified cost categories (the benchmark) and sharing of recorded costs or savings (compared to the benchmark) realized in SDG&E's operations. Major disagreement exists, however, over the appropriate treatment of

those areas of G&D operation where factors beyond management control are presumed to be the primary drivers. The record reveals three approaches to this problem.

SDG&E's original proposal cleanly classifies all G&D cost categories as either subject to the incentive mechanism (through the benchmark) or not subject to any incentive whatsoever. Regarding the latter cost categories, SDG&E's original proposal would have almost entirely insulated the utility from risk, i.e., rate recovery would be allowed for all actual costs, regardless of the level of costs originally forecast.[3] In other words, ratepayers would bear all risks related to these cost categories.

California Cogeneration Council (CCC) believes SDG&E exerts at least some level of control over most of the cost categories left out of the benchmark. CCC therefore reasons that SDG&E ought to bear some level of risk, and have some opportunity for gain, for these categories. To accomplish this, CCC would true up 80% of the costs for these categories but would treat 20% of the costs on a forecast basis. This proposal is similar in concept to the AER mechanism, which we have applied in ECACs but which we have often suspended out of concern for potential impact of exogenous factors, like the recent war in the Persian Gulf.[4]

After long discussion, SDG&E joined DRA, Utility Consumers Action Network (UCAN), Federal Executive Agencies (FEA), and Coalition for Energy Efficiency and Renewable Technologies (CEERT) (collectively, "joining parties") in working out an alternative approach, which includes refinements to both the incentive (benchmark) and true-up portions of SDG&E's original G&D proposal. The alternative approach is clearly a compromise.

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3 Under SDG&E's original proposal, reasonableness review would be eliminated for everything except fuel oil carrying costs.

4 The AER is currently suspended. (See I.90-08-006.)

Unlike the CCC proposal and SDG&E's original proposal, the joining parties further disaggregate the various cost categories left out of the benchmark, and there is no single risk-sharing or ratemaking philosophy that defines their approach. They would preserve certain existing incentive mechanisms, such as the target capacity factor (TCF) for output from the San Onofre Nuclear Generating Station Units 2 and 3 (SONGS 2 and 3). They would reinstate reasonableness review for all cost categories (both those under the benchmark and those trued up) under certain circumstances. They would also institute a new kind of hindsight review, regarding so-called "Z factors," which appears to make the question of what was and was not susceptible to management control perennially subject to after-the-fact determination by the Commission.

For different reasons, we do not endorse either the joining parties' or CCC's G&D proposals. However, we describe certain modifications to the joining parties' proposal that would make the proposal acceptable.

In Section 3.2 below, we address those issues where we differ with the joining parties or seek clarification; we also discuss CCC's proposal, which raises a fundamental philosophical issue in incentive regulation. In Section 3.3, we describe the joining parties' less controversial refinements to SDG&E's original proposal. We generally find these refinements to be useful and approve them for the experiment.

## 3.2 Controversial Elements of the G&D Incentive

The joining parties modify SDG&E's original proposal in many respects. They do not eliminate reasonableness reviews altogether, but the Commission would engage in such review only if SDG&E's measured performance falls outside a 6% range of a defined performance benchmark. This benchmark, as in the original proposal, is based on ECAC forecasts. When recorded costs fall within this 6% range ("deadband"), there is a sharing between

ratepayers and shareholders, under a specified formula, of costs or savings achieved by SDG&E.

Also as in the original proposal, the benchmark does not cover all costs; certain cost categories essentially receive balancing account treatment, i.e., forecast costs are trued up to actual costs for ratemaking purposes. However, the joining parties modify the truing up, e.g., by retaining the TCF. (See Appendix B for detailed description of the sharing formula and other aspects of the joining parties' G&D proposal.)

The most significant change, from our perspective, is the joining parties' recommendation to complicate the performance benchmark by applying "Z factors" to make after-the-fact adjustments to the benchmark established in the ECAC forecast. We find such after-the-fact adjustments are at odds with our concept of incentive regulation.

3.2.1 Z factors

The joining parties define Z factors as "limited exogenous ECAC costs [that are] clearly beyond SDG&E's control." They do not give much detail, other than to say that the impact of a Z factor must be at least $50,000 on SDG&E's costs, that the impact on those costs could be positive or negative, and that the Z factor must not "compensate" for external events already reflected in the benchmark. (Presumably, this would require us to examine, e.g., whether and to what extent the possibility of a given "external event" had been taken into consideration in the original ECAC forecast. Such examination could be difficult, since elements of ECAC forecasts are often stipulated to by the parties, and the record might not disclose either the range of possible variation or potential external events they were assuming.)

Finally, the joining parties give a few examples of what would be a Z factor (such as enactment of a federal BTU tax) and what would not (such as "depreciation changes"). Our examination

of these examples does not disclose the principles behind the joining parties' classification.

CCC notes the introduction of Z factors further diminishes the relevance of the ECAC forecast. CCC also criticizes the Z factor testimony for lack of specificity on the criteria or procedures that might be used in Z factor determination and measurement. CCC believes the Z factor methodology lacks sufficient coordination with the proposed truing up provisions, so that there is a potential for double counting.

The inclusion of Z factors renders the joining parties' G&D mechanism unacceptable to us. We entertained this application for a PBR experiment with the understanding, as represented in the application, that SDG&E was trying to limit hindsight review and simplify the regulatory process. We find these goals reasonable. The joining parties, however, would retain reasonableness review in certain circumstances and would add a new after-the-fact procedure that promises to be both complex and litigious.

We expect Z factors could well influence utility management to make decisions based on what is easiest to defend in the regulatory arena, not on what works best in the marketplace. This undesirable regulatory overlay was one of the chief reasons motivating SDG&E's original proposal. The joining parties would not eliminate this feature of this status quo; if anything, their proposal would exacerbate it.

We also do not see any assumption of risk by SDG&E that might justify tampering with the benchmark through Z factors. SDG&E does agree in the joint testimony to be subject to the TCF, whereas SDG&E's original proposal would basically shift all SONGS 2 and 3 risks to ratepayers; however, SDG&E is only agreeing to bear a risk currently assigned to it, not a new risk. Under the joining parties' proposal, SDG&E assumes greater risk (compared to the status quo) regarding cost elements subject to management control, and substantially diminished risk regarding cost elements largely

outside management control. This distribution of risk seems to maintain or even improve the risk/reward balance; it certainly does not justify a new procedure designed to mitigate SDG&E's risk for cost elements concededly susceptible to management control.

We recognize, of course, that external events can influence cost elements that are normally manageable. But the parties have recourse to our petition for modification procedure if something happens that would render the incentive mechanism unreasonable. If an external event occurs that clearly, uncontrollably, and massively affects the benchmark or other crucial aspect of the experiment, we would take remedial action, or even halt the experiment. What we decline to do, however, is to pick over the preceding year's events to debate which events were "exogenous" and had at least a $50,000 impact on benchmarked costs.[5]

We acknowledge that prospective Z factors are a feature of our New Regulatory Framework (NRF) for certain telecommunications utilities. The NRF is a more sweeping reform than the experiment under consideration here. The joining parties do not analyze NRF, and we decline to extrapolate Z factors for use here, on a retroactive basis, without a showing that the same risk/reward considerations apply.

3.2.2 CCC Proposal

CCC suggests that SDG&E, under its G&D proposal, would have no incentive to accurately forecast non-benchmark costs in ECACs, or to seek to improve its cost control for those categories,

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5 The prospect of some form of new national energy tax, and its potential impact on the PBR mechanism, seems a principal concern behind the Z factor proposal. We would allow SDG&E, if such a tax were enacted, to seek via advice letter filing our authorization to establish an appropriate memorandum account to ensure appropriate tracking of any impacts.

because they would be "trued-up" to actual expenditures. CCC argues that ECACs would become strategic exercises, with careful and vigorously debated forecasting for the benchmark cost categories, but possible "gaming" of forecasts of non-benchmark categories.

CCC's particular concern is with SDG&E's incremental energy rate (IER), which is an element in the formula for computing SDG&E's energy payments to certain independent power suppliers. CCC (which represents such suppliers) fears that SDG&E would try to understate the IER, in order to reduce those payments. Such understatement presumably would pose no risk to SDG&E, since under SDG&E's G&D proposal the utility would incur no loss if it failed to meet or beat the projected IER.

CCC's proposal gives SDG&E a stake in the ECAC forecast, and more generally an incentive to control those costs that fall outside the benchmark, by excluding a portion of such costs from true up. CCC proposes that 80% (rather than 100%) of SDG&E's non-benchmark costs be trued up to actual values. The remaining 20% of non-benchmark costs would be based entirely on the Commission's adopted ECAC forecast for SDG&E, with no true up.

The CCC proposal is a logical alternative to SDG&E's original G&D proposal. For CCC, incentive regulation means the utility should bear some risk for all costs incurred in regulated activities. For SDG&E, incentive regulation means putting the utility at risk for costs that the utility can manage effectively but imposing no risk for costs deemed beyond management control.

These proposals are philosophical opposites. Neither proposal is clearly right or wrong. Probably no category of cost is wholly beyond management's ability to influence, but that concession does not mean we also have to accept the conclusion that the utility must bear some level of risk for everything. SDG&E might argue that efficiency is best served by having ratepayers bear <u>all</u> the risk for some kinds of activity--that forcing the

utility to bear risks it has little ability to mitigate eventually raises its cost of capital, which cost increase in turn is passed on to ratepayers.

We do not have to choose between these philosophies at this time. SDG&E has indicated that it would not pursue the G&D experiment if modified per the CCC proposal. This proceeding is an application by the utility, not a generic investigation begun on our initiative. In this setting, we give weight to the utility's desire regarding the kind of experiment it is willing to conduct.

We also note that accepting CCC's proposal would only fuel the joining parties' arguments in favor of Z factors, which we rejected earlier. Our experience in frequently suspending the AER mechanism, which CCC's proposal resembles, shows that insisting on utility sharing of risks in the face of events like the Persian Gulf War is simply not tenable as a practical matter. What we want is a PBR experiment designed to proceed with minimal regulatory intervention. Adopting Z factors or the CCC proposal would make such intervention more likely than not.

We acknowledge that ratemaking of all kinds, whether traditional or PBR, requires fair forecasting, i.e., forecasts that are not skewed high or low but are equally likely to err on either side. Probably any forecasting exercise presents some opportunities for gaming, but we do not see any unusual opportunities in the G&D mechanism, as modified today. CCC will certainly participate in ECACs, which should help to ensure reasonable IER forecasts. We also suspect the IER could affect some cost projections that are part of the benchmark, so CCC has not established its underlying thesis, namely, that SDG&E will always try to lowball the IER forecast.

### 3.2.3 Litigation Gains and Expenses

The joining parties agree that incentive mechanisms should reflect the impact of SDG&E's proceeds from litigation awards and settlements. Thus, any settlements and awards

pertaining to fuel and fuel-related costs for electric operations and costs of purchased power should offset SDG&E's G&D cost results, in effect sharing such gains between ratepayers and shareholders. We approve this treatment of settlements and awards, which formerly occurred through operation of the now-suspended AER mechanism. (See D.93-04-037, slip op., pp. 29-33.) Sharing should apply to funds recovered from legal activities SDG&E initiates during the G&D experiment.[6]

The joining parties do not agree on whether SDG&E should recover litigation expenses beyond those projected and approved as part of SDG&E's base rates in general rate cases (GRCs). The joining parties agree instead that SDG&E should seek rate recovery of additional expenses, if any, on a case-by-case basis, bearing whatever burden of proof the Commission establishes. SDG&E witness Pak acknowledges that SDG&E "would have the burden of proving that those expenses should be netted [against litigation gains] and are not recovered elsewhere" (R.T. at p. 44, lines 3-5.)

We reject this proposal for two reasons. First, SDG&E under today's decision has a stronger incentive (because more gains will be shared) than it had under the AER mechanism and traditional ECAC to use whatever cost containment strategies--including litigation--seem most promising. Adopting the proposal would effectively induce SDG&E to prefer litigation, since SDG&E could seek rate recovery if its legal expenses went over budget. Second, we continue to believe that administrative and general expenses, which include legal expenses, are most efficiently set through test

6 Although the joint testimony (Exhibit 22) refers only to the G&D experiment in connection with litigation gains, the same incentive to lower costs through vigorous assertion of contract rights, using litigation where appropriate, makes sense for gas procurement. Our approval of this treatment of litigation gains applies to both of SDG&E's incentive mechanisms.

year ratemaking in GRCs. (Cf. D.93-04-037 at p. 29.) We decline to change this policy, particularly where the incentive mechanisms approved today should handle the alleged problem with the policy.

3.2.4 TCF and Nuclear Operations

In response to SDG&E's original request to eliminate both the TCF and reasonableness reviews of SONGS 2 and 3 operations, the joining parties propose to (1) retain the TCF, (2) true up nuclear energy production and expenses, (3) limit reasonableness review of trued-up expenses to situations in which total ECAC costs exceed the 106% cap, and (4) apply incentive treatment to nuclear fuel carrying costs by benchmarking them as forecast in ECAC without truing up. The joining parties also propose to subject SONGS 1 abandonment costs to true up. (SONGS 1, a much older unit than SONGS 2 and 3, has been permanently shut down and is undergoing appropriate retirement procedures. See D.92-08-036, slip op.)

We accept the joining parties' treatment of abandonment costs and, for the most part, of SONGS 2 and 3 costs, but we reject the limitation on reasonableness reviews. Instead, we retain both the TCF incentive procedure and reasonableness review of SONGS 2 and 3 operations, per our current regulatory practice.

As we have already indicated, we accept the basic incentive concept of bifurcating electric utility costs into controllable and noncontrollable elements. For controllable categories, our stated intention is to motivate SDG&E to exercise control over these costs. Running SONGS 2 and 3, like other power plant operations, is one of utility management's primary obligations and a key indicator of management skill.[7]

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7 The accident at Three Mile Island had a short-term impact on all nuclear operators in the United States, as the Nuclear Regulatory Commission required various remedial modifications to

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The fact that SDG&E holds only a minority interest in SONGS 2 and 3 does not justify shifting to SDG&E's ratepayers all or part of performance risks properly borne by shareholders. The joining parties have already accommodated shareholder interests by leaving SONGS 2 and 3 subject to the TCF rather than the more far-reaching incentive provided by benchmarking nuclear output based on the ECAC forecast without true up. A lesser degree of regulatory oversight, as would occur under the joining parties' proposal to limit reasonableness reviews, is unwarranted. (See also our discussion of risk/reward balance in Section 3.2.1 above.)

### 3.3 Other Elements of the Joining Parties' Proposal

The joining parties agreed on many changes to SDG&E's original proposal. The changes, other than those discussed in Section 3.2 above, generally address implementation issues and do not affect the fundamentals of the PBR mechanism. We approve the changes, as discussed below. Our discussion treats only the most notable issues, e.g., modeling methods and assumptions. Appendix B summarizes the complete G&D mechanism.

#### 3.3.1 Economy Energy

SDG&E originally proposed to develop two sets of economy energy cost data: one using a normal hydro year and another using a dry hydro year. Other parties indicated their preferences for modeling of wet, dry, and normal supply and cost data with various modifications to SDG&E's proposal.

