ALJ/vdl

Decision 83 09 007 September 7, 1983

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern California Edison Company for authority to establish a major additions adjustment clause, to implement a major additions adjustment billing factor and an annual major additions rate to recover the costs of owning, operating, and maintaining San Onofre Nuclear Generating Station Unit No. 2.	Application 82-02-40 (Filed February 18, 1982; amended December 1, 1982)
In the Matter of the Application of San Diego Gas & Electric Company to add a major additions adjustment clause (MAAC) to its electric tariffs, to adjust its electric rates in accordance therewith upon operation of San Onofre Nuclear Generating Station Unit 2, and to modify its energy cost adjustment clause (ECAC) rates.	Application 82-03-63 (Filed March 18, 1982)

(Appearances are listed in Appendix A.)

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PHASE 1 INTERIM OPINION

I. Introduction

On February 18, 1982 Southern California Edison Company (Edison) filed an application for authority to establish a Major Additions Adjustment Clause (MAAC), and implement a Major Additions Adjustment Billing Factor (MAABF) with an initial rate of 0.071 cents per kilowatt-hour (¢/kWh) and an Annual Major Additions Rate (AMAR) with an initial rate of 0.591 ¢/kWh to recover both the costs of owning 75% of San Onofre Nuclear Generating Station (SONGS) Unit 2, as well as related operating expenses. The application also requested authority to adju[illegible]ward the net Energy Cost Adjustment Clause (ECAC) rates t[illegible] in MAAC rates. The application was ame[illegible] removing the proposed offset of ECAC ra[illegible]ncing account treatment of investment-re[illegible]ion and maintenance (O&M) expenses [illegible] at the prehearing conference to p[illegible]arts.

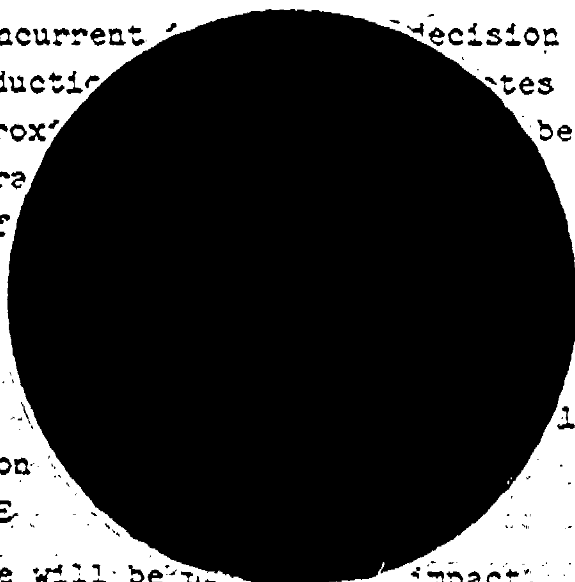
San D[illegible]G&E) filed its companion applic[illegible] SONGS 2 on March 18, 1982. SDG&E in i[illegible]ity to add a MAAC clause to its electric tar[illegible]ctric rates in accordance with increases authori[illegible] of SONGS 2, and to reduce its ECAC and Annual Energy [illegible]) rates by a corresponding amount. SDG&E, unlike Edison, did not amend its application and therefore is still requesting a reduction in ECAC and AER rates equal to the increase in any rates authorized under MAAC.

The above positions were subsequently revised in part at the July 15, 1983 oral argument.

The decision adopts a modified version of the target capacity proposal of the staff and calls for further study of certain other ratemaking alternatives raised by staff.

Changes authorized in this decision will go into effect when the commercial operating date (COD) criteria previously set forth by this Commission have been met.

The decision also requires that AER and ECAC rates for Edison and SDG&E be reduced by the anticipated energy savings which will result from the commercial operation of SONGS 2. For SDG&E the combined reduction in AER and ECAC rates will amount to $61.7 million. A concurrent [illegible] decision for Edison also provides for similar reductio[illegible] [illegible]tes for anticipated fuel savings of approx[illegible] [illegible] be triggered on the commercial opera[illegible] [illegible] of this decision can be summarized as f[illegible]



	Net Increase
[illegible]	[illegible]llars)
Edison	0
SDG&E	0

There will be n[illegible] impact.

III. SONGS 2 Background

SONGS 2 and 3 are two 1,100 MWe nuclear power plants located in San Diego County south of the City of San Clemente, California, adjacent to the SONGS 1 site. SONGS 2 and 3 were constructed as a single project and share certain common facilities. Other common facilities are shared between SONGS 2 and 3 and SONGS 1.

On January 27, 1970, Edison announced its plan to design, construct, and operate SONGS 2 and 3. On July 16, 1970, Edison and SDG&E filed Application 52045 before this Commission requesting a

CORRECTION

CORRECTION

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PHASE 1 INTERIM OPINION

I. Introduction

On February 18, 1982 Southern California Edison Company (Edison) filed an application for authority to establish a Major Additions Adjustment Clause (MAAC), and implement a Major Additions Adjustment Billing Factor (MAABF) with an initial rate of 0.071 cents per kilowatt-hour (¢/kWh) and an Annual Major Additions Rate (AMAR) with an initial rate of 0.591 ¢/kWh to recover both the costs of owning 75% of San Onofre Nuclear Generating Station (SONGS) Unit 2, as well as related operating expenses. The application also requested authority to adjust downward the net Energy Cost Adjustment Clause (ECAC) rates to equal the increase in MAAC rates. The application was amended on December 1, 1982 removing the proposed offset of ECAC rates. It also requests balancing account treatment of investment-related costs as well as operation and maintenance (O&M) expenses to recognize the agreement made at the prehearing conference to phase the proceedings into two parts.