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plant practices and equipment. However, the fact remains that many utilities have attained consistently high capacity factors from their nuclear plants, while other utilities have attained consistently low capacity factors. This record indicates that for nuclear, as for other generation technologies, management skill is a critical factor.

The joining parties agree that the forecast benchmark for economy energy should be determined using normal hydro conditions. They stipulate that if the actual hydro conditions as reported by the National Weather Service River Forecast Center in its "May Volume Runoff Adjustment" are "dry" or "wet," an adjustment will be made to the benchmark.

Regarding economy energy imports from the desert Southwest, the joining parties have deleted SDG&E's original recommendation that it be allowed to true up costs and availability of such energy for any month when 20% or more (3200 MW) of Arizona/New Mexico resources are unavailable for 10 days or more. Instead, Southwest economy energy will be benchmarked using the ECAC forecast.

Parties disagree about the methodology to be used in modeling economy energy. While DRA agrees with SDG&E that forecasts of economy energy purchases should be determined using the relationships between the price/quantity of economy energy and the utility's cost of marginal fuel, DRA prefers a price block methodology over SDG&E's proposal, at least until regional supply and simultaneous imports can be modeled. UCAN believes that regression equations like those used by SDG&E can capture price relationships in the aggregate, but agrees with DRA that its price block model is the better model to use at this time. UCAN recommends that the method used not be concretely set in this proceeding or in the ECAC.

The joining parties stipulate, and we concur, that economy energy modeling parameters should be determined in the ECAC proceeding.

3.3.2 Planned Short-Term Firm Purchases

No disagreement exists on benchmarking short-term firm contracts that are already signed. The contracts in dispute for performance benchmark inclusion are those in some stage of development short of actual signing.

DRA initially argued the benchmark should include only those contracts that had been offered, negotiated, and signed. SDG&E proposed to include estimated contract terms in the benchmark as an incentive for SDG&E to then negotiate improved terms.

The joining parties agree to the following benchmarking procedure for short-term firm capacity contracts:

1. Future short term firm capacity contracts shall be procured only through a Request for Proposal(RFP) process that adheres to revised protocols described in Appendix B.

2. The MW of firm capacity from short-term contracts will be determined based on the most recently adopted reserve margin.

3. In the subsequent years of a multi-year contract, the actual terms of the short-term firm capacity contract will be included in the calculation of the benchmark. Improvements from the best RFP offers are subject to sharing only for the first year of the contract.

4. Starting in January 1994, the best responses to SDG&E's power solicitation which meet SDG&E's capacity need shall form the basis for calculating the performance benchmark. All contract concessions or savings realized through negotiations will be subject to the sharing mechanism.

We approve these procedures. It is also our understanding that no element of short-term firm capacity contracts would be trued up, but that where contract prices are set by reference to an external index outside SDG&E's control, the contract would be modeled as such. Also, for the forecast period prior to the establishment of the G&D mechanism, there would be no retroactive reward for signed contracts.

### 3.3.3 Reasonableness Reviews

SDG&E's original proposal called for elimination of reasonableness reviews for utility activities falling within the scope of SDG&E's G&D proposal.

DRA originally argued that as a result of the true-up mechanism, many costs, such as QF contract costs, would be removed from Commission oversight, preventing the Commission from ensuring that rates were just and reasonable. DRA wanted reasonableness review to continue for all trued up items, and also for QF contract modifications and all nuclear expenses. Other parties also argued for some retention of reasonableness reviews.

The joining parties' proposal calls for reasonableness review of all ECAC costs whenever recorded costs vary from the forecast by more than 6% (after truing up those elements subject to true up, i.e., outside the incentive). However, SDG&E's liability for disallowance would be limited to the amount of costs in excess of the cap. We consider this retention of reasonableness review in limited circumstances is appropriate and consistent with the purposes of this PBR experiment.

The joining parties propose to model long-term contracts as if SDG&E will exercise all of its rights under existing terms. So as long as aggregate G&D costs fall below the cap, the joining parties believe reasonableness review of these contracts is not necessary. The joining parties would also dispense with reasonableness review of short-term firm capacity contracts. The performance benchmark would incorporate the costs of short-term firm electric power at rates derived from the RFP process mentioned earlier. We accept this treatment of power purchase contracts.

### 3.3.4 Reserve Margins

SDG&E's need for short-term capacity will be determined for modeling purposes using the most recently adopted reserve margin. Generally, we have used a single target reserve margin. Other methodologies may prove desirable, such as having more than

one reserve margin, depending on the time of year or power plant characteristics. Any changes to the reserve margin methodology would be developed in other proceedings and implemented for benchmarking purposes in SDG&E's then-current ECAC.

3.3.5 Reasonableness Assessment Letters (DRA)

Most of SDG&E's power purchases from QFs are under standard contracts with price and other terms pre-approved by this Commission. Therefore, neither the quantity purchased nor its cost requires reasonableness review.

However, under the current practice, SDG&E could modify some of these contracts by mutual agreement with QFs. The joining parties agree that SDG&E will submit any proposed modifications of contracts with QFs to DRA for a reasonableness assessment review prior to any such contract modification. We note, and SDG&E acknowledges, that any letter from DRA does not bind the Commission.

Uranium procurement for nuclear generation is not subject to incentives. Similar to the QF contract modification procedure, SDG&E will submit to DRA any proposed contracts for new uranium supply.

QF contract administration and uranium procurement will not receive scrutiny for reasonableness unless SDG&E's overall ECAC costs deviate substantially from the forecast, as we mentioned earlier. The reasonableness assessment procedure maintains a continuing level of regulatory supervision in these important matters. We accept the procedure on an experimental basis but direct that our monitoring and evaluation program specifically address its effectiveness. We also direct that SDG&E utilize this procedure for any modification of a contract with a nonutility generator, regardless of whether that generator has QF status.

3.3.6 Miscellaneous Benchmarked Costs

The joining parties agree that forecasted wheeling costs should be subject to incentives. Similarly, fuel oil management

costs, including fuel oil inventory costs, and nuclear inventory carrying costs, will be benchmarked.

## 4. Analysis of Gas Procurement Mechanism

### 4.1 Anticipated Benefits of Performance-Based Ratemaking

The Commission is charged with ensuring that local distribution companies (LDCs) such as SDG&E provide safe, reliable, environmentally sensitive services at reasonable and non-discriminatory rates. Our current gas procurement regulation is based on dollar-for-dollar recovery accompanied by reasonableness review of utility expenditures. This regulatory approach has been criticized as tending to hamper the utility's productive efficiency.

Specifically, incentives based solely on exposure to after-the-fact penalties may cause utility management to focus on defending expenses rather than promoting efficiency and on avoidance of error rather than performance improvement. The regulator also may miss the success of an overall procurement strategy by focusing on particular contracts and a narrow timeframe. Since the utility does not share in the gains from successful innovations, but may be saddled with all the losses from unsuccessful innovations, the utility would prefer the safety of the status quo to risks, even where they offer good prospects for lowering costs.

We agree that the promotion of productive efficiency in operations is an appropriate goal for us to keep in mind, along with the others we've mentioned above. We also think that expanded incentives for gas utilities are a logical complement to the increasing openness and competitiveness in the gas industry.

For this or any other new regulatory approach to be effective, we must articulate clear standards of performance for the utility. Those standards should broadly cover gas purchasing activities to give the utility the flexibility to (1) make sound business decisions, without micromanagement by regulators,

(2) develop innovative methods for improving performance, and
(3) adjust to changing circumstances.

SDG&E has proposed to replace after-the-fact reviews of its gas procurement operations with a market-based gas price benchmark. We see the proposal as an attempt to align ratepayer and shareholder interests through sharing of gains and losses. This proposal promises an improvement over the current regulatory approach by providing lower gas costs to ratepayers than would be achieved under the status quo, and by reducing the regulatory burden and complexity for all parties.

Under this new mechanism, SDG&E's management would see gains for the company if it succeeds in lowering gas costs for its customers. The existence of shareholders' rewards resulting from superior performance by SDG&E's management, accompanied by penalties for performance below the market-based benchmark, should encourage the utility to explore and use new acquisition options in today's dynamic market. We expect SDG&E to make timely and appropriate decisions and to compete vigorously for lowest-cost supply and delivery of gas.

4.2 Applicability to Other Utilities

We emphasize that this mechanism is experimental and is designed to suit the needs of SDG&E's particular situation, e.g., SDG&E's location, relevant gas supply markets, and access to transportation, as well as its customers' service requirements. SDG&E sells from a single utility gas supply portfolio. Its sales mix consists of approximately 40% core residential and small commercial, 20% noncore commercial and industrial, and 40% utility electric generation (UEG). This portfolio situation and sales mix both differentiate SDG&E from the other large California investor-owned LDCs, namely, Pacific Gas and Electric Company (PG&E) and Southern California Gas Company (SoCalGas).

SDG&E also differs from PG&E and SoCalGas in that SDG&E does not presently interconnect directly with an interstate pipeline. All of SDG&E's gas supply now reaches SDG&E's border over SoCalGas' pipelines. The interconnection with SoCalGas is sized to serve primarily SDG&E's core customer requirements. Unlike PG&E and SoCalGas, SDG&E holds little firm interstate pipeline capacity.[8]

Thus, we acknowledge that SDG&E is situated differently from PG&E and SoCalGas. We hope to learn from our experience with SDG&E's gas PBR mechanism over the next two years, but we will not apply the lessons of that experience (positive or negative) to the other gas utilities without first considering how the differences in their respective situations should affect our analysis.

## 4.3 Description of the Gas Procurement Mechanism

### 4.3.1 Limitation on Reasonableness Review

Currently, rates for natural gas service are set in the Biennial Cost Allocation Proceedings (BCAPs) which cover a forecast period of two years.[9] In BCAPs, the Commission forecasts revenue requirements, allocates fuel and transportation revenue requirements among customer classes, reviews and modifies gas rate design, and sets gas rates.

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8 SDG&E holds 10 MMcfd on the El Paso pipeline system and has contracted for 50 MMcfd on the PGT expansion project. The implementation of capacity brokering could significantly affect SDG&E's access to interstate transportation, however.

9 SDG&E's last BCAP (D.92-05-029) covers the forecast period from October 1, 1991 to September 30, 1993. SDG&E's next BCAP application is due on August 1, 1993 with rate implementation scheduled for May 1994.

Reasonableness reviews for SDG&E's gas procurement are conducted in the annual ECACs. The purpose of the reasonableness review is to determine the amount the utility should recover through rates to reflect fuel purchases and operating expenses for the previous year. Fuel purchases and expenses that we determine to be imprudent are subject to disallowance.

The proposed gas procurement PBR mechanism, with its benchmarks and shared savings/costs arrangement, would eliminate reasonableness review of SDG&E's gas procurement costs.[10] SDG&E's fuel management decisions regarding SDG&E's gas storage inventory and operations, however, will continue to be subject to reasonableness review. Gas storage and inventory operations may properly be reconsidered for inclusion in the PBR mechanism after sufficient experience is gained in the unbundled gas storage environment (I.87-03-036).

4.3.2 Structure of the Mechanism

The mechanism involves a two-part benchmark designed to measure SDG&E's gas purchasing performance and provide SDG&E positive incentives to pursue low-cost gas purchase and delivery. Part A of the mechanism, with equal sharing of "excess costs" and "savings" between shareholders and ratepayers, serves to encourage SDG&E to minimize its gas commodity costs within its major supply markets or basins. Part B provides SDG&E incentives to lower its total delivered (commodity and transportation) cost of gas by allowing shareholders to earn a percentage of cost "savings."

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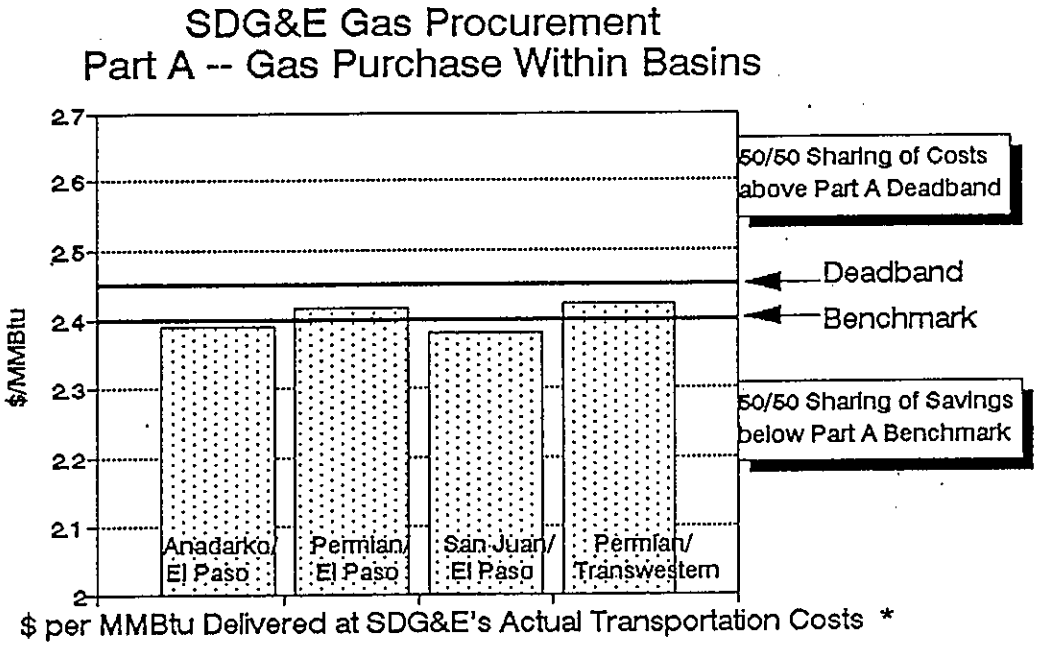
10 Our statement refers to procurement operations in SDG&E's capacity as LDC. To the extent SDG&E's UEG department buys its gas supplies through the LDC (as it does currently), the elimination of reasonableness review also applies to the UEG's gas procurement (but not gas usage).

Both Part A and Part B have their own monthly benchmark against which SDG&E's actual purchased gas cost is compared. For each part, the variance between the market-based benchmarks and actual costs for each 12-month period determines the amount of shareholders' reward or penalty for that year.

The benchmarks for both parts are based on calculations of the 30-day market price for gas. At this time, we find the use of this short-term ("spot") price information appropriate in establishing the mechanism's benchmarks. SDG&E will have the ability to procure gas under any contract terms that its management deems appropriate; only its resulting total cost of gas will be judged against the benchmarks.

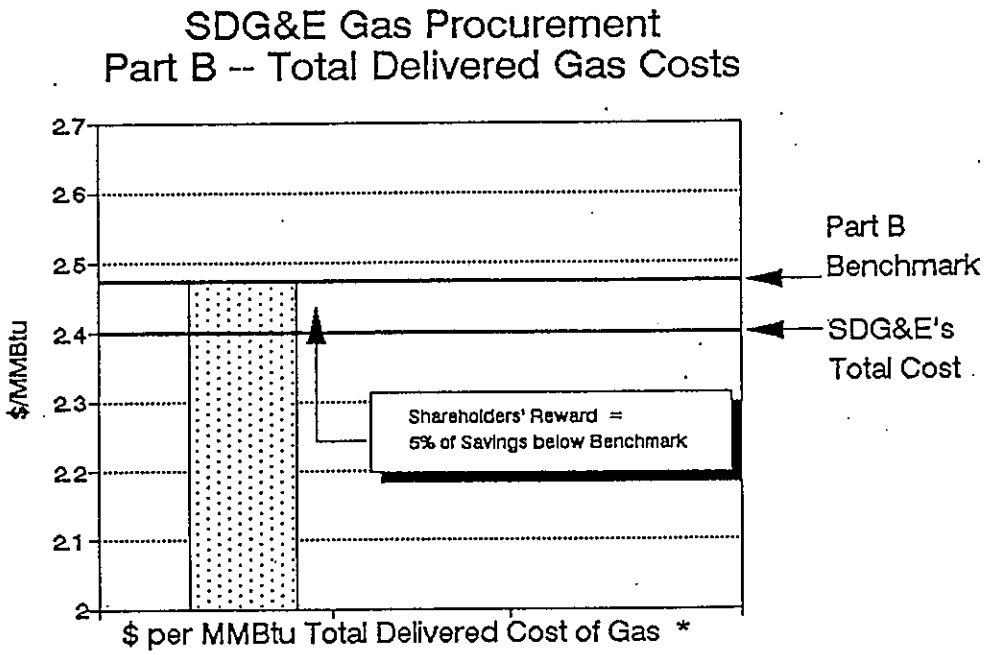
Part A and Part B are relatively simple in concept. As the reader will find, however, the associated benchmarks and sharing calculations are multi-step processes, and their description necessarily protracted. Thus, we discuss only the overall purpose and design of Parts A and B in the following sections. See Appendix C for a more detailed description. Also, see Figures A and B (following page) for a graphical representation of the sharing mechanism for Parts A and B, respectively.

## Figure A




* *Unit price is used for illustrative purposes only. Sharing calculations are based on total annual costs.*

## Figure B




* *Unit price is used for illustrative purposes only. Reward calculations are based on total benchmark and cost for the year.*

#### 4.3.2.1 Part A

Part A is designed to measure how well SDG&E does in purchasing gas in its relevant supply markets. On an annual basis, SDG&E's Purchased Gas Cost (PGC) is compared to the Part A benchmark and deadband total.[11] If SDG&E's total PGC for the year is less than the 12-month sum of the benchmark, the difference constitutes the shared savings. Whenever SDG&E's total PGC is more than the deadband total, the difference between those two amounts represents the shared costs. Shared costs/savings are allocated equally to shareholders and ratepayers. The reward to shareholders, 50% of shared savings, will be included as part of the total cost of gas procurement. Conversely, shareholders' penalty amount, 50% of shared costs, will be used to reduce the PGC recoverable through rates.

Part A's sharable costs/savings in essence represent the average difference between what SDG&E actually paid for gas and what SDG&E could have paid from the same basins when buying at the average spot price available. Each month, the Part A benchmark is calculated using averaged basin price indices and actual transportation cost data. This benchmark is designed to reflect the market price of available spot gas supplies.

The corresponding deadband total incorporates a 2% deadband over the commodity price from the same supply sources, i.e., SDG&E's gas costs can exceed the benchmark by 2% before SDG&E's shareholders must share in the excess costs. Although asymmetric, this deadband seems reasonable, given the experimental character of the gas PBR mechanism.

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11 Benchmark and Deadband Total are terms used in SDG&E's proposal to describe the lower and upper limits of the cost range in which no sharing takes place.

The benchmarks are based on published price data on SDG&E's primary sources of supply in the major Southwest U.S. gas basins delivered on the El Paso and Transwestern pipeline systems. Those major basin sources are the Anadarko, Permian, and San Juan. The benchmark reflects the volume-weighted (based on actual volumes) price for available spot gas from four identified basin/pipeline receipt points (IBPs).[12] The volume-weighting of the average published index for each IBP is designed to focus on SDG&E's purchasing performance on a basin-by-basin basis.

Part A also includes proxy indices, derived from data on the IBPs, to represent SDG&E purchases of gas at sources other than the four IBPs. Such gas may come from California gas producers or from purchases delivered to the California border at a "bundled" price that covers both commodity and interstate transportation. Proxy indices are used to represent these supplies since there is no specific basin identified as the source and there is normally no separately stated commodity and transportation price.

Transportation cost components are used in Part A solely to account for gas purchases from sources other than the IBPs. Transportation cost data used in the benchmark are actuals, and would "cancel out" the transportation component reflected in SDG&E's actual purchased gas cost. Part A thus provides a benchmark only for the commodity cost, and not transportation cost, of all gas supplies.

As mentioned earlier, price data from the four IBPs provide the basic input to the benchmark calculations. These four IBPs are chosen for various reasons:

- o they represent the primary sources from which SDG&E has been obtaining its gas supplies;

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12 The current IBPs are Anadarko/El Paso; Permian/El Paso; San Juan/El Paso; and Permian/Transwestern.

- these sources have the price data needed for benchmark calculation purposes;
- they have at least three primary independent sources for pricing information;
- there exists an established source of transportation tariff data (firm and interruptible rates) for transportation of gas supplies from the receipt point to the California (SoCalGas) border; and
- SDG&E has sufficient experience in following the published data for each basin price index and its correlation with the prices of gas actually purchased by SDG&E from the market at the receipt point.

Spot price data on SDG&E's four IBPs are from three widely recognized and established industry publications: Inside FERC's Gas Market Report; Natural Gas Week; and Natural Gas Intelligence. These publications are expected to continue to provide the 30-day spot price data needed for calculating Part A's benchmark.

During the two-year pilot, basin price index data from additional publications may come into generally accepted use, or there may be major, unanticipated changes to the list of identified basins from which SDG&E buys most of its supplies. Adjustments to the indices may be necessary and, subject to Commission approval, may be made as long as the above criteria are satisfied and the basic integrity of the mechanism is maintained.

Overall, Part A provides SDG&E a balanced incentive to obtain competitive gas prices at the basin. The basic premise here is that we judge SDG&E to be performing well if it can purchase its gas supplies at (spot) market price. Shareholders' and ratepayers' interests are aligned as they are expected to share cost/savings when SDG&E's performance results in purchased cost above/below these market-based standards.

We recognize that Part A only provides a limited measure of SDG&E's gas procurement performance. Transportation costs are reflected as actuals in the benchmark calculations. Thus, Part A does not provide SDG&E any incentives to lower its interstate transportation costs. Consequently, we look to Part B to measure SDG&E's effectiveness in lowering total delivered cost of gas. Also discussed in the next section is the need for the two-part design and the respective emphasis of Part A and Part B in this mechanism.

4.3.2.2 Part B

Part B focuses on the interaction between commodity and transportation components of total delivered gas costs. It is designed to provide SDG&E positive incentives to make the lowest total cost decisions based on available supply and delivery alternatives, while maintaining core service reliability. Its benchmark reflects the posted maximum firm transportation rate on the pipeline system from the basin receipt point, including fuel usage charge, and reservation and commodity charges at 100% utilization rate.

The Part B benchmark developed each month is the product of the weighted average delivered price index and the actual delivered volumes of gas purchased by SDG&E in that month.

The weighted average delivered price index is found by applying weighting factors to El Paso (70%) and Transwestern (30%) delivered price indices. These factors represent a distribution of firm capacity originally available through SoCalGas from El Paso and Transwestern, and are referenced in SDG&E's gas service contract with SoCalGas.

The delivered price indices for gas delivered on the El Paso and Transwestern systems are the simple average of the Average Indices of the three identified basins on the El Paso system. (The IBPs' Average Indices are those already calculated for Part A and

represent the average of the three published spot prices for gas available at the respective basin/pipeline receipt point.)

The PGC used to compare against the benchmark is the same as that calculated for Part A. At the end of each 12-month period after implementation, if SDG&E's total PGC is less than the total benchmark, the difference between those two amounts constitutes shared savings. SDG&E's shareholders then would earn 5% of the shared savings. As with Part A, this reward would be included as part of the total cost to ratepayers for supply and delivery of gas. (See Figure B.)

Compared to Part A, Part B provides a more comprehensive measure of SDG&E's performance in securing supply and delivery of gas to its customers. Part B encourages SDG&E to obtain discounts to transportation rates and to make the appropriate commitment to firm pipeline capacity to provide for the greatest chance of yielding the lowest-cost supply and delivery outcomes. Part B's smaller percentage of reward, relative to Part A, reflects our recognition that more needs to be known about the impact of FERC's Order 636 (capacity release program) on the gas market supplies and transportation capacity availability.

In the meantime, we believe Part A is a reasonable and necessary complement to Part B. At the end of this two-year experiment, we expect to revisit this issue to consider whether the two-part design is still applicable. We envision a more comprehensive incentive package such as that provided in Part B will increase in importance relative to, or even replace the need for, Part A's measure of in-basin gas procurement performance.

4.3.2.3 Backcast Study of Parts A and B

SDG&E has performed a backcast study, in which SDG&E used past data to calculate Part A and Part B benchmarks and shareholders' reward/penalty.[13] Table A below shows the results for two 12-month periods: from August 1990 to July 1991, and from August 1991 to July 1992.

Table A. Backcast Results for Two 12-Month Periods

| DESCRIPTION ($millions) | | 8/90-7/91 | 8/91-7/92 | |
|---|---|---|---|---|
| Purchased Gas Cost | | $221.6 | $215.4 | 100.0% |
| Part A | Benchmark | 223.9 | 221.6 | 102.9% |
| | Deadband | 226.0 | 224.4 | 104.1% |
| | Shared Savings | 2.3 | 5.6 | 2.6% |
| | Reward | 1.2 | 2.8 | 1.3% |
| Part B | Benchmark | 220.5 | 228.4 | 106.0% |
| | Shared Savings | none | 13.0 | 0.6% |
| | Reward | none | 0.6 | 0.3% |
| Total Reward | | 1.2 | 3.4 | 1.6% |

We present the above example not to demonstrate SDG&E's expected future performance, but to show the relative size of potential rewards and penalties. DRA in its reasonableness review reports on SDG&E's 1990-1991 and 1991-1992 record periods cited gas

13 Exhibit 16, SDG&E's Response to CCC's First Data Request, Question 1.

cost savings achieved by SDG&E through its "exceptional" management of gas procurement. We expect SDG&E's gas procurement performance to continue to improve in response to the performance-based incentives provided by this mechanism.

4.3.2.4 Enhancement Proposed by Enron

Enron Gas Services Corporation (Enron) supports SDG&E's proposal but believes the proposal would be enhanced by tempering the use of spot prices for benchmarking all of SDG&E's gas purchases. (See Appendix C for a detailed summary of the enhancement.) DRA and SDG&E oppose the Enron enhancement. We approve the benchmark as proposed by SDG&E.

Understanding the debate requires some review of commodity pricing theory. Commodity markets use a wide variety of contract lengths and pricing terms. The variety of transactions exists for many reasons. Not all buyers are alike, and not all sellers are alike. For example, both production and consumption may vary seasonally. The variety of transactions also results from risk management, as both buyers and sellers try to choose an optimal mix of short- and long-term obligations with fixed or fluctuating prices.

The term "spot" market describes very short-term transactions (30 days or less). A seller will generally market some of its production through spot sales, since committing all of its production capability to long-term sales would be risky.[14] As long as spot sales cover the seller's variable cost of production plus some contribution to fixed costs, and the seller does not anticipate a rapid rise in prices, the seller is probably better off making the sale than shutting down production facilities or storing the excess commodity. Buyers can find bargains in the spot

14 Production also reaches the spot market when production facilities run in excess of their rated capacity (which can happen under optimal conditions) or any time supply outstrips demand.

market but are cautious about relying exclusively on the spot market because of concerns over dependability of supply and the possibility that long-term deals may actually be cheaper than short-term.[15]

Benchmarking SDG&E's gas procurement mechanism to spot market prices is reasonable if we assume that those prices will attract a dependable supply. That assumption could well hold true for some time for SDG&E. Pipeline capacity to California is increasing, and all California buyers are getting improved access to more supply basins. Expanded competition (basin-to-basin and pipeline-to-pipeline) will probably result in a buyer's market over and beyond the next two years, barring disruption of supply or huge demand growth.

Seasonal shortages could cause price spikes in the spot market, as demand peaks in winter and severe cold can hamper gas production and pipeline operations at many points before gas from out of state reaches the California city gate. However, the LDCs are used to dealing with this winter situation, for example, by storing gas in the summer, so seasonal shortages alone do not justify modifying the proposed benchmark.

Enron notes, however, that assured long-term supply of gas requires recovery of more than just the variable costs of production; producers must explore new fields and drill new wells, and these things require infusions of capital. Producers' cost of capital depends in part on the quality of their revenue streams. Enron contends that if the gas market is dominated by spot sales (and sales indexed to the spot market), producers' capital costs

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15 The price tradeoff between long-term and short-term deals is complex, and we cannot fairly generalize that buying short is always cheaper than buying long. For example, a buyer that always goes short in order to take maximum advantage of the spot market may not do as well as a buyer that makes longer-term commitments and receives, e.g., volume discounts in return.

will go up because producers' revenues will exhibit all the variability and uncertainty of the spot market. The result, Enron concludes, will be higher gas prices over the long run to the LDCs and their ratepayers, compared to a situation where the gas market is a mixture of spot and non-spot transactions.

This brings us back to Enron's problem with the benchmark. Enron believes that the benchmark in its current form drives SDG&E to rely entirely, and perhaps imprudently, on the spot market, or purchases indexed to spot prices. Enron would mitigate that effect by giving SDG&E a "safe harbor" for non-spot indexed gas purchases, not to exceed 25% of SDG&E's gas purchases in a given month.

Specifically, Enron would allow SDG&E to remove from the sharing mechanism those non-spot indexed contracts meeting the "safe harbor" criteria. SDG&E would have no downside exposure (and no reasonableness review) if such purchases exceed the benchmark, and would not share any saving if they beat the benchmark. Enron notes SDG&E could use the "safe harbor" as much as it wished (up to the 25% cap) or not at all, depending on SDG&E's judgment of the quality of gas sellers' responses to requests for proposals that SDG&E plans to issue during the experiment to test the non-spot market.

We agree with Enron that SDG&E should analyze all kinds of gas purchase opportunities.[16] We do not agree that the spot-based benchmark prevents or discourages such analysis. Logically, SDG&E would project various price scenarios and associated likelihoods, and procure a mix of gas supplies that offers the best

16 We strongly approve SDG&E's commitment to issue requests for proposals to determine the full range of purchase transactions available in the market place. Finding out what's available is the heart of any sound procurement strategy.

expected value when all outcomes are considered. The benchmark gives SDG&E a strong incentive to make any long-term purchases that lower the overall price that SDG&E projects for its supply mix, including under certain circumstances long-term purchases above the benchmark price.