San Diego Gas & Electric Company (SDG&E) filed its companion application for its 20% interest in SONGS 2 on March 18, 1982. SDG&E in its application seeks authority to add a MAAC clause to its electric tariffs, to adjust its electric rates in accordance with increases authorized upon operation of SONGS 2, and to reduce its ECAC and Annual Energy Rate (AER) rates by a corresponding amount. SDG&E, unlike Edison, did not amend its application and therefore is still requesting a reduction in ECAC and AER rates equal to the increase in any rates authorized under MAAC.

The above positions were subsequently revised in part at the July 15, 1983 oral argument.

II. Summary of Decision

This decision authorizes Edison and SDG&E to establish a MAAC procedure to reflect the cost of owning, operating, and maintaining SONGS 2 for their respective 75.05% and 20% interest in the facilities. Without the provisions of MAAC, the earnings of Edison and SDG&E will experience a substantial decline once the plant attains full commercial operation and Allowance For Funds Used During Construction (AFUDC) can no longer be accrued.

The decision authorizes for Edison an interim Phase 1 rate increase of $206.9 million. $38.2 million of the interim increase is for noninvestment-related expenses and is not subject to balancing account treatment. The remaining $168.7 million covers investment-related costs and is subject to balancing account treatment to allow for any adjustment found necessary in the Commission's ultimate decision in Phase 2 on the reasonableness of the investment in SONGS 2.

The decision adopts SDG&E's recommendation to allocate the cost of common plant equally between the two units rather than allocating total project costs on a 60-40 basis which charges all common plant costs to Unit 2. Since revenue requirement relating to return on investment, income taxes, depreciation, and property taxes for SONGS 2 will not be definitely known until the end of Phase 2, such revenue requirement will be subject to balancing account treatment.

The decision authorizes for SDG&E an interim Phase 1 rate increase of $61.7 million. $10.7 million of the increase relates to noninvestment-related expenses and is not subject to balancing account treatment. The remaining $51.0 million covers investment-related costs and is subject to balancing account treatment and to any adjustments found necessary in the Commission's ultimate decision in Phase 2.

The decision adopts a modified version of the target capacity proposal of the staff and calls for further study of certain other ratemaking alternatives raised by staff.

Changes authorized in this decision will go into effect when the commercial operating date (COD) criteria previously set forth by this Commission have been met.

The decision also requires that AER and ECAC rates for Edison and SDG&E be reduced by the anticipated energy savings which will result from the commercial operation of SONGS 2. For SDG&E the combined reduction in AER and ECAC rates will amount to $61.7 million. A concurrent interim ECAC decision for Edison also provides for similar reductions in AER and ECAC rates for anticipated fuel savings of approximately $206.9 million to be triggered on the commercial operation of SONGS 2. The impact of this decision can be summarized as follows:

	MAAC Increase	AER/ECAC Decrease	Net Increase
	(In millions of dollars)		
Edison	$206.9	$206.9	0
SDG&E	61.7	61.7	0

There will be no net rate impact.

III. SONGS 2 Background

SONGS 2 and 3 are two 1,100 MWe nuclear power plants located in San Diego County south of the City of San Clemente, California, adjacent to the SONGS 1 site. SONGS 2 and 3 were constructed as a single project and share certain common facilities. Other common facilities are shared between SONGS 2 and 3 and SONGS 1.

On January 27, 1970, Edison announced its plan to design, construct, and operate SONGS 2 and 3. On July 16, 1970, Edison and SDG&E filed Application 52045 before this Commission requesting a

Certificate of Public Convenience and Necessity for SONGS 2 and 3. On March 9, 1971, the Commission issued Decision (D.) 78470 which authorized issuance of the requested certificate for SONGS 2 and 3. Construction of SONGS 2 and 3 began in March 1974.

When SONGS 2 and 3 were initially authorized, Edison owned 80% of the project and SDG&E owned 20% of the project. In the intervening time, Edison has sold 4.95% of the ownership to the Cities of Anaheim and Riverside. The ownership of SONGS 2 and 3 is now divided as follows:

Utility	Percent Ownership
Edison	75.05
SDG&E	20.00
City of Anaheim	3.16
City of Riverside	1.79

Edison has acted and continues to act as project manager of the SONGS 2 and 3 project on behalf of itself and the other owners in the design, construction, operation, and maintenance of SONGS 2 and 3.

Applicants (Edison and SDG&E) received an operating license from the Nuclear Regulatory Commission (NRC) on February 16, 1982 which authorized applicants to load nuclear fuel into the SONGS 2 reactor, and commence low-power testing of SONGS 2. On September 7, 1982 the full-power operating license was received from the NRC, which license authorizes applicants to operate SONGS 2 at full rated power after the low-power testing is completed.

IV. Procedural Background

Subsequent to the filing of the two applications, a prehearing conference was held on April 16, 1982 for the purpose of establishing a hearing schedule and to resolve any other problems. At the prehearing conference the Commission staff (staff) proposed that, in view of the contemplated August 15, 1982 commercial operating date for SONGS 2, hearings on these matters be bifurcated

to enable the staff to undertake and complete the necessary studies for a project of this magnitude and importance. The staff proposed that the first phase be limited to procedural issues relating to the adoption of a MAAC with the issue of a COD as a preliminary matter and the second phase to be devoted to the prudency of the investment and related cost issues.

It was agreed at the prehearing conference that a two-phase approach would be adopted with hearings on the COD issue to commence on May 24, 1982 and other Phase 1 issues beginning on June 1, 1982. Although Edison agreed that the two applications should be heard on a consolidated record, it requested a separate decision for each application. Edison expressed concern that should there be a challenge to the decision relating to one company, the uninvolved company may find its order prevented from becoming final because there is only one decision. While the Administrative Law Judge (ALJ) initially agreed to issue separate decisions, the hearing process proved that the matters are so closely intertwined that the development of separate decisions would be duplicative and time consuming.

At the conclusion of the applicants' and staff showings on COD, the staff made a motion requesting an interim order be issued on the appropriate definition of COD. The staff reasoned that should the Commission adopt the staff-recommended definition of COD, further hearings on other Phase 1 issues could be postponed until the plant has completed most of its testing. Hearings on the COD issue were concluded on June 1, 1982, subject to the filing of concurrent briefs on June 8, 1982.

On June 14, 1982 the ALJ issued a ruling, with the concurrence of the assigned Commissioner, adopting the staff recommendation that COD be defined as occurring when all initial start-up tests and the warranty run have been completed. The ALJ's ruling also canceled the hearings set for June 17, 1982 and scheduled a second prehearing conference on October 12, 1982. The ruling was

affirmed by the Commission by Minute Order dated July 21, 1982. It was further modified in response to Edison's Petition for Rehearing and Modification by D.82-09-111, dated September 12, 1982, to include Findings of Fact and Conclusions of Law.

The second prehearing conference was held on October 12, 1982. Hearings on other Phase 1 issues were scheduled to commence on January 17, 1983. Edison's revised exhibits were scheduled to be distributed on December 1, 1982 and staff revised exhibits to be distributed before December 25, 1982. Public witness hearings were scheduled for January 13, 1983 in San Diego and on January 14, 1983 in Los Angeles. Evidentiary hearings on Phase 1 issues commenced on January 17, 1983 in San Francisco and were submitted on April 6, 1983 after 25 days of hearings upon receipt of concurrent opening briefs due on May 13, 1983 and concurrent reply briefs due May 23, 1983. (These dates include the seven days' extension for filing of briefs requested by the staff.) Concurrent opening and closing briefs were filed by Edison, SDG&E, and the staff.

On June 9, 1983 the ALJ issued a ruling setting aside submission of Phase 1 and reopening hearings for the purpose of holding oral argument before the Commission en banc. Oral arguments were heard on July 15, 1983 in Los Angeles and the matter was resubmitted. Edison, SDG&E, Toward Utility Rate Normalization (TURN), Friends of the Earth (Friends), Community Energy Action Network, Edward Duncan, and staff participated in the oral arguments. In addition, numerous customers appeared at the public witness hearings held on January 13 in San Diego and on January 14 in Los Angeles to express their views regarding SONGS 2. Thirteen hundred letters and 500 postcards have also been received from the public offering their views on SONGS 2. We are now ready for decision.

V. Edison's Position

A. Costs Associated With Plant Investment

Edison initially took the position that costs associated with plant investment should be recovered through a fixed AMAR. Subsequently the staff recommended dividing the proceedings into a procedural phase and a reasonableness of investment phase, with balancing account treatment to be applied to investment-related costs in Phase 1. This would allow for later adjustments to reflect the Commission's ultimate Phase 2 decision. Edison concurred and revised its MAAC to provide for balancing account treatment of both operation and maintenance expenses as well as investment-related costs.

Table 1 presents a comparison of estimated electric plant costs for SONGS 2 and 3 and SONGS 2 by participant, both as originally estimated in each application and as subsequently revised during the hearings.

Total project and direct plant cost estimates for SONGS 2 and 3 were revised during the hearings to reflect estimated direct costs of $2.8 billion and total project costs of $4.2 billion. Based on the same 60% allocation of project costs to SONGS 2, Edison's 75.05% interest in SONGS 2 direct plant cost was estimated to be $1.266 billion and its interest in the total project cost, including overheads, was estimated at $1.882 billion. Edison did not revise its revenue requirement request to reflect these higher plant cost estimates.

TABLE 1
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE UNIT NO. 2
ELECTRIC PLANT (ESTIMATED)
TOTAL SONGS 2 & 3 AND SONGS 2 BY PARTICIPANT 1/

ORIGINAL ESTIMATE
(Thousands of Dollars)

	TOTAL COST SONGS 2 & 3	TOTAL COST SONGS 2	SDG&E SONGS 2	ANAHEIM/ RIVERSIDE SONGS 2	SCE SONGS 2
Direct Cost	$2,305,000	$1,383,000 2/	$276,600	$68,400	$1,038,000
Overhead Costs:					
Allowance for Funds Used During Construction (AFUDC)	1,008,900	-	- 3/	9,377 4/	481,500
Miscellaneous Construction Expenditures (A&G Capitalized)	75,700	-	- 3/	- 3/	38,400
Other Overhead Costs 5/	70,400	- 3/	- 3/	- 3/	38,100
TOTAL PROJECT	3,460,000				1,596,000