For example, suppose SDG&E reasonably expects low spot prices to prevail but sees a 1-in-10 chance that spot prices could be as high as 50% above the expected "low" price. In that case, SDG&E might well consider a hedging strategy to save money in the "high" price scenario, even though such hedging would result in a small premium over the spot price expected in the most likely case.[17] (There may of course be many price scenarios and many potential hedging strategies.) Successful hedging would lower gas rates and give the best expected performance against the benchmark, when all reasonable scenarios are taken into account.

We also agree with Enron that gas producers, over time, must recover a range of costs, including costs of developing new supplies. Inevitably, the marketplace will accommodate such cost recovery. But neither SDG&E nor this Commission can guess the timing or direction of the marketplace. We cannot justify releasing a substantial part of SDG&E's gas supply portfolio from any kind of accountability (through either benchmarking or reasonableness review) in order to achieve the speculative benefits of hastening the development of a "forward" market in natural gas. Thus, we reject the Enron "safe harbor" proposal.

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17 We note that SDG&E's gas procurement mechanism includes a 2% deadband above the benchmark, i.e., SDG&E's gas costs can exceed the benchmark by 2% before SDG&E's shareholders must share in the excess costs. SDG&E and DRA indicate this deadband is intended to allow SDG&E to obtain "take" flexibility and to meet the level of supply reliability its core customers need. We do not accept these rationales; instead, we approve the asymmetric deadband in the context of the gas PBR mechanism, considering its experimental character.

5. Monitoring and Evaluation Plan

We now consider how to meaningfully monitor the course of this experiment and evaluate its performance and impacts. Monitoring and evaluation (M&E) are critical tasks, since the PBR experiment directly affects almost half of SDG&E's revenue requirement.[18] We are pleased that participants at the workshops contributed to the M&E discussions. Only the joining parties, however, provided testimony on this subject.

The joining parties support a comprehensive monitoring plan. They propose a plan that includes monthly reports, scheduled audits, and evaluation of the reporting and data collection process. For G&D, SDG&E would provide DRA with monthly ELFIN runs, including ELFIN input, output, and post-processor files.

The joining parties recommend that evaluation be performed both an on-going basis and at the end of the experiment. Evaluation criteria should be designed generally to test for compliance with Commission policy. Other matters for evaluation include how the utility balanced competing regulatory goals over the course of the experiment, and whether any aspects of the experiment had unintended consequences on the utility's performance of G&D, gas procurement, or other regulated activities. The parties suggest measuring utility performance against the following specific criteria:

- o resource efficiency and environmental protection;
- o reliability and service quality;

18 SDG&E's total intrastate revenue requirement is about $1.6 billion annually. Of that total, about 27% is ECAC-related, 17% represents purchased gas costs, and the balance belongs to base rate (and steam) revenue requirement. SDG&E's proposed PBR experiment affects the ECAC-related and gas procurement portions, or approximately 44% of its total annual intrastate revenue requirement.

- o utilization of demand-side and emerging least-cost resources;
- o avoidance of cross subsidies;
- o efficient operations; and
- o encouraging competition where appropriate.

For evaluating G&D, the parties propose ELFIN backcasts twice during the experiment, evaluating the level of reward/penalty, examining SDG&E's portfolios, and qualitative assessment of operational innovations due to the PBR mechanism. DRA would perform comparative analysis using external references (e.g., gas spot market) wherever possible, and compare SDG&E's performance on a quantitative basis with other utilities, state and national averages, and trends. Qualitative evaluation would be performed on simplicity of process, regulatory burden, and comparison to other utility "incentive" mechanisms. Finally, DRA would commit adequate resources to look for and analyze any unintended consequences.

5.1 Discussion

The importance of the M&E plan is heightened because reasonableness reviews are reduced or eliminated. Other factors complicate this task.

For example, we do not have the luxury of a controlled experiment. As we move forward with this experiment, rigorous information on what would have happened for SDG&E had we maintained the status quo simply will not be available.

Also, we are changing our regulatory approach on an incremental basis. SDG&E's other regulated activities, such as those under base rate recovery, are likely to affect many of the parameters we wish to measure in this experiment, e.g., service quality, level of rates, and environmental impacts.

Finally, SDG&E operates in an environment where constraints and opportunities are constantly changing, so we may not easily discern the direct impacts of this experiment.

The joint ruling provided general guidelines concerning the development of the M&E plan. (See Section 2.2 above.) The M&E plan that we develop herein incorporates the elements proposed in the joint testimony, parties' original proposals, and our further thoughts and requirements.

To begin, we discuss in general terms M&E objectives and requirements for this two-year experiment. We then discuss specific plans for the G&D and gas procurement PBR mechanisms.

5.1.1 Monitoring

We agree with the parties' approach and develop M&E as two separate but complementary sets of activities. The monitoring plan is established primarily to follow the implementation of the experiment, providing us with periodic progress reports. Information collected in this phase will serve as valuable input in the evaluation process.

The monitoring plan we adopt is substantially that of the joining parties. It includes monthly and annual reports submitted by SDG&E and review of those reports by DRA and CACD. The periodic monitoring reports will contain information on costs, benchmarks, shareholders' rewards and penalties, and explanatory discussion on the variance between SDG&E's actual and benchmark costs. We rely on DRA and CACD to review the information provided in these reports and to alert us if immediate corrective actions are needed. As this is only an experiment, we order SDG&E to continue collecting and submitting information necessary to fulfill its current CPUC reporting requirements.

5.1.2 Evaluation and Audit

The evaluation plan must measure the experiment's successes or failures with respect to our regulatory objectives. We want to ensure that the PBR mechanisms are effective in

improving the efficiency of SDG&E's operations, and that SDG&E provides its services in a safe, reliable, and environmentally sensitive manner and at reasonable rates.

The joining parties have proposed a reasonable evaluation plan, and we adopt many of its components. Our adopted version provides additional detail and structure.

We incorporate DRA's planned evaluation and auditing activities. DRA would provide its critical evaluation of the experiment at the end of the two years, addressing those issues set forth by the joining parties.

DRA has also committed to perform three scheduled audits of the supporting data in the monitoring reports. We believe the audits can be useful to check whether the M&E plan, as well as the experiment itself, performs as expected and to allow for timely corrective actions, if necessary. The first audit will take place after the fourth month of the experiment. The purpose of this audit is to determine whether SDG&E complies with the monitoring procedures adopted by the Commission in this proceeding and whether adjustments to the procedures are needed. SDG&E, DRA, CACD, and interested parties should participate in discussions on whether and what adjustments to the monitoring procedures are needed; minor adjustments may be made during the experiment, but must be approved in writing by both DRA and CACD.

DRA would perform the second and third audits at the end of the experiment's first and second years. These audits will focus not only on the monitoring procedures, but also on the results of the experiment to date. DRA would collect and perform preliminary evaluation of data and would base its final evaluation report on findings from these two audits. We expect DRA's reports will lag SDG&E's annual reports by 45 days.

We stress that while DRA has volunteered to perform the auditing (and other M&E) functions, CACD may conduct an independent analysis, applying such tests and procedures as CACD deems

appropriate for these purposes. However, we envision the two divisions will continue to share information and coordinate their investigations to minimize duplicative efforts.

We believe the operational flexibility that we are granting SDG&E in this proceeding will not diminish our need for access to utility information. We expect the level and quality of staff's access to SDG&E's information to remain unchanged, or even improved, under this experimental framework.

To supplement the joining parties's proposed evaluation plan, we require CACD to prepare interim and final evaluation reports.[19] CACD should issue its interim report 18 months after the implementation of either the G&D or the Gas Procurement portion, whichever is later. This schedule allows CACD sufficient time to receive and review SDG&E's first annual reports (due at the end of the 15th month) and DRA's first two audit reports and first annual report. CACD should provide an independent analysis of the results to date and to the extent possible a preliminary assessment of the experiment's effectiveness. This report, and those by DRA and SDG&E, will provide us an important update and a preview of what we can expect in the final evaluation phase.

Four months after the conclusion of either the G&D or gas procurement two-year experiment, whichever is later, CACD should issue a comprehensive report containing its findings on the results of the experiment. CACD should also provide recommendations regarding the continuation of the experiment, and, if appropriate, propose adjustments to the mechanisms. Specific reporting requirements and evaluation criteria for G&D and gas procurement mechanisms are discussed separately in the next sections.

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19 CACD should serve these reports on the parties, the assigned ALJ, and Commissioners.

CACD, in its evaluation of this experiment, may engage the services of an independent consultant. CACD should appoint a Project Coordinator who will approve the request for proposals, bidder list, contractor selection criteria, contractor selection and contract document. The Project Coordinator should direct consultant efforts and approve consultant invoices for payment. The consultant should have the same access to SDG&E's information that Commission staff would have.

SDG&E will fund the consultant services. We intend to allow SDG&E to recover such costs in rates, similar to the treatment of costs associated with management and demand side management program audits. SDG&E shall set up a balancing account to record such costs. SDG&E is authorized to request rate recovery of the accrued balance, at the completion of the consultant services, through an advice letter filing. We will allocate the costs of consultant between electric and gas departments (if SDG&E chooses to implement both the G&D and gas procurement mechanisms) based on their respective recorded costs for 1993.

DRA's role in evaluation equals CACD's in importance, but except for the due dates of DRA reports, we leave DRA with the flexibility it needs in performing its independent evaluation of this experiment. Accordingly, we do not provide much specificity regarding DRA's evaluation procedures or requirements.

We note this proceeding's collaborative process has been effective in advancing the understanding of SDG&E's proposal and parties' concerns, and highlighting issues that need to be addressed. We hope this collaborative spirit continues during this experiment and into the evaluation process.

We do not specify procedures for involving, e.g., other energy utilities, UCAN, other state agencies, the independent power industry, and other affected groups and communities. Nevertheless, we encourage those parties to continue to communicate their concerns and findings to SDG&E, DRA, and/or CACD. The reports can

only benefit from having a wide range of input. SDG&E, DRA, and CACD may want to take some of the following approaches for sharing of information and ideas among parties:

- Hold meetings to clarify other parties' expectations in terms of the type of information and level of detail, etc.
- Circulate draft reports among parties and solicit feedback.
- Hold workshops or informal meetings to explain and discuss findings presented in the reports.

5.1.3 Reporting Requirements and Evaluation Criteria

5.1.3.1 Generation and Dispatch PBR Mechanism

We require SDG&E to submit to DRA, and to CACD's Environmental and Energy Advisory Branch, monthly G&D reports 75 days after the end of each reporting period. The joining parties suggest the following data and formats to do monthly G&D true-ups:

- Analysis of electric fuel and purchased power expenses for the reporting period in the format shown in Table E-1 of Appendix D. The analysis will include an explanation of why actual costs differed from benchmark costs.
- Data supporting the above analysis, to be presented in the format shown in Tables E-2 and E-3 of Appendix D.
- Data associated with the ELFIN run for that month, including the ELFIN input, output, and post-processor files.

The need for additional information or for information presented in a different format may develop as we gain experience. We expect SDG&E to cooperate in such modifications when requested by DRA or CACD.

To evaluate how accurately the benchmark model reflects SDG&E's system, we require that SDG&E perform two ELFIN backcast studies during the two-year experiment. DRA, which routinely

performs production cost modelling, will consult with SDG&E and determine the studies' schedule to ensure that their results can be produced in a timely and meaningful manner. For each backcast study, SDG&E shall file and serve a report on its findings and recommendations for future modelling adjustments, if appropriate.

SDG&E shall file and serve two annual G&D reports.[20] The timing for the reports is 90 days after the first and second anniversaries of implementation of the G&D mechanism. Each report will describe the results for that year, and set forth calculations for shareholders' reward/penalty. SDG&E shall include detailed explanation of the variance between actual and benchmark costs for the year. SDG&E should also summarize its utilization of the reasonableness assessment procedure. SDG&E shall also include in its second annual report a comprehensive analysis of the G&D mechanism's results and effectiveness, a discussion of lessons learned from the experiment, and a detailed assessment, and justification if applicable, of its continuation.

SDG&E shall also file and serve the annual report in its then-current ECAC proceeding. The report will provide the basis for Commission approval of appropriate adjustments to the ECAC balancing account. The review and approval process will normally take the place of what is presently the reasonableness review phase in SDG&E's ECAC proceedings.

In its final evaluation report, CACD should assess how the G&D mechanism and its results measure up to each of the regulatory objectives identified by the joining parties. In addition to analysis of service quality and rate impacts due to the experiment, we are interested in answers and explanations to the following questions:

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20 Both the monthly and annual G&D reports will be public documents, as are the analogous gas procurement reports.

- Did the mechanism alter the way SDG&E generates and dispatches its energy resources?
- Did SDG&E's energy portfolio change due to this mechanism?
- Did the mechanism encourage and result in operational innovations in SDG&E's generation and dispatch areas?
- Did the mechanism in the long-run affect (i.e., reduce) regulatory complexity, the CPUC's resource requirements for regulatory oversight, and SDG&E's and interested parties' regulatory burden?
- Did this mechanism's focus on beating short-run avoided cost benchmarks affect SDG&E's willingness or ability to reduce long-run avoided costs?
- What unintended consequences, both positive and negative, resulted from the mechanism?
- Did the mechanism affect SDG&E's compliance practices and performance related to environmental protection?
- Did demand-side management programs suffer as the result of SDG&E's implementation of this mechanism?
- Does the mechanism affect the financial community's assessment of SDG&E with respect to financial stability and investment risk?
- Were there any systematic biases built in the forecasting/benchmarking methodology?
- What changes should be made to the mechanism if it were to continue?
- How did ELFIN perform as a tool to establish monthly G&D benchmarks?

CACD should also analyze forecast (benchmark) and actual (recorded) costs of short-term firm capacity contracts, and levels of sharable savings and costs.

CACD, in cooperation with DRA, SDG&E, and other interested parties, shall determine the amount and type of data needed to perform its analysis. For quantitative analysis, we suspect much of the needed information can be found in existing reports submitted by SDG&E to the CPUC and other regulatory agencies.

5.1.3.2 Gas Procurement PBR Mechanism

SDG&E shall submit a monthly gas procurement report to DRA and CACD's Environmental and Energy Advisory Branch 60 days after the end of each reporting period. This report will contain calculations for the gas procurement PBR benchmarks and shareholders' rewards/penalties.

The report will be in the format shown in Tables G-1 and G-2 of Appendix D. Table G-1 (Schedule A) contains information on actual costs, gas indices, benchmarks, deadband, and sharable gains/losses. Table G-2 (Schedule B) provides a summary of gas purchases in terms of geographical source, price structure, and contract duration. The latter table is designed to check whether the supply assumptions used in developing the mechanism's benchmarks realistically reflect SDG&E's gas procurement situation. It also provides a measure of SDG&E's utilization of non-spot indexed contracts relative to its total gas supply needs.

SDG&E shall also include in the monthly reports a description of bidding and procurement activities. Any action taken regarding purchases not indexed to spot prices should be specified.

SDG&E shall continue to submit to DRA all currently required confidential reports related to gas procurement. Subject to DRA's concurrence, those confidential reports may be amended to

contain detailed data needed to support the information provided in Schedules A and B.