REVISED ESTIMATE

	TOTAL COST SONGS 2 & 3	TOTAL COST SONGS 2	SDG&E SONGS 2	ANAHEIM/ RIVERSIDE SONGS 2	SCE SONGS 2
Direct Cost	$2,812,000	$1,687,200 2/	$337,400	83,600	1,266,000
Overhead Costs:					
Allowance for Funds Used During Construction (AFUDC)	1,170,000	-	- 3/	9,377 4/	526,800
Miscellaneous Construction Expenditures (A&G Capitalized)	81,000	-	- 3/	- 3/	36,600
Other Overhead Costs 5/	117,000	- 3/	- 3/	- 3/	52,800
TOTAL PROJECT	4,180,000				1,882,200

1/ Participation Percentages:
- SDG&E - 20.00%
- Cities:
  - Anaheim - 3.16%
  - Riverside - 1.79%
- SCE - 75.05%

2/ SONGS 2 is 60% of total project.
3/ Unknown - Developed by SDG&E or Cities.
4/ Recorded costs incurred by Cities at Buy-in. No additional costs projected.
5/ Includes injuries and damages, taxes during construction and engineering and services.

B. Operation and Maintenance Expenses

While Edison admits that O&M expenses for SONGS 2 are difficult to estimate, Edison contends that its O&M expense estimate of $55.1 million is the best currently available, since it was developed by supervisors and managers responsible for accomplishing the required O&M at SONGS 2 (personnel with experience from SONGS 1 or with experience from other parts of the nuclear industry). Edison argues that the following factors, which were considered by these individuals in developing their O&M estimates, are unique to SONGS 2:

1. SONGS 2 is the first unit of its size class with a Combustion Engineering (CE) Nuclear Steam Supply System licensed since TMI.
2. The impact of seismically designed equipment and systems on O&M expenses.
3. The extent and evaluation of technical specifications from pre-TMI standards to post-TMI Standard Revision No. 3 imposed on SONGS 2 by the NRC.
4. Balance-of-plant consideration.
5. The lack of experience with turbine-generators of SONGS 2 size and manufacture.
6. The unique design of offshore intake and discharge structures necessitated by water quality considerations.
7. Labor requirements and craft labor mix.
8. Plant site size and proximity of support facilities.
9. Costs of transporting materials and supplies from eastern and midwestern suppliers.
10. The impact of using salt water cooling.
11. The necessity of maintaining submerged oceanic cooling water intake and discharge structures.
12. Administrative and site-security problems.
13. Coastal Commission requirements not experienced by other utilities.

Finally, upon completion of its estimate, Edison made a comparison with industry data to verify that its plant-specific estimate was within the zone of reasonableness based on the recorded expenses of other similar nuclear plants. In conclusion, Edison argues that its estimate should be adopted because it is specific to SONGS 2 and reflects the best judgment of the people actually responsible for the required O&M activities at SONGS 2.

Edison originally asked that balancing account treatment be applied to O&M expenses and administrative and general (A&G) expenses. At the July 15, 1983 oral argument, Edison agreed with the staff that a fixed estimate should be adopted.

C. Administrative and General Expenses

1. Edison's pension and benefits expense estimate of $2,929,000 is based on the application of a 19.2% rate on total payroll.
2. Edison's payroll tax expense of $842,000 is linked directly to the labor portion of O&M expenses.
3. Edison's insurance expenses for SONGS 2 are estimated as follows: property $2,980,000; excess property $712,000; liability $439,000; and replacement generation $1,343,000. Staff did not take exception to any of Edison's insurance expense estimates; however, the staff omitted replacement generation insurance from its estimate in order to highlight this expense for the Commission's attention.
4. Estimates for franchise and uncollectibles are based on rates in effect at the time the application was filed. Edison adopts the staff's use of the most recently adopted rates used in D.82-12-055, Edison's last general rate increase decision.

Table 2 presents a comparison of Edison and staff estimates of 1983 annualized O&M expenses, including certain A&G expenses.

TABLE 2

OPERATION AND MAINTENANCE EXPENSES
($000)

Description	Annualized Cost		
	Edison	Staff	Difference
Operation & Maintenance	$49,365[1]	$32,300[2]	$(17,065)
Pensions and Benefits	2,929[3]	1,860[4]	(1,069)
Payroll Tax	842[5]	842[4]	-
Insurance			
Property	2,980[6]	2,980[7]	-
Excess Property	712[6]	712[7]	-
Liability (Injuries and Damages)	439[6]	439[8]	-
Replacement Generation	1,343[6]	-	(1,343)
Subtotal, Insurance	5,474[6]	4,131[4]	(1,343)
Subtotal	58,610	39,133	(19,477)
Franchise & Uncollectibles	395[9]	400	(5)[10]
Total	59,005	39,533	(19,472)
CPUC Jurisdictional Amount	55,112	36,924	(18,188)

(Red Figure)

1 Ex. 42, Table 4B (revised).

2 Ex. 39, p. 2-2.

3 Ex. 38, Table 5C (revised).

4 Ex. 39A.

5 Ex. 42, Tables 6-G, 6-H, and 6-I.

6 Ex. 38, Table 5-B.

7 Ex. 39, p. 2-14.

8 Ex. 39, p. 2-15.

9 Ex. 4, p. 10-9, annualized.

10 This difference is due to the staff's use of the rates for this item as adopted in D.82-12-055, *supra*, while Edison's figure reflects the rates in effect at the time of this filing. Edison adopts staff's use of the most recently adopted rate.