SDG&E shall file and serve two annual gas procurement reports. The timing of the reports is 90 days after the first and second anniversaries of implementation of the gas procurement mechanism. Each report will include results of the mechanism for that year, and calculations for shareholders' rewards/penalties, together with detailed explanation of the variance between actual and benchmark costs.

SDG&E shall also file the annual report in its then-current ECAC proceeding. The Commission will review this report and will use sharable savings/cost information from the report to adopt appropriate adjustments to the purchased gas balancing account. As with G&D, Commission review and approval of such adjustments will normally be made in the second phase (currently called reasonableness review phase) of the ECAC proceedings.

The evaluation plan for gas procurement is the same as that for G&D. CACD's evaluation of the gas procurement mechanism should address these questions:

- Did the mechanism alter the way SDG&E procures its natural gas supply?
- What impacts did the mechanism have on SDG&E's gas portfolio? Did SDG&E purchase any gas not indexed to spot prices? Should a "safe harbor" or other special treatment for non-spot indexed purchases be created?
- Did the mechanism encourage and result in innovations in gas procurement?
- Did this mechanism's focus on beating spot priced gas market affect SDG&E's supply reliability?
- What if any unintended consequences, both positive and negative, resulted from the mechanism?

- Did demand-side management programs suffer as the result of SDG&E's implementation of this mechanism?
- Does the mechanism affect the financial community's assessment of SDG&E with respect to financial stability and investment risk?
- Were there any systematic biases built in the benchmarking methodology?
- Did the mechanism in the long-run affect (i.e., reduce) regulatory complexity, CPUC's resource requirements for regulatory oversight, and SDG&E's and interested parties' regulatory burden?
- What changes should be made to the mechanism if it were to continue?

## 6. Implementation

### 6.1 Election to Proceed with Experiment

We have previously mentioned that SDG&E may choose not to proceed with this experiment if we impose substantial changes on the experimental design. Today's decision clearly imposes such changes on the joining parties' G&D proposal. SDG&E should therefore indicate its election to proceed with a G&D mechanism modified to conform to today's decision, or instead to continue under current ratemaking policies. SDG&E should file and serve its election within two weeks of the effective date of today's decision.

We approve the gas procurement mechanism as proposed, so we expect SDG&E to proceed with the latter, whether or not SDG&E elects to proceed with the G&D mechanism.

### 6.2 Tariff Filing

If SDG&E elects to proceed with one or both of the mechanisms, it should submit its advice letter filing(s) no later than five calendar days after its notice of election. SDG&E's draft tariffs for the Gas Procurement and G&D mechanisms are contained in Exhibits 12 and 24, respectively. The advice letter

filing(s) should contain revised tariffs to conform to our directions in this decision. The advice letter(s) shall be effective no sooner than August 1, 1993.

6.3 Beyond the Initial Two-year Period

Although this is a two-year experiment, we expect the PBR mechanisms may be left in place well into the third year. Two complete annual cycles are probably needed to obtain reasonably reliable data for evaluating the effectiveness of these mechanisms. Thus, absent unanimity that the experiment should end, we expect to allow the two years to transpire and data to be collected and analyzed before we determine the mechanisms' effectiveness and continued viability.

We direct SDG&E to file, at the time its second year report is due, an appropriate pleading (probably a petition for modification of this decision or a new application, depending on the extent of the proposed changes to the program) seeking authority to extend, make permanent, discontinue, or modify the PBR mechanisms. As specified in the M&E plan, the various final evaluation reports will lag the 24-month mark by up to six months. These reports will be part of the record on which we will reconsider the mechanisms' role in our regulation of SDG&E.

7. Comments on Proposed Decision

Pursuant to PU Code § 311 and our Rules of Practice and Procedure, the Proposed Decision of ALJ Kotz was published on May 24, 1993; parties then had an opportunity to file comments and replies.[21] The parties generally adhere to their policy arguments previously made in the record, and upon full consideration we have

21 We received comments from SDG&E, DRA, CCC, and Enron. SDG&E, CCC, and DRA filed reply comments, as did CEERT.

determined to affirm the Proposed Decision in substance but to make a number of changes, clarifications, and corrections.[22]

We also respond to CCC's objections to the reasonableness assessment procedure. (See Section 3.3.5 above.) CCC objected to this procedure in its testimony and renewed its objection as its sole comment on the Proposed Decision.

CCC believes this procedure unnecessarily complicates negotiations between nonutility generators and SDG&E by "inserting DRA into the process at the negotiation stage...." (CCC, Comments, p. 4.) CCC acknowledges that utilities already seek DRA's views on proposed contract modifications; apparently, CCC objects to the procedure only insofar as it is mandatory.

We think DRA should not be sitting at the bargaining table with SDG&E and the nonutility generator, but the procedure does not require that. The procedure might complicate some negotiations, but we could say the same thing regarding almost any degree of regulatory supervision, including the existing utility practice of voluntarily consulting DRA about proposed modifications. As the generation market matures, that market will enforce the most effective discipline over these negotiations; in the mean time, we find the reasonableness assessment procedure appropriate as a component of the G&D mechanism approved today.[23]

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22 The following portions of the Proposed Decision are modified: 3.1.1; 3.3.1; 3.3.2; 3.3.5; 4.3.2.1; 4.3.2.4; 5.1.2; 5.1.3.1; 5.1.3.2; 6.3; findings 3, 32, 42, and 50; conclusions 6, 13, 14, and 15; appendices A and B.

23 SDG&E, in its Reply Comments, says CCC's concern can be addressed during the PBR experiment once parties gain some experience under its provisions, including the reasonableness assessment procedure. SDG&E is willing to meet and confer with parties such as CCC, if the procedure becomes problematic, to work on improvements on a collaborative basis. SDG&E would submit any

(Footnote continues on next page)

We reject SDG&E's request that the gas procurement mechanism be implemented on July 1 rather than August 1. The earlier date would leave only five business days between decision date and the effective date of the revised tariffs. The mechanism involves a large amount of tariff language changes and additions, with complex interactions among the provisions. We want the experiment to begin as smoothly as possible and want to leave enough time for that to happen.

One reason SDG&E gives for July 1 implementation is so gas procurement and G&D have staggered reporting schedules. We can see that different due dates for reports could ease personnel constraints; if this is desirable SDG&E and CACD can simply change the reporting schedules--no change in implementation dates is necessary.

Findings of Fact

1. A broad consensus emerged among the parties in support of SDG&E's gas procurement PBR mechanism essentially as originally proposed.

2. Many parties raised concerns over SDG&E's original proposal to bifurcate ECAC cost categories. These concerns generally take two forms. First, parties feel that SDG&E management has some (albeit less than total) control over many of the categories of cost subject to true up. Second, parties object in various ways to risk allocation under the proposal.

3. Under the Commission's current regulatory program, SDG&E receives balancing account treatment for all generation, dispatch

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(Footnote continued from previous page)
agreed-on improvements for Commission approval via advice letter or petition for modification, as appropriate. This is a reasonable suggestion.

and purchased power costs reviewed during the ECAC proceeding. "Balancing account treatment" means in essence that SDG&E's actual expenses are recorded, and any overcollections or undercollections resulting from differences between billed amounts and actual expenses are reflected in rates, subject to reasonableness review.

4. A long-standing criticism of balancing accounts and their correlative reasonableness reviews is that they do not provide the utility with any positive incentive to control costs subject to such treatment.

5. The immediate function of incentive regulation is to provide the positive incentive missing in strict balancing account treatment. This positive incentive will also help in realizing our regulatory goals efficiently.

6. Ideally, incentive regulation aligns the interests of shareholders and ratepayers.

7. Many areas of utility operation closely reflect the degree of skill shown by utility management. A ratemaking treatment providing incentives for skilful performance in those areas makes sense.

8. The joining parties' recommendation to complicate the performance benchmark by applying "Z factors" to make after-the-fact adjustments to the benchmark is at odds with our concept of incentive regulation.

9. The joining parties say that a Z factor must not "compensate" for external events already reflected in the benchmark. Presumably, this would require us to examine, e.g., whether and to what extent the possibility of a given "external event" had been taken into consideration in the original ECAC forecast. Such examination could be difficult, since elements of ECAC forecasts are often stipulated to by the parties, and the record might not disclose either the range of possible variation or potential external events they were assuming.

10. Z factors could well influence utility management to make decisions based on what is easiest to defend in the regulatory arena, not on what works best in the marketplace.

11. We do not see any assumption of risk by SDG&E that might justify tampering with the benchmark through Z factors.

12. External events can influence cost elements that are normally manageable. But the petition for modification procedure provides a remedy if something happens that would render the incentive mechanism unreasonable.

13. Z factors are a feature of our NRF for certain telecommunications utilities. The NRF is a far more sweeping reform than the experiment under consideration here.

14. For CCC, incentive regulation means the utility should bear some risk for all costs incurred in regulated activities. For SDG&E, incentive regulation means putting the utility at risk for costs that the utility can manage effectively but imposing no risk for costs deemed beyond management control. These proposals are philosophical opposites. Neither proposal is clearly right or wrong. Probably no category of cost is wholly beyond management's ability to influence, but that concession does not mean the utility must bear some level of risk for everything.

15. We want a PBR experiment designed to proceed with minimal regulatory intervention. Adopting Z factors or the CCC proposal would make such intervention more likely than not.

16. Probably any forecasting exercise presents some opportunities for gaming, but we do not see any unusual opportunities in the G&D mechanism, as modified today.

17. Any settlements and awards pertaining to fuel and fuel-related costs for electric operations and costs of purchased power should offset SDG&E's G&D cost results, in effect sharing such gains between ratepayers and shareholders. The same treatment should apply to litigation gains affecting costs covered by the gas

Good!

procurement PBR mechanism. Sharing should apply to funds recovered from legal activities SDG&E initiates during the experiment.

18. Administrative and general expenses, which include legal expenses, are most efficiently set through test year ratemaking in GRCs.

19. Running power plants, such as SONGS 2 and 3, is one of electric utility management's primary obligations and a key indicator of management skill.

20. The fact that SDG&E holds only a minority interest in SONGS 2 and 3 does not justify shifting to SDG&E's ratepayers all or part of performance risks properly borne by shareholders.

21. The joining parties agreed on many changes to SDG&E's original G&D proposal. These changes, other than those discussed in Section 3.2 of today's decision, are reasonable.

22. Economy energy modeling parameters should be determined in the ECAC proceeding.

23. The procedures and protocols for benchmarking short-term purchases, as described in Section 3.3.2 of today's decision, are reasonable.

24. The joining parties' proposal for retention of reasonableness review in limited circumstances is appropriate and consistent with the purposes of this PBR experiment.

25. Any changes to the reserve margin methodology would be developed in other proceedings and implemented for benchmarking purposes in SDG&E's then-current ECAC.

26. QF contract administration and uranium procurement will not receive scrutiny for reasonableness unless SDG&E's overall ECAC costs deviate substantially from the forecast. The reasonableness assessment procedure maintains a continuing level of regulatory supervision. We accept the procedure on an experimental basis but direct that our monitoring and evaluation program specifically address its effectiveness.

27. Promotion of productive efficiency in operations is an appropriate goal for utility regulators to keep in mind.

28. Expanded incentives for gas utilities are a logical complement to the increasing openness and competitiveness in the gas industry.

29. The gas procurement PBR is experimental and is designed to suit the needs of SDG&E's particular situation, e.g., SDG&E's location, relevant gas supply markets, and access to transportation, as well as its customers' service requirements.

30. The gas procurement mechanism involves a two-part benchmark designed to measure SDG&E's gas purchasing performance and provide SDG&E positive incentives to pursue low-cost gas purchase and delivery. Part A serves to encourage SDG&E to minimize its gas commodity costs within its major supply markets or basins. Part B provides SDG&E incentives to lower its total delivered (commodity and transportation) cost of gas by allowing shareholders to earn a percentage of cost "savings."

31. The benchmarks for both parts are based on calculations of the 30-day market price for gas. At this time, we find the use of this "spot" price information appropriate in establishing the benchmarks.

32. The Part A benchmark incorporates an asymmetric deadband. The asymmetry is reasonable in the context of the gas PBR mechanism, considering its experimental character.

33. Part B is designed to provide SDG&E positive incentives to make the lowest total cost decisions based on available gas supply and delivery alternatives, while maintaining core service reliability.

34. Compared to Part A, Part B provides a more comprehensive measure of SDG&E's performance. Part B's smaller percentage of reward, relative to Part A, reflects uncertainty about the impact of FERC's Order 636 (capacity release program) on the gas market supplies and transportation capacity availability. At the end of

this two-year experiment, we expect to consider whether the two-part design is still applicable.

35. SDG&E should analyze all kinds of gas purchase opportunities. The spot-based benchmark does not prevent or discourage such analysis.

36. Gas producers, over time, must recover a range of costs, including costs of developing new supplies. Inevitably, the marketplace will accommodate such cost recovery. We cannot justify releasing a substantial part of SDG&E's gas supply portfolio from any kind of accountability (through either benchmarking or reasonableness review) in order to achieve the speculative benefits of hastening the development of a "forward" market in natural gas.

37. The PBR experiment directly affects almost half of SDG&E's revenue requirement.

38. The monitoring plan is established primarily to follow the implementation of the experiment, providing periodic progress reports. The monitoring plan we adopt is substantially that of the joining parties.

39. The evaluation plan must measure the experiment's successes or failures with respect to our regulatory objectives.

40. DRA should perform three scheduled audits of the supporting data in the monitoring reports. The audits can be useful (1) to check whether the M&E plan, as well as the experiment itself, performs as expected and (2) to allow for timely corrective actions, if necessary.

41. Other energy utilities, UCAN, other state agencies, the independent power industry, and other affected groups and communities are urged to communicate their concerns and findings to SDG&E, DRA, and/or CACD during the experiment, and to provide input to M&E.

42. SDG&E should submit to DRA, and to CACD's Environmental and Energy Advisory Branch, monthly G&D reports 75 days after the end of each reporting period, as described in Section 5.1.3.1.

43. To evaluate how accurately the benchmark model reflects SDG&E's system, SDG&E should perform two ELFIN backcast studies during the experiment. DRA will consult with SDG&E and determine the studies' schedule.

44. SDG&E should file and serve two annual G&D reports 90 days after the first and second anniversaries of implementation of the G&D mechanism. Each report should describe the results for that year, and set forth calculations for shareholders' reward/penalty. SDG&E should include detailed explanation of the variance between actual and benchmark costs. SDG&E should also include in its second annual report a comprehensive analysis of the G&D mechanism's results and effectiveness, a discussion of lessons learned from the experiment, and a detailed assessment, and justification if applicable, of its continuation.

45. SDG&E should file and serve its annual G&D reports in this docket and in its then-current ECAC proceeding.

46. SDG&E should submit a monthly gas procurement report to DRA and CACD's Environmental and Energy Advisory Branch 60 days after the end of each reporting period, as described in Section 5.1.3.2.