D. Revenue Requirement, Level of Cash Rate Relief, and Rate of Return

Edison concurred with the staff recommendation for balancing account treatment of investment-related costs for SONGS 2 in Phase 1. However, Edison believes the two issues which must be resolved, even with the adoption of a balancing account in Phase 1 for plant investment and investment-related costs, are:

a. The amount of cash rate relief to be allowed as Phase 1 interim rates.

b. The rate of return to be allowed on plant investment.

Edison alleges that its $361.6 million revenue increase request is fully justified by the evidentiary record. The $361.6 million estimate is an annualized estimate for the period August 15, 1982 through December 31, 1983 based on the weighting of annualized revenue requirements of $300 million for 1982 and $389 million for 1983. Edison further argues that, based on its updated operating expense estimates contained in its amendment to the application, its revenue requirement estimate would be $402 million. Therefore, Edison concludes that the $361.6 million request is fully justified and should be adopted. Edison believes that the significant Phase 1 issue is, how much of the requested revenue increase should be allowed as interim cash rate relief in Phase 1 with the remainder going into the balancing account.

Edison's financial witness Noel testified that Edison must have substantial rate relief in Phase 1 if it is to be able to maintain its financial integrity, credit standing, and ability to attract capital. According to witness Noel, substantial cash rate relief would be approximately $340 million. He argues that a rate increase of that magnitude will enable Edison to maintain its AA bond rating while leaving the Commission with sufficient flexibility to accommodate any disallowances found necessary in Phase 2.

Edison further argues that the amount of undercollections to be held in a balancing account should be minimized since future ratepayers would be required to pay amounts properly chargeable to present ratepayers; secondly, future ratepayers must pay the interest accruing on the balancing accounts; and finally, if the financial community responds adversely to the amount of cash relief granted, it would most likely result in higher capital costs which future ratepayers will be required to bear.

Under Edison's proposal for $340 million in cash rate relief in Phase 1, Edison claims that 34.5% of its plant investment in SONGS 2 remains at risk. If relief in Phase 1 were limited to $215 million as proposed by the staff, Edison argues that over 63% of its plant investment in SONGS 2 would remain at risk.

Edison takes the position that the appropriate rate of return to use with respect to Edison's SONGS 2 investment is the rate of return authorized by the Commission in Edison's 1983 test year general rate case decision. Edison argues that the 12.55% rate of return established in that proceeding includes the overall risk associated with SONGS 2.

At the July 15, 1983 oral argument, Edison revised its position to request that the full $361.6 million be granted as Phase 1 cash rates with no balancing account treatment. Edison argued that SONGS 2 revenue requirements have now increased from the original $361.6 million estimate.

Edison stated that it will soon be filing a supplemental MAAC application for SONGS 2 to recover this additional revenue requirement. Edison suggests that an investment-related balancing account could be established in response to Edison's supplemental MAAC application if the Commission believes a balancing account is necessary. By then the Commission would have the full investment in

SONGS 2 before it and could determine the appropriate amount, if any, to be placed into the balancing account.

Edison also argued against the staff proposal to limit Phase 1 rates to the estimated fuel savings from the operation of SONGS 2. It claims that this would result in $171 million being accumulated in a balancing account, based on Edison's estimate of fuel savings of $190 million. Edison argued that, if a similar approach was applied to reflect commercial operation of Unit 3, the size of the undercollection would be much larger.

Edison, in its oral argument, made another request for consideration of its rate stabilization proposal which was also introduced in its May 1983 ECAC case. It requests that official notice be taken of the rate stabilization concept suggested in that case and that it be given consideration in this proceeding. Edison stated that it would be willing to defer the benefit of some cash flow in the interest of more stable, moderated increases in the level of rates to its customers.

E. Operation of MAAC and Rate Design

Edison offers three alternative procedures under which the initial level of rates would be set at $340 million and the total revenue requirement for expenses and costs would be limited to $361.6 million on an annualized basis. One alternative provides for full balancing account treatment of both O&M and plant-related costs, and another provides for balancing account treatment of all plant-related costs and fixed rate treatment of O&M expenses not subject to the balancing account. At the July 15, 1983 oral arguments, Edison suggested, as a third alternative, that no balancing account treatment be adopted for either noninvestment-related expenses or investment-related expenses.

Under any alternative, Edison proposes that the rate level be developed by allocating the MAAC revenue requirement to all customer groups on an equal ¢/kWh basis, thereby maintaining the existing rate relationship between customer groups. Edison also advocates the use of its forecast of sales, which was not contested

by any party, and the use of percentages for franchise fees and uncollectibles adopted in D.82-12-055 of 0.8000% and 0.2125%, respectively.

F. Target Capacity Factor Proposal

During the course of the proceeding, staff witness Knecht proposed that a prospective standard of operating performance, in the form of a target capacity factor, be set up to put Edison more at risk for the operating performance of SONGS 2. Under this staff proposal, the target capacity factor for SONGS 2 would be set at 65% over the life of the plant and Edison would keep any fuel cost savings, or pay for any fuel cost excesses, associated with actual plant operation that is above or below this target.