47. SDG&E should continue to submit to DRA all currently required confidential reports related to gas procurement.

48. SDG&E should file and serve two annual gas procurement reports 90 days after the first and second anniversaries of implementation. Each report will include results of the mechanism for that year, and calculations for shareholders' rewards/penalties, together with detailed explanation of the variance between actual and benchmark costs.

49. SDG&E should file its annual gas procurement report in this docket and in its then-current ECAC proceeding.

50. Two complete annual cycles are probably needed to obtain reasonably reliable data for evaluating the effectiveness of these PBR mechanisms.

Conclusions of Law

1. SDG&E need not show that its proposals are superior to all other conceivable PBR experiments. SDG&E should show, however, that the PBR experiments it proposes have reasonable potential for improving on existing regulation, without unreasonable jeopardy to regulatory goals if the experiments prove disappointing.

2. SDG&E should support its PBR application by a showing (1) that the experiments reasonably respond to our ratemaking and other relevant regulatory goals; (2) that the experimental design enables us to judge the success of the experiments; and (3) that the experiments do not in themselves create unreasonable risks. SDG&E has made the requisite showing in support of its gas procurement proposal. The record indicates that the joining parties' G&D proposal should be rejected, but that the proposal would be acceptable if modified as discussed in Sections 3.2 through 3.2.4 of the foregoing opinion.

3. If an external event occurs that clearly, uncontrollably, and massively affects the benchmarks, or other crucial aspect of the PBR mechanism, we should take remedial action or halt the experiment.

4. This proceeding is an application by the utility, not a generic investigation begun on our initiative. In this setting, we give weight to the utility's desires regarding the kind of PBR experiment(s) it is willing to conduct.

5. The Commission is statutorily charged with ensuring that LDCs and electric utilities provide safe, reliable, environmentally sensitive services at reasonable rates and on a nondiscriminatory basis.

6. During the gas PBR experiment, we may need to modify the gas price indices to deal, for example, with new supply basins. Such modification would require our prior approval. SDG&E should file an advice letter to request a change already contemplated in

the record herein. For other changes, SDG&E should file a petition to modify today's decision.

7. During the PBR experiments, SDG&E should continue collecting and submitting information necessary to fulfill its current CPUC reporting requirements.

8. DRA and CACD should both prepare evaluation reports. We encourage the two divisions to perform independent analyses but to share information and coordinate to minimize duplicative efforts.

Good!

9. SDG&E's monthly and annual reports on the G&D and gas procurement experiments should be public documents.

10. SDG&E should indicate its election to proceed with a G&D mechanism modified to conform to this decision, or instead to continue under current ratemaking policies. SDG&E should file and serve its election within two weeks of the effective date of this decision.

11. SDG&E should proceed with the gas procurement mechanism, whether or not SDG&E elects to proceed with the G&D mechanism.

12. No later than five calendar days after SDG&E files its election, it should submit its advice letter filing(s). These should contain tariffs revising, to the extent necessary pursuant to this decision, the draft gas procurement and (assuming SDG&E elects to proceed with the G&D experiment) the draft G&D tariffs previously submitted. The advice letter(s) should be effective no sooner than August 1, 1993.

13. SDG&E should file, at or before the time its second annual report is due, an appropriate pleading (probably a petition for modification of this decision or a new application, depending on the extent of the proposed changes to the program) seeking authority to extend, make permanent, discontinue, or modify the PBR mechanisms.

14. Rate changes during the PBR experiment should normally be made during the reasonableness review phase of the ECAC.

15. This order should take effect immediately to permit timely implementation of the PBR mechanisms.

## O R D E R

**IT IS ORDERED** that:

1. The application of San Diego Gas & Electric Company (SDG&E) for approval of a two-year experimental performance-based ratemaking mechanism, governing SDG&E's procurement operations as a gas utility, is granted as set forth in the foregoing opinion, findings of fact, and conclusions of law. SDG&E shall file an advice letter on July 12, 1993, containing any necessary revisions to its draft gas tariffs previously submitted in this proceeding. The advice letter shall be effective no sooner than August 1, 1993.

2. The application of SDG&E for approval of a two-year experimental performance-based ratemaking mechanism, governing SDG&E's generation and dispatch (G&D) operations as an electric utility, is denied.

3. SDG&E may file and serve, no later than July 7, 1993, its election to proceed with a G&D mechanism modified to conform to the foregoing opinion, findings of fact, and conclusions of law. If SDG&E elects to proceed, it shall file an advice letter on July 12, 1993, containing all necessary revisions to its draft electric tariffs previously submitted in this proceeding. The advice letter shall be effective no sooner than August 1, 1993.

4. The gas procurement mechanism and (if SDG&E elects to proceed) the G&D mechanism shall be monitored during the experiment and evaluated as set forth in the foregoing opinion, findings of fact, and conclusions of law.

5. This docket shall remain open during the experiment. Also, Phase 2 of this proceeding shall consider SDG&E's proposals for experimental performance-based ratemaking to govern additional areas of utility operation.

This order is effective today.

Dated June 23, 1993, at San Francisco, California.

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

We will file a joint written concurring opinion.

/s/ PATRICIA M. ECKERT
/s/ P. GREGORY CONLON
Commissioners

**APPENDIX A**
**Page 1**

## Table of Technical Acronyms and Abbreviations

| | | |
|---|---|---|
| AER | - | annual energy rate mechanism |
| ALJ | - | Administrative Law Judge |
| BCAP | - | Biennial Cost Allocation Proceeding |
| BTU | - | British thermal unit (a measure of heat energy) |
| CACD | - | Commission Advisory and Compliance Division |
| CCC | - | California Cogeneration Council |
| CEERT | - | Coalition for Energy Efficiency and Renewable Technologies |
| CPUC | - | California Public Utilities Commission |
| DRA | - | Division of Ratepayer Advocates |
| ECAC | - | Energy Cost Adjustment Clause |
| economy energy | - | purchased electric energy; nonfirm and subject to interruption. Economy energy is purchased by the utility when it is more cost effective to buy energy than to generate it with the utility's own system. |
| ELFIN | - | Commission sanctioned modeling program utilized to emulate an electric utility's operating system |
| El Paso | - | El Paso Natural Gas Company |
| Enron | - | Enron Gas Services Corporation |

**APPENDIX A**
**Page 2**

| | | |
|---|---|---|
| FEA | - | Department of the Navy and all other Federal Executive Agencies |
| FERC | - | Federal Energy Regulatory Commission |
| G&D | - | electric generation and dispatch |
| GRC | - | General Rate Case |
| I. | - | CPUC investigation |
| IBP | - | Identified Basin/Receipt Point |
| IER | - | incremental energy rate |
| Joining Parties | - | SDG&E, DRA, UCAN, FEA and CEERT |
| Joint Testimony | - | The prepared testimony of the joining parties on SDG&E's Performance Based Ratemaking Proposal for Generation and Dispatch and Monitoring and Evaluation |
| LDC | - | Local Distribution Company |
| M&E | - | Monitoring and Evaluation |
| MMBtu | - | Millions of British thermal units |
| MMcfd | - | Millions of cubic feet per day (measure of volumes over gas pipelines) |
| MW | - | megawatt (a measure of electric generating capacity) |
| NRF | - | New Regulatory Framework (telecommunications) |
| PBR | - | Performance-Based Ratemaking |
| PG&E | - | Pacific Gas and Electric Company |

**APPENDIX A**
**Page 3**

| | | |
|---|---|---|
| PGC | - | Purchased Gas Cost |
| PU Code | - | Public Utilities Code |
| QF | - | Qualifying Facility |
| RFP | - | Request for proposal |
| SDG&E | - | San Diego Gas and Electric Company |
| sharing mechanism | - | formula for sharing costs/savings above and below the benchmark |
| SoCalGas | - | Southern California Gas Company |
| SONGS 2 and 3 | - | San Onofre Nuclear Generating Station Units 2 and 3 |
| TCF | - | Target Capacity Factor |
| Transwestern | - | Transwestern Pipeline Company |
| true-up | - | the practice of updating initial ECAC forecast variables to their actual values |
| UCAN | - | Utility Consumers Action Network |
| UEG | - | Utility Electric Generation |
| Z factors | - | limited, exogenous ECAC-related cost items |

**(End of Appendix A)**

**APPENDIX B**
**Page 1**

## Generation and Dispatch

All of the provisions listed in Appendix B come from the joining parties' proposal, as modified in today's decision. This appendix is only a summary; it does not substitute for the discussion, findings, and conclusions of the foregoing opinion and order.

**Cost/savings sharing formula**

Below is a description of the adopted sharing formula illustrated in Figure 2 of Appendix B.

If SDG&E's performance during the twelve months covered by the ECAC forecast falls within one percent above or below the performance benchmark, the additional costs or savings over the performance benchmark would be shared by ratepayers seventy percent and shareholders thirty percent.

If SDG&E's actual costs during the twelve months covered by the ECAC forecast exceed the benchmark by more than one percent but less than six percent, then the amount of these costs in excess of one percent would be shared equally by ratepayers and shareholders. If SDG&E's costs fall below the benchmark by more than one percent but less than six percent, then the amount of these savings between one and six percent will be shared equally by ratepayers and shareholders.

If SDG&E's costs during the twelve months covered by the ECAC forecast exceed the benchmark by more than six percent, then ratepayers will pay the amount of these costs in excess of six percent above the benchmark, subject to an ECAC reasonableness review.

If SDG&E's costs during the twelve months covered by the ECAC forecast fall below the benchmark by more than six percent, resulting in additional savings, ratepayers will automatically receive all of the benefits of the cost reductions beyond the six percent.

An investigation will be triggered by costs during the twelve months covered by the ECAC forecast being either above or below the benchmark by more than six percent at the end of the year. The investigation is designed to determine the reasons for the fluctuations in performance.

**APPENDIX B**
**Page 2**

**Performance benchmark calculation**

The parties will continue to use the ELFIN model to establish a performance benchmark of G&D and purchased power costs. Modifications to the version of the model currently used in ECAC proceedings (ELFIN v. 1.95) may be adopted, subject to approval in the ECAC.

At year end, actual G&D expenses will be compared to the performance benchmark, and the difference will be allocated per the sharing mechanism. Several "trued up" values are to be input into the ELFIN model monthly, such as:

- Weekly loads and peaks of SDG&E's retail customers. (Additional loads due to sales for resale will be excluded from the benchmarks.)
- Actual accrued gas and oil expenses.
- Gas dispatch prices equal to the average of the highest 50%[1] of all gas used by SDG&E.
- QF purchased energy volumes and expenses.
- New test heat rates following plant overhauls.
- SONGS 1 costs.

---

[1] DRA and SDG&E agree that forecasts of economy energy purchases should reflect the relationship between the price and quantity of economy energy and the utility's *marginal* fuel cost. The lower cost gas is unlikely to be on the margin. The joining parties stipulate that the weighted average cost of the most expensive 50% of gas purchases for the performance benchmark serves as a reasonable proxy to the marginal cost of gas. The average of the most expensive 50% means that gas prices at approximately the seventy-fifth percentile of monthly gas costs will be used in the performance benchmark calculation. The joining parties believe that this definition prevents the production cost model from rejecting economy energy purchases when such purchases could avoid the use of more expensive gas by SDG&E.

**APPENDIX B**
**Page 3**

The following elements of the benchmark are subject to incentive treatment and will be input as forecast: nuclear fuel carrying costs; forced outages (forecast based on historical averages); maintenance outages[2]; fuel inventory costs; economy energy availability and price (except as indicated in note 1 above); wheeling and transmission costs; purchases of short-term firm capacity and long-term firm capacity.

**Nuclear Operations**

The TCF and reasonableness reviews of SONGS 2 and 3 are retained. The availability, generation cost, and nuclear output for SONGS 2 and 3 will be trued up so that the ELFIN model yields the actual GWh of nuclear generation by each unit in each of the 12 months simulated.

The TCF has a floor of 55% and a ceiling of 80%. If performance of the plant falls between 55% and 80%, there is no penalty or a reward. If the plant operates at a capacity factor lower than 55%, a penalty is calculated using the difference between the actual capacity factor and 55%. Conversely, if the plant operates over an 80% capacity factor, a reward is calculated using the difference between the actual capacity factor and 80%. Southern California Edison, SDG&E, and ratepayers share the TCF penalties and rewards equally.

In addition to the TCF, the Commission reviews the reasonableness of other aspects of the SONGS operation such as outages and fuel cycle durations.

**Short-term capacity contract provisions**

SDG&E's future short term firm capacity contracts shall be procured only through a revised Request for Proposal(RFP) process that adheres to the following protocols:

- SDG&E will only negotiate with the best respondents. The "best respondents" shall be defined as the most cost-effective viable offers that can supply up to twice SDG&E's capacity needs.

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[2] Maintenance outages are scheduled and their schedule will be forecast based on the best information available at the time the forecast is prepared. Forced outages are those outages which are unplanned (not scheduled). This applies to fossil plants; nuclear plant outages are trued up.

- The best respondents will be determined solely from the results of the initial solicitations. There will not be a "revised bid" stage for determining those eligible for negotiations with SDG&E.

- SDG&E will solicit annual, summer and winter offers.

- SDG&E will generally undertake subsequent negotiations with the best respondents to seek improvements in the price and conditions of the offer.

**Implementation**

Certain procedures will be instituted mostly in ECACs for implementation of the PBR mechanism:

- For the forecast period prior to the establishment of the PBR mechanism, the parties have agreed that there be no retroactive reward for signed contracts. The first year performance benchmark will incorporate recently signed contracts as signed.

- Starting in January 1994, those bidders qualifying as "best respondents" to SDG&E's power solicitation which meet SDG&E's capacity need shall form the basis for calculating the performance benchmark.

- All contract concessions or savings realized through negotiations will be subject to the sharing mechanism.

- For the January to April 1994 period, a review procedure will be adopted because the selection of the best responses will not be resolved as part of the current ECAC forecast proceeding. SDG&E and DRA have agreed on the principle of using competitive RFP offers to set the benchmark. That benchmark and actual contract terms would be used in determining any sharing. SDG&E will provide to DRA its analysis of the most cost-effective responses to the 1993 RFP within 60 days of receipt of the responses. Any challenges to the selection of responses for the January through April 1994 time period will be handled through a special ECAC proceeding if requested by DRA.

**APPENDIX B**
**Page 5**

- For the May 1994-April 1995 ECAC period, the short-term firm capacity contract performance benchmark will be determined based on the Commission-adopted ECAC forecast. In that proceeding, it will be determined whether SDG&E has included the best responses that met its capacity need as part of past RFP results.

- Subject to ECAC approval, the first year benchmark will include a 200 MW Pacificorp agreement of one year, a multi-year BPA exchange which was recently signed, and/or a one year 50 MW purchase agreement with Louis Dreyfus Electric Power Company.

- MW of firm capacity from short-term contracts will be determined based on the most recently adopted reserve margin.

- In subsequent years of a multi-year contract, actual terms of the short-term firm capacity contract will be included in the calculation of the benchmark, not "best respondent" prices. Improvements from the best RFP offers are subject to sharing for only the first year of the contract.

Figure 1. Generation & Dispatch Mechanism.