Edison argues that in establishing the need for such a proposal, staff relied on alleged "failures" in Edison's resource planning. These have, in staff's view, led to cost overruns and scheduling delays in the construction of plants such as SONGS and the inability to achieve expected performance levels in such plants. Accordingly, Edison argues, the staff is basing the need for the target capacity factor on some implied imprudence on the part of Edison. Edison points out that the prudency of its action regarding the construction of SONGS is not at issue in this Phase 1 proceeding. Further, Edison argues that the prudency of the operating performance level achieved for SONGS can only be a matter of speculation at this point.

Edison contends that staff's proposal is based on faulty economic analysis in that it implies that by shifting more risks to utility investors, economic efficiency will be promoted. Edison's rebuttal witness, Dr. Jurewitz, testified that unregulated competitive markets do not exhibit any particular degree of investor risk-bearing. Rather, the allocation of risks between producers and consumers varies from market to market and is arrived at through process of negotiation between such parties. In the electric utility industry, Jurewitz argues, consumers may bear more risks associated

with producer performance but they pay prices that reflect lower capital costs and fewer economic rents for the utility as a result.

Edison argues that the staff failed to consider adequately what Edison foresees as a deleterious effect on its cost of capital associated with the adoption of a target capacity factor for SONGS 2. Edison considers the target capacity factor to be a significant change in the regulatory "rules of the game" which will disrupt investor expectations and have a chilling effect on its ability to raise capital.

Edison questions the efficiency gains that staff sees flowing from the proposed performance standard. Edison contends that it will have no effect on planning efficiency, as staff alleges. Edison argues that it is also doubtful whether there will be any effect on operational efficiency, as it has limited control over the plant's capacity factor in the face of heavy NRC regulation and other factors. Edison concludes that the Commission can ensure that the company has made sufficient effort to achieve good plant performance by relying on the existing ECAC reasonableness review procedures.

Edison acknowledges that certain other jurisdictions have established performance standards for nuclear plants, but it considers the Knecht proposal to be "radically" different. Edison argues that the Virginia Electric Power Company (VEPCO) incentive plan, which staff points to as a parallel example, bases its target performance level on an industry average criterion which, based on this record, would be closer to 55% than staff's target of 65%. Edison regards the use of its own planning target of 65% as inappropriate for the purposes of an operational standard. Edison also views this target as punitive in light of the industry average and in light of the fact that Knecht expects SONGS 2 to operate in the 55-60% range.

Edison also notes that the VEPCO plan, unlike Knecht's proposal, involves a neutral "deadband" around the target in which no incentives apply. The VEPCO plan also places a cap on rewards and

penalties, and explicitly considers unique plant factors. Edison also notes that rewards and penalties under the staff proposal would be tied to volatile oil and gas prices.

Edison concludes that if a performance standard were to be considered for SONGS 2, it should only be developed after that plant has matured and actual operating experience has been gained. Further, following the example of the Commission's action on SONGS 1, Edison argues that the standard should only be considered pursuant to a study which considers unique plant factors and safety questions Edison feels would be raised by the imposition of such an incentive.

G. COD Criteria

At the oral argument, Edison again renewed its request for the Commission to reconsider the COD criteria adopted previously for SONGS 2. Edison argued that the completion of the 200-hour warranty run at the 100% power level is too rigid a criterion and is unrelated to what should be considered for declaring a plant to be "used and useful." Edison requests that the Commission adopt operation at the 80% power level for 100 hours as the COD criterion. Edison argued that contractual warranties are used as a basis for evaluating equipment and system performance and for negotiating settlement of claims with its suppliers and engineering-constructors and was never intended to constitute a "used and useful" test. While claiming that it will soon meet the 200 hours at the 100% power level criterion, Edison argues that it is improper for the Commission to apply such a strict, unreasonable criterion which it claims is unrelated to when a plant is "used and useful."

VI. SDG&E's Position

A. Costs Associated with Plant Investment

In its application, SDG&E proposes to transfer to electric plant in service and rate base an amount totaling $473 million as investment reflecting its 20% interest in SONGS 2. The direct cost

portion of the above total was based upon a 60-40% allocation of the estimated direct costs for SONGS 2 and 3. The 60-40% allocation was based on an engineering study which allocated all common plant to SONGS 2 consistent with the accounting requirements set forth in the Uniform System of Accounts for electric utilities. The $413 million total also includes overhead expenses of $135 million of which $124 million represents AFUDC. Although estimated project costs have increased substantially since the application was filed, SDG&E has not modified its revenue requirement request. Instead, SDG&E now supports its alternative proposal to allocate capital costs for SONGS 2 and 3 on a 50-50 basis to share the common plant costs equally between the two units. SDG&E's witness Strachan stated that SONGS 2 and 3 are duplicate reactors and that actual costs for SONGS 2 and 3 will not be known until both units are completed. He testified that the project is accounted for jointly and since no separate accounts are maintained for SONGS 2, SONGS 3, or common facilities, any amount capitalized will have to be based on an allocation. He further testified that if a regulatory body determines an appropriate ratemaking treatment, the Federal Energy Regulatory Commission normally would accede to that Commission's decision, even though it may differ from the treatment prescribed in the Uniform System of Accounts. His proposal also would require accumulation of AFUDC on that portion of plant associated with SONGS 3.

B. Expenses

The fundamental difference between SDG&E and the staff is whether SONGS O&M expenses should be subject to balancing account treatment. While SDG&E agrees that SONGS 2 expenses are capable of estimation, SDG&E questions the degree of certainty and accuracy of such estimates. Therefore, SDG&E believes balancing account treatment is appropriate in order not to burden its shareholders and ratepayers with the risk of inaccurate estimates.

SDG&E argues that in its case, where Edison is the operating partner and the utility with direct control over expenses, the reasons used by the staff to justify the adoption of fixed estimates have little justification. SDG&E believes a reasonableness review of the balancing account is best because it provides a review of actual costs incurred in response to actual events.

SDG&E supports Edison's plant specific estimate of O&M expenses, arguing that it is more detailed and more carefully considered than that provided by the staff. SDG&E recommends that Edison's estimate should be adopted, with or without balancing account treatment, as the best estimate. SDG&E criticizes the staff averaging methodology, arguing that it relies on a single year's average costs and does not rely on any formal statistical analysis to validate the estimate. SDG&E further faults the staff estimate because it failed to consider expenses resulting from the small SONGS site, seismic requirements, or the larger size of SONGS 2 compared with the other nuclear plants included in the averaging process.

Table 3 shows SDG&E's estimate of revenues and expenses associated with its 20% interest in SONGS 2 upon commercial operation. SDG&E's witness Malquist testified that Edison's revised estimate of O&M expenses would increase total operating expenses by $3,457,000 to $79,670,000. Since SDG&E is seeking balancing account treatment for these expenses, it has not revised its revenue requirement request to reflect this change. Should the Commission adopt the staff's position to adopt a fixed O&M estimate, SDG&E requests that the Commission consider the higher O&M expenses resulting from Edison's revisions to the extent possible under the $119.9 million limit to the SDG&E rate request.

TABLE 3

SAN DIEGO GAS & ELECTRIC COMPANY

ESTIMATED REVENUES AND EXPENSES ASSOCIATED WITH COMMERCIAL OPERATION OF SAN ONOFRE UNIT 2
($000)

Title	1983
Total Operating Revenues	$127,265
Operating Expenses	
Production	9,679
Transmission	106
Administrative & General	1,814
Payroll Taxes	224
Franchise Fees & Uncollectibles	2,673
Subtotal	$ 14,496
Depreciation & Amortization	15,504
Ad Valorem Taxes	4,188
Income Taxes	42,025
Total Operating Expenses	$ 76,213*
Net Operating Income	$ 51,052
Weighted Average Rate Base	$385,297
Rate of Return (%)	13.25%

*Total operating expenses would increase by $3,457,000 using Edison's revised estimate to $79,670,000.

C. Revenue Requirement, Level of Cash Rate Relief and Rate of Return

SDG&E requests that all revenues collected under MAAC be subject to balancing account treatment. Although estimated capital costs have increased since the filing of the application in March 18, 1982, SDG&E did not choose to revise its revenue requirement request. Instead, SDG&E asked the Commission to adopt its alternate proposal of allocating the direct plant costs of SONGS 2 and 3 on a 50-50 basis rather than on a 60-40 basis as proposed by both Edison and SDG&E in their original applications.

SDG&E's financial witness Haney testified that there is a compelling need for a timely increase in cash earnings upon the commercial operation of SONGS 2. He argued that although SDG&E's financial indicators improved in 1981 and 1982, additional, sustained improvement is required if SDG&E is to regain its A bond rating and its financial recovery is to be considered complete.[1] Staff in this proceeding has recommended limiting the cash revenue increase in Phase 1 to the anticipated fuel savings from the commercial operation of SONGS 2 which the staff estimates to be $61.7 million. The balance of the revenue requirement is to be deferred and given balancing account treatment. SDG&E, on the other hand, takes the position that the full amount requested should be granted, with little or no accumulation in the balancing account prior to the Phase 2 decision. If there is a disallowance at that time, it would then lead to a rate reduction to the ratepayers. SDG&E maintains that if the staff recommendation is adopted and only $61.7 million of the

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[1] We note SDG&E was reclassified to an A3 rating by Moody's on May 26, 1983 and to an A rating by Standard and Poors on June 3, 1983.

requested $119.9 million is authorized in current rates, future ratepayers will have to bear the difference less any disallowances. SDG&E argues that to the extent the balancing account is greater than the disallowances, ratepayers would be confronted with higher rates. SDG&E also argues that a substantial undercollection in the balancing account has other implications as far as investors are concerned in the form of increased risks in recovering such deferred revenues and the failure of balancing account entries to improve the cash flow position of the utility. The utility argues that these risks are translated into higher capital costs.

SDG&E takes the position that the appropriate rate of return to be used in this phase is the one authorized by the Commission in the last general rate case decision. SDG&E argues that the rate of return established in the general rate case takes into consideration all the risks associated with the utility and the surrounding financial circumstances. SDG&E takes exception to the staff proposal to use the recorded or earned rate of return because of lesser risks perceived by the staff under the MAAC procedures. SDG&E argues that since revenues are normally protected by Electric Rate Adjustment Mechanism (ERAM), risks faced in achieving the authorized rate of return are comparable.

Under the MAAC proposal the rate base will not be established until the end of Phase 2. According to SDG&E's witness Haney "Investors would certainly evaluate earnings subject to future decrease in a balancing account or subject to future refund as having more risk than nonrefundable earnings granted through a general rate case process." SDG&E argues that the staff recommendation is impractical since the use of actual rate of return requires computations based on a rate of return that will vary from month to month.