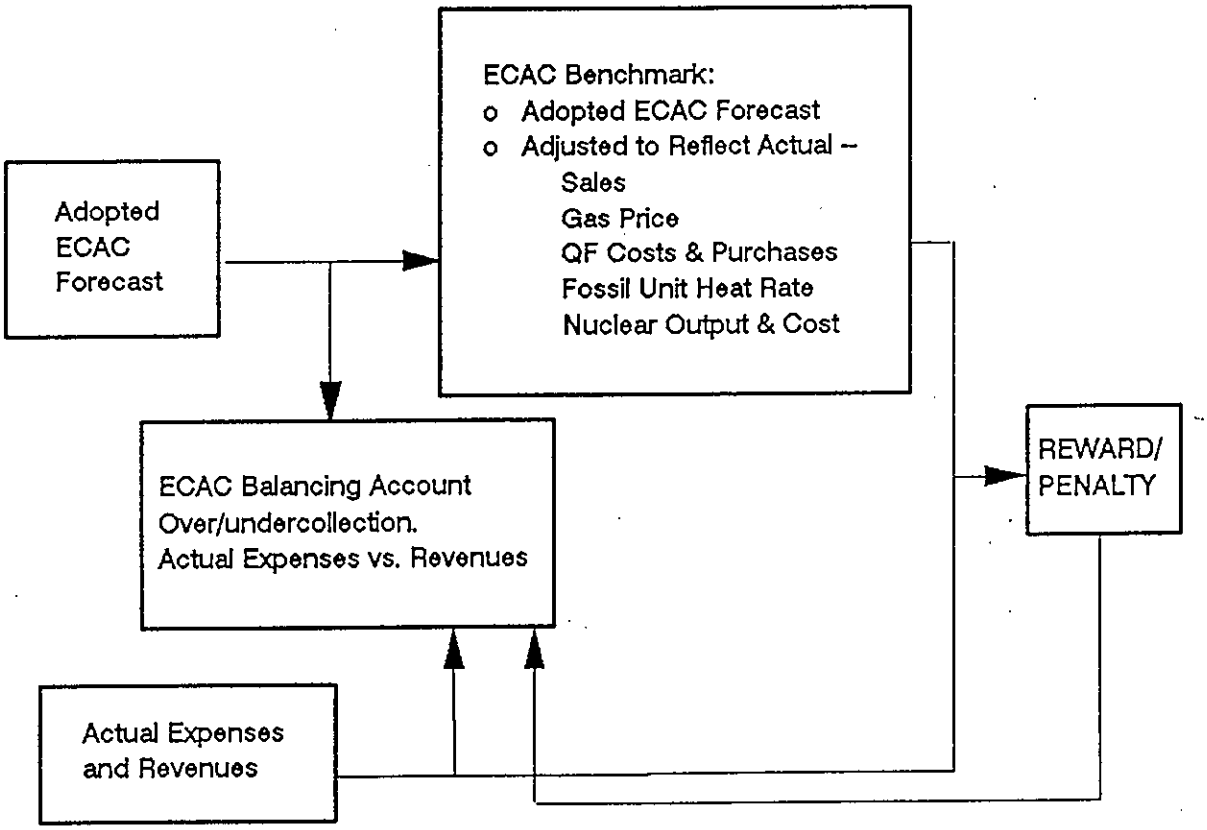
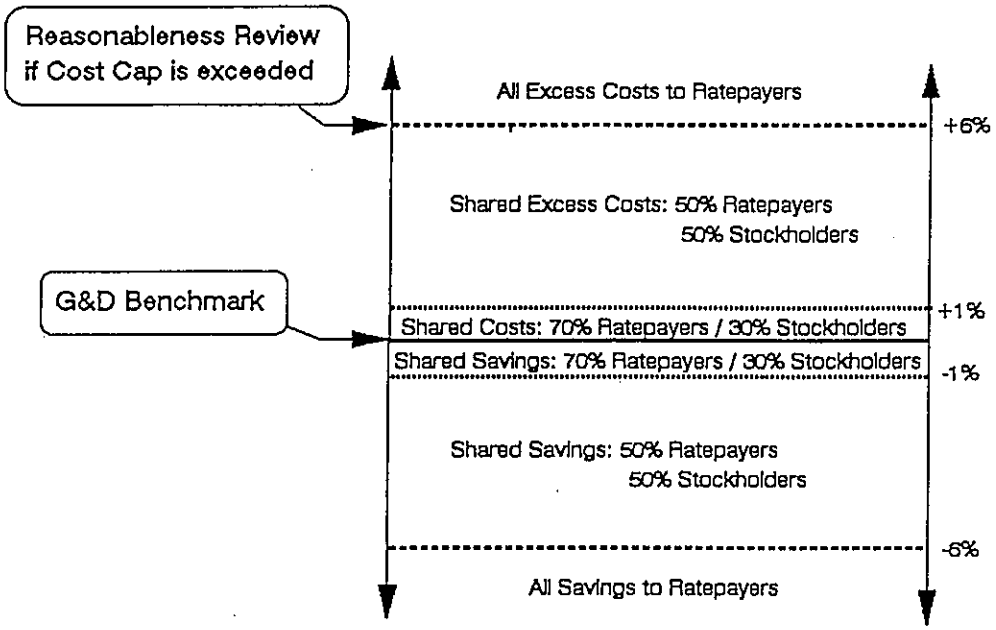


Figure 2. G&D Sharing Mechanism.




[END OF APPENDIX B]

# APPENDIX C

# GAS PROCUREMENT CALCULATIONS and ENRON'S PROPOSED OPTIONAL "SAFE HARBOR" PROVISION

## *GAS PROCUREMENT CALCULATIONS -- PART A*

Part A benchmarking and cost/savings sharing methodology is a multi-step process. Wherever possible, calculations are summarized in algebraic form for ease of reference.

**Average Index, AI.** An average index is developed for each IBP to represent the average spot price available at that basin/pipeline receipt point. It is the simple average of basin price indices obtained at the first of each month from the three chosen publications.

$$AI = \sum ( BI_{Publication\ 1} + BI_{Publication\ 2} + BI_{Publication\ 3} ) \div 3$$

where, AI: Average Index, in dollars per MMBtu, for each of the following basin/pipeline receipt point sources:

- Anadarko/El Paso
- Permian/El Paso
- San Juan/El Paso
- Permian/Transwestern

BI: Basin Index data from each of the three previously identified publications for the gas prices for each IBP source.

**Transportation Rate, $TR_{actual}$.** For each IBP, an actual transportation rate is determined for delivery on SDG&E's interruptible or firm transportation from that IBP to the California (SoCalGas) border. The transportation cost includes applicable reservation charge, converted to dollars per MMBtu, assumes 100% utilization rate, and includes fuel usage cost.

**Proxy Basin Index, PBI.** The PBI is used to account for gas SDG&E acquires at a point other than an IBP. This index, which approximates the commodity price of non-IBP procurement options, is the volume-weighted average of the Average Index from each IBP.

$$PBI = [ \sum ( AI \times DV_{IBP} ) ] \div [ \sum ( DV_{IBP} ) ]$$

where, $DV_{IBP}$: Delivered Volumes, in MMBtu, recorded by SDG&E as transported from each IBP, corresponding to the calculated Average Index, to the California (SoCalGas) border.

# APPENDIX C

**Proxy Transportation Index, PTI.** The PTI is the transportation complement to the proxy basin index. It is the volume-weighted average of the Market Clearing Price for Transportation, $TR_{CLR}$, which includes the transportation fuel charge and may be defined as either:

1. posted or discounted interruptible transportation rate on El Paso and Transwestern, or
2. rate for monthly firm interstate capacity including reservation charge and all volumetric charges as posted by El Paso and Transwestern, or
3. rate for monthly firm interstate capacity on El Paso and Transwestern including reservation charges and all volumetric charges as posted by holders of such capacity,

from each IBP to the California border, whichever is more representative of the market price for transportation.[1]

$$PTI = \Sigma ( TR_{CLR} \times DV_{IBP} ) \div \Sigma DV_{IBP}$$

where, $TR_{CLR}$: Transportation Rate, in dollars per MMBtu, including fuel usage charge for interruptible deliveries from each IBP to the California (SoCalGas) border as posted by the interstate pipelines.

**Benchmark, $BM(A)_{total}$.** The Part A benchmark is the sum of delivered costs of gas from the four IBPs and all other sources. Reflected in the benchmark are commodity costs derived from basin price indices, transportation costs based on actuals, and actual volumes. The benchmark represents the low end of the market-based cost range below which shareholders receive 50% of the savings.

$$BM(A)_{total} = [\Sigma ( AI + TR_{act}) \times DV_{IBP} ] + [ ( PBI + PTI ) \times DV_{OSG} ]$$

where, $BM(A)_{total}$: Part A benchmark, in total dollars, for each month.

$TR_{act}$: Transportation Rate, in dollars per MMBtu, including the applicable reservation charge and fuel usage charge actually incurred by SDG&E for each IBP to the California (SoCalGas) border.

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[1] SDG&E originally proposed to reflect the maximum Interruptible Transportation Rate in the calculation of this proxy. At the January 25-18 workshops, DRA suggested that the definition of this proxy transportation index be expanded to cover a broader range of potential scenarios that may occur once capacity brokering comes into play. SDG&E subsequently modified its proposed calculation of this proxy index through revisions to its draft tariff language (Exhibit 12, Revised Appendix 1 to Chapter V of Report on Performance-Based Ratemaking Proposal for Gas Procurement).

## APPENDIX C

$DV_{OSG}$: Delivered Volumes, in MMBtu, is equal to the sum total of recorded other-source gas supplies recorded by SDG&E.

**Deadband Rate, $DB(A)_{rate}$.** A Deadband Rate, in dollars per MMBtu, is developed to incorporate the 2% "premium" over spot prices designed for the Deadband Total. The $DB(A)_{rate}$ is calculated by first multiplying the volume-weighted average of the Average Index for each IBP and the Proxy Basin Index by 102%. This product is then added to the volume-weighted average of the actual transportation rates from the IBPs and the Proxy Transportation Index.

$$DB(A)_{rate} = \left\{ [\Sigma(AI \times DV_{IBP}) + (PBI \times DV_{OSG})] \div [\Sigma(DV_{IBP}) + DV_{OSG}] \right\} \times 102\%$$

$$+ \left\{ [\Sigma(TR_{act} \times DV_{IBP}) + (PTI \times DV_{OSG})] \div [\Sigma(DV_{IBP}) + DV_{OSG}] \right\}$$

**Deadband Total, $DB(A)_{total}$.** Finally, the Deadband Total, in dollars, is determined by multiplying the Deadband Rate by the total actual delivered volumes. The Deadband Total is the high end of the total market-based cost range, above which 50% of the excess costs (or difference between deadband total and actual costs) will be absorbed by shareholders. The 2% premium over spot price reflected in the Deadband Total is formulated in recognition of SDG&E's obligation to maintain core supply reliability.

$$DB(A)_{total} = DB(A)_{rate} \times [\Sigma(DV_{IBP}) + DV_{OSG}]$$

**Purchased Gas Cost, PGC.** On a monthly basis, SDG&E's purchased gas cost is calculated using recorded data. This cost includes variable transportation costs and applicable reservation charges for the amount of firm capacity used by SDG&E on each pipeline; fuel charges; and any additional fees or surcharges associated with the delivery of all of SDG&E's gas supplies to the SoCalGas system.[2] Also included are any offsetting revenues from SDG&E's off-system sales and any gains, losses, and expenses related to Gas Futures transactions.

$$PGC = \Sigma[(BP_{IBP} + TR_{act}) \times DV_{IBP}] + \Sigma(DP_{OSG} \times DV_{OSG}) + \Sigma MC$$

---

[2] As described in SDG&E's Response to CSC's Initial Request for Data - Gas, Question 6 (Exhibit 15), actual costs incurred by SDG&E for the procurement and delivery of gas supplies refer to the dollar amount due to the individual suppliers and pipelines as recorded on the invoices received by SDG&E each month. Adjustments to booked costs for any invoice subsequent to the month during which the gas was purchased will be applied to that month of purchase so that the proper comparison can be made with the gas procurement benchmarks.

## APPENDIX C

where, $BP_{IBP}$: Basin Price, in dollars per MMBtu, of the gas supplies from each of the IBPs incurred by SDG&E.

$DP_{OSG}$: Delivered Price, in dollars per MMBtu, of the gas supplies from each of those sources other than IBPs incurred by SDG&E.

MC: Miscellaneous Costs, in dollars, for additional fees, surcharges and offsetting revenues as described above.

**Shared Savings/Costs.** Part A Shared savings/costs are determined at the end of each 12-month period after implementation by comparing SDG&E's total PGC against Part A Benchmark and Deadband for the year.

$$PGC \leq BM(A)_{total} \Rightarrow \text{Shared Savings} = PGC - BM(A)_{total}$$

$$PGC \geq DB(A)_{total} \Rightarrow \text{Shared Costs} = DB(A)_{total} - PGC$$

**Shareholders' Reward/Penalty.** Shareholders' Reward and Penalty equals to 50% of the Shared Savings and Costs, respectively.

### *GAS PROCUREMENT CALCULATIONS -- PART B*

Basin price data used in calculating the Part B Benchmark is the same as that used in Part A. As with Part A, the development of the Part B benchmark is a multi-step process. The benchmark is the product of the weighted average delivered price indices and actual volumes. First, separate Delivered Price Indices are developed for gas delivered on the El Paso and Transwestern systems.

**Delivered Price Index on El Paso, DPI(EP).** This index is the simple average of the Average Indices of the three identified basins on the El Paso system.

$$DPI(EP) = \sum [\ AI(EP) + TR_{max}(EP)\ ] \div 3$$

where, AI(EP): Average Index, in dollars per MMBtu, of each IBP on El Paso.

$TR_{max}(EP)$: Transportation Rate, in dollars per MMBtu, for firm delivery at the maximum posted rate from each IBP on El Paso's pipeline system, including the applicable reservation and commodity charges and fuel charges.

## APPENDIX C

**Delivered Price Index on Transwestern, DPI(TW).** This index is the sum of the Average Index and the transportation rate for the Permian/Transwestern IBP[3]. The transportation rate is for Transwestern firm delivery at the maximum posted rate, including applicable reservation and commodity charge and fuel usage cost.

$$DPI(TW) = AI(TW) + TR_{max}(TW)$$

**Weighted Average Delivered Price Index, $DPI_{WA}$.** The weighted average index is calculated by applying weighting factors to El Paso (70%) and Transwestern (30%) delivered price indices. These factors represent a distribution of firm capacity originally available through SoCalGas from El Paso and Transwestern and are referenced in SDG&E's gas service contract with SoCalGas.

$$DPI_{WA} = [\, DPI(EP) \times 70\% \,] + [\, DPI(TW) \times 30\% \,]$$

**Part B Benchmark, $BM(B)_{total}$.** The Part B benchmark developed each month is the product of the weighted average delivered price index and the actual delivered volumes of gas purchased by SDG&E in that month.

$$BM(B)_{total} = DPI_{WA} \times [\, \Sigma (DV_{IBP}) + DV_{OSG} \,]$$

**Purchased Gas Cost, PGC.** This amount is same as that already calculated in the Part A of the mechanism.

**Part B Shared Savings, SS(B).** Shared Savings results if at the end of the 12-month period, SDG&E's recorded PGC is less than the Part B Benchmark. The I Shared Savings amount is equal to PGC less the Benchmark.

$$SS(B) = PGC - BM(B)_{total}, \text{ and } PGC \leq BM(B)_{total}.$$

**Part B Reward, Reward(B).** Whenever SDG&E's actual purchased gas cost is less than the Part B benchmark, its shareholders would earn a reward equalling 5% of the savings.

$$Reward(B) = SS(B) \times 5\%$$

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[3] An simple average of the delivered cost on the Transwestern system would be calculated if there are additional basins identified on the Transwestern system in the future.

## APPENDIX C

***OUTLINE OF ENRON PROPOSAL FOR OPTIONAL "SAFE HARBOR" PROVISION***

- A maximum of 25% of SDG&E's porfolio may be placed in the "safe harbor," and will not be eligible for inclusion in the calculation of sharable savings/costs.

- SDG&E has the option to place contracts either in the "safe harbor" or in the indexed mechanism, but may only exercise this option once at the execution of the contract.

- SDG&E may assign to the "safe harbor" contracts of any term greater than 30 days. These contracts may contain any pricing provision except indexing the contract price to spot prices.

- SDG&E shall submit to the market a minimum of three RFPs for non-spot indexed gas supply contracts during the initial two year term of the gas procurement performance-based ratemaking mechanism.

- Contracts assigned to the "safe harbor" are deemed reasonable for their full term if the following conditions are met:
  - SDG&E receives a minimum of five bids from eligible suppliers for the amount of supply placed out to bid through a request for proposal (RFP) issued by SDG&E, and
  - all suppliers eligible to bid for the supply offered through the RFP process must have previously engaged in sales of spot gas to SDG&E and satisfactorily performed all obligations under such sales transactions. In addition, SDG&E may impose such other standards of creditworthiness for eligible suppliers as it deems suitable, subject to approval by the Commission of an advice letter filing containing such standards.

**[END OF APPENDIX C]**

# APPENDIX D

## Table E-1. Monthly G&D Report, Electric Fuel & Purchased Power Analysis.

| Peak Demand (MW): | Reporting Period: Month/Year ** | | | | | Year-to-Date | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Actual (a) | ECAC Forecast | Benchmark (b) | Variance (c=a-b) | %Variance (c/b)-1 | Actual (a') | ECAC Forecast | Benchmark (b') | Variance (c'=a'-b') | %Variance (c'/b')-1 |
| ELECTRIC GENERATION & RECEIPTS (GWh) | | | | | | | | | | |
| Oil | | | | | | | | | | |
| Gas | | | | | | | | | | |
| Nuclear | | | | | | | | | | |
| Purchased Energy | | | | | | | | | | |
| Cogeneration | | | | | | | | | | |
| Off-System Sales | | | | | | | | | | |
| Total Energy | | | | | | | | | | |
| ELECTRIC FUEL COST ($000) | | | | | | | | | | |
| Oil | | | | | | | | | | |
| Gas | | | | | | | | | | |
| Nuclear | | | | | | | | | | |
| Purchased Energy | | | | | | | | | | |
| Purchased Capacity | | | | | | | | | | |
| Purchased Wheeling | | | | | | | | | | |
| Cogeneration | | | | | | | | | | |
| Cost of Off-System Sales | | | | | | | | | | |
| Total Fuel Costs | | | | | | | | | | |
| COST PER KWh IN CENTS | | | | | | | | | | |
| Oil | | | | | | | | | | |
| Gas | | | | | | | | | | |
| Nuclear | | | | | | | | | | |
| Purchased Energy | | | | | | | | | | |
| Cogeneration | | | | | | | | | | |
| Average Cost per KWh [2] | | | | | | | | | | |

] G&D mechanism's reporting period is on a calendar month basis. In instances in which ELFIN produces monthly reports that does not coincide the calendar month (resulting in the monthly benchmark data not being exactly comparable to the calendar month' s actual cost data), SDG&E should so indicate.

] Includes effects of off-system sales.

# APPENDIX D

## Table E-2. Monthly G&D Report, Input Data Sheet for G&D Trued-Up Analysis

NUMBER OF DAYS IN THE MONTH: 30

ACTUAL GENERATION DATA:

| | Actual Data | | | |
|---|---|---|---|---|
| | MW | MWh | Total Costs ($$) | Sources |
| Area System Peak | 3,247 | --- | --- | MOR |
| Upper 50% WACOG ($/mmcf) | --- | --- | 2.24 | Fuel Dept |
| WACOG ($/MMcf) | --- | --- | 2.20 | Fuel Dept |
| Oil | | 3,512 | 266,985 | MOR |
| Gas | | 445,713 | 15,169,151 | MOR |
| Nuclear: SONGS 1 | | 55,000 | 600,000 | Accounting Dept |
| Nuclear: SONGS 2 | | 140,000 | 900,000 | Accounting Dept |
| Nuclear: SONGS 3 | | 150,901 | 1,084,894 | Accounting Dept |
| Purch. Power incl. Indexed Resources | | 667,646 | 11,490,841 | RIT |
| Purchased Capacity | | | 10,379,597 | RIT |
| Transmission Wheeling | | | 708,516 | RIT |
| Cogeneration (Energy & Capacity) | | 85,872 | 6,676,644 | RIT |
| Firm/NonFirm Energy Sales | | (32,557) | (828,949) | RIT/IS |
| Others (undefined) | | 0 | 0 | |
| Total | 3,247 | 1,516,087 | 46,447,679 | |

LOAD & ENERGY DATA:

| | Actual Data | | | | | Elfin Model |
|---|---|---|---|---|---|---|
| | MW | MWh | | | | |
| System Requirement | 3,247 | 1,516,087 | | | | anpeak,sal |
| | | | | | | |
| Hourly Load Demand | Computer Data obtained from System Forecasting in EEI format | | | | | ECAC3.LD |

NATURAL GAS DISPATCH COST:

| | Actual Data | | | | | Elfin Model |
|---|---|---|---|---|---|---|
| | Border Price | Transport | Dispatch | | | |
| Natural Gas | ($/mmcf) | ($/mmcf) | ($/mmcf) | | | |
| Average of Upper 50% Gas | $2.24 | $0.30 | $2.54 | | | ngasfc |

SONGS NUCLEAR UNITS:

| | Actual Data | | Calculated Value | | | Elfin Model |
|---|---|---|---|---|---|---|
| | Costs $$ | Energy (MWh) | Costs/MWh $$/MWh | Available (%) | Unavailable (%) | |
| SONGS 1 | 600,000.00 | 55,000 | | 97.93% | 2.07% | so2zfr |
| SONGS 2 | 900,000.00 | 140,000 | | 90.86% | 9.14% | so2zfr |
| SONGS 3 | 1,084,894.00 | 150,901 | | 97.03% | 2.97% | so3zfr |
| Total | 2,584,894 | 345,901 | $7.47 | 92.74% | 7.26% | |
| SONGS 2 Maintenance Schedule/Rate | | | | | 0.00% | so2mr |
| SONGS 3 Maintenance Schedule/Rate | | | | | 0.00% | so3mr |

COGENERATION

| | Actual Data | | Calculated Value | | | Elfin Model |
|---|---|---|---|---|---|---|
| | Costs $$ | Energy (MWh) | Costs/MWh $$/MWh | Available (%) | Unavailable (%) | |
| Cogeneration | 6,676,644.00 | 85,872 | $77.75 | 81.13% | 18.87% | qfzzfr |

Notes:
MOR ===> Monthly Operating Report
RIT ===> Recapitulation of Interexchange Transaction
IS ===> Interconnection Sales Involving Section 9.(J)(2)c. of ECAC
WACOG ===> Weighted Average Cost of Gas at California Border

# APPENDIX D

'able E-3. Monthly G&D Report, Post Processor True-up Input Data Sheet (Example).

| | SOURCES | TABLE 2 | TABLE 3 | TABLE 7 | TABLE 8 |
|---|---|---|---|---|---|
| ATURAL GAS: | | | | | |
| WACOG ($/MMBtu) | Fuel Dept | 2453 | | | |
| Fixed Demand Charge | BCAP | | | | |
| | | | | | |
| Ignitor Transportation ($/MMBtu) | BCAP | 4.0439 | | | |
| StartUp Volume (M#Btu) | BCAP | 19 | | | |
| Ignitor Price ($/MMBtu) | BCAP | 5.81 | | | |
| | | | | | |
| Tier 1 Transportation Rate ($/MMBtu) | BCAP | 0.6479 | | | |
| Tier 1 Volume (M#Btu) | BCAP | 590 | | | |
| Tier 1 Price ($/MMBtu) | BCAP | 2.42 | | | |
| | | | | | |
| Tier 2 Transportation Rate ($/MMBtu) | BCAP | 0.2862 | | | |
| Tier 2 Volume (M#Btu) | BCAP | 0 | | | |
| Tier 2 Price ($/MMBtu) | BCAP | | | | |

| | | | | | |
|---|---|---|---|---|---|
| L/DIESEL: | | | | | |
| LSFO Generation (GWh) | MOR | | | | |
| Total LSFO Cost ($1,000) | MOR | | | | |
| | | | | | |
| Diesel Generation (GWh) | MOR | | | | |
| Diesel Cost ($1,000) | MOR | | | | |
| | | | | | |
| OGENERATION: | | | | | |
| Yearly Total Energy Costs ($1,000) | RIT | | | | |
| Yearly Total Capacity Costs ($1,000) | RIT | | | | |

| | | | | | |
|---|---|---|---|---|---|
| UCLEAR GENERATION: | | | | | |
| SONGS 1 Total Costs ($1,000) | Accounting Dept | | | | |
| SONGS 2 Total Costs ($1,000) | Accounting Dept | | | | |
| SONGS 3 Total Costs ($1,000) | Accounting Dept | | | | |

# APPENDIX D

## Table G-1. Monthly Gas Procurement Report, Schedule A.

| MONTH [1] | AVERAGE INDICES | | | | Proxy Basin | Part A Index | Part B Index | Adjusted WACOG | Total Cost | Part A | | | | Part B | | | Parts A & B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Permian (Transwst) | Permian (El Paso) | San Juan (El Paso) | Anadarko (El Paso) | | | | | | Benchmark | Deadband | Shared Svgs (Costs) | Reward (Penalty) | Benchmark | Shared Savings | Reward | TOTAL REWARD |
| August 1993 | | | | | | | | | | | | | | | | | |
| September | | | | | | | | | | | | | | | | | |
| October | | | | | | | | | | | | | | | | | |
| November | | | | | | | | | | | | | | | | | |
| December | | | | | | | | | | | | | | | | | |
| January 1994 | | | | | | | | | | | | | | | | | |
| February | | | | | | | | | | | | | | | | | |
| March | | | | | | | | | | | | | | | | | |
| April | | | | | | | | | | | | | | | | | |
| May | | | | | | | | | | | | | | | | | |
| June | | | | | | | | | | | | | | | | | |
| July | | | | | | | | | | | | | | | | | |
| 12-Month Total | | | | | | | | | | | | | | | | | |

[1] Gas Procurement mechanism's reporting period is on a calendar month basis. Show all available to-date information (e.g. December 1993 report should show August thru December 1993 data).

# APPENDIX D

## Table G-2. Monthly Gas Procurement Report, Schedule B.

REPORTING PERIOD: August 1993.

| SOURCE/PURCHASE TERMS (Volume In MMBtus) | SPOT PURCHASES | NON SPOT-INDEXED-PRICE CONTRACTS | | SPOT-INDEXED-PRICE CONTRACTS | |
|---|---|---|---|---|---|
| | | up to one year | longer than one year | up to one year | longer than one year |
| Four Identified Basin/Receipt Points | | | | | |
| Southwest – other than 4 IBPs | | | | | |
| California | | | | | |
| Canada | | | | | |
| All Others | | | | | |
| TOTAL GAS PURCHASE | | | | | |

[END OF APPENDIX D]

List of Appearances

Applicant: Keith W. Melville, Wayne P. Sakarias, and Alvin Pak, Attorneys at Law, for San Diego Gas & Electric Company.

Interested Parties: Ater, Wynne, Hewitt, Dodson & Skerritt, by Michael P. Alcantar, Attorney at Law, for Cogenerators of Southern California; Peter V. Allen, Attorney at Law, for Toward Utility Rate Normalization (TURN); David R. Branchcomb, for Henwood Energy Services, Inc.; Morrison & Foerster, by Jerry R. Bloom, Claudia S. Toussaint, and Lynn Haug, Attorneys at Law, for California Cogeneration Council; Rand Carroll, Attorney at Law, for the State of New Mexico; John D. Chandley, Attorney at Law, for California Energy Commission; Frank J. Cooley and Michael D. Mackness, Attorneys at Law, for Southern California Edison Company; Michael B. Day, Jerome Candelaria, and Leslie Lawner, Attorneys at Law, for Enron Gas Services Corp.; Norman J. Furuta, Attorney at Law, for Federal Executive Agencies; Grueneich, Ellison & Schneider, by Dian Grueneich and Mary Novak, Attorneys at Law, for the State of California Department of General Services; Adrian Hudson, for California Natural Gas Bulletin; Jeffrey E. Jackson and Daniel G. Clement, Attorneys at Law, for Southern California Gas Company; Douglas K. Kerner, Attorney at Law, for Independent Energy Producers/Geothermal Resource Association (IEP/GRA); Wayne Lepire, Phillip Endom, and Patrick Power, Attorneys at Law, for El Paso Natural Gas Company; William Marcus and Jeffrey A. Nahigian, for JBS Energy; Sara Steck Myers, Attorney at Law, for Coalition for Energy Efficiency and Renewable Technologies (CEERT); Roger J. Peters, Peter Ouborg, and Harry W. Long, Attorneys at Law, for Pacific Gas and Electric Company; David R. Pigott and Paul V. Gerst, Attorneys at Law, for Arroyo Energy, L.P.; Anderson, Donovan & Poole, by Edward G. Poole, Attorney at Law, for Anderson, Donovan & Poole; Patrick J. Power, Attorney at Law, for City of Long Beach; James A. Ross, for Regulatory & Cogeneration Services; Bartle Wells Associates, by Reed V. Schmidt, for California City - County Street Light Association; Michael Shames, Attorney at Law, for Utility Consumers Action Network (UCAN); Armour, Goodin, Schlotz & MacBride, by James D. Squeri, Attorney at Law, for Kelco Division of Merck & Co., Inc.; N. Vandenberg, for Transwestern Pipeline; Morse, Richard, Weisenmiller & Associates, Inc., by Robert B. Weisenmiller, for MRW & Associates, Inc.; Ater, Wynne, Hewitt, Dodson & Skerritt, by Divan Williams, Attorney at Law,

for Harbor Cogeneration; Eric C. Woychik, for Strategy Integration; and Van Horn Consulting, by Andrew J. Van Horn, for himself.

Division of Ratepayer Advocates: Judy Lamson, Attorney at Law, and Timothy Sullivan.

(END OF APPENDIX E)