D. Operation of MAAC and Rate Design

SDG&E claims that the adoption of a MAAC process is not at issue in this proceeding, since the staff did not question the

appropriateness of the overall MAAC concept and, in fact, agreed that such a mechanism was necessary to prevent a decline in earnings when SONGS 2 goes into commercial operation. SDG&E also states that the expenses and rate base covered in this application are not covered in any other application and that its proposal is consistent with Commission D.89316 on PG&E in which the Commission suggested a special offset application be filed for Diablo Canyon.

SDG&E argues that its MAAC procedure provides for full balancing account treatment of all expenses related to SONGS 2 and 3 and will compare actual non-ECAC related expenses associated with SONGS 2 to the applicable revenue from the MAAC adjustment rate previously established. Any difference between actual expenses and revenues collected will go into a balancing account and will accrue interest.

Under SDG&E's proposal, the rate level to be established under MAAC and the subsequent corresponding decrease to AER and ECAC will be allocated to all applicable classes of service and to each schedule within each class on a uniform ¢/kWh basis.

E. ECAC and AER Rate Adjustments

SDG&E proposes a decrease in ECAC and AER rates equal to the increase in base rates authorized in this proceeding. SDG&E calculates that the AER should be reduced by 0.0117 ¢/kWh with the ECAC rate being reduced by the remainder of the decrease required to offset the base rate increase. SDG&E proposes carrying any required increase due to the difference in fuel savings and base rate increase over into the next ECAC filing. SDG&E claims its proposal will avoid another increase in rates separate from the normal ECAC change and has the added benefit of basing the change on actual, instead of estimated, fuel cost savings.

SDG&E further states that although the staff apparently recognizes the desirability of a decrease in ECAC and AER rates at the time the base rate goes into effect, it has only recommended a change in AER rates. SDG&E argues that the change in AER and ECAC

rates must be considered in this proceeding, since this is the only proceeding where both changes are under consideration.

SDG&E denies the allegation that its proposal for an equal offset in ECAC and AER rates was to hide the effects of the SONGS 2 increase. SDG&E proposes to keep subaccounts to differentiate undercollections due to ECAC and those due to MAAC in order to readily identify the two sources of over- or undercollection.

F. Target Capacity Factor Proposal

SDG&E joins Edison in strongly opposing the staff's target capacity factor proposal. SDG&E argues that the staff is improperly trying to base the need for this risk allocation mechanism on the staff's contention that the plant will not be cost-effective over its operating life. SDG&E contends that this cost-effectiveness analysis is inappropriate because it ignores the earlier decision-making context in which the decision to build the plant was made. It is also a suspect analysis, according to SDG&E, because it relies on highly uncertain estimates of future oil prices in the comparison of SONGS costs to avoided costs.

More importantly, SDG&E argues, the target capacity factor (TCF) represents a significant change from conventional ratemaking in the treatment of the plant which investors had no notice of during the 13 years of planning, engineering, and construction of the project. SDG&E considers the TCF to be a change that will increase investor risk, raise the company's cost of capital, and jeopardize its long worked-for bond rating upgrade.

SDG&E argues that the TCF can only affect incentives for plant operational performance, not construction costs, as the latter has already been expended. In the area of operational performance, the TCF will merely duplicate the Commission's incentive structure instituted in the annual energy rate (AER). Further, for SDG&E the issue of operational incentives is moot because they do not control the operation of the plant.

SDG&E also points out that the Commission has already instituted a study of nuclear plant performance standards in the case of SONGS 1. The study will consider the appropriateness of such standards and their compatability with nuclear safety. SDG&E concludes that the Knecht proposal is premature.

G. Proposals Made in Oral Argument

At the July 15, 1983 oral argument SDG&E's vice president of engineering, Gary Cotton, requested that in deciding this case, the Commission recognize that it is dealing with two separate companies with different financial conditions, different rate levels, different responsibilities related to plant operation, and different general rate case schedules. SDG&E now proposes it be granted a current increase in base rates of $100 million with the remaining $20 million of its original request to be carried in the MAAC balancing account. At the same time, SDG&E requests that fuel savings of $52 million resulting from the operation of SONGS 2 be treated as a concurrent ECAC reduction and the ECAC application filed on July 8, 1983 showing an ECAC reduction of $47.6 million be granted as a further offset to be granted concurrently with a timely SONGS 2 decision, rather than in the normal November time frame. The net effect of SDG&E's proposal is to allow SONGS 2 to be added into rates with no net change in rates to SDG&E's customers at this time. SDG&E argued that the staff's proposal would limit the base rate increase and result in the accumulation of large undercollections in the balancing account as well as requiring a substantial increase in rates at the close of Phase 2. Cotton also argued that the $100 million increase in base rates together with MAAC will meet the expectations of the rating agencies and help SDG&E maintain the recently upgraded bond ratings.

VII. Staff Position

A. Fundamental Issue-Risk Allocation

The staff states that the fundamental issue in this phase of the proceeding is to determine the proper allocation of costs and risks between ratepayers and investors pending the Commission's decision in Phase 2. The staff strongly opposes Edison's original request for the full balancing account treatment for O&M expenses and Edison's[2] request for use of the last authorized rate of return in calculating the return component on the investment in SONGS 2 either for interim rate purposes or for balancing account purposes. Staff believes the return on equity under a balancing account would be a guaranteed return, and therefore, the 16% return on common equity found reasonable in D.82-12-055 would be excessive.

B. Standard Ratemaking Treatment for O&M Expenses

The staff opposes the adoption of a balancing account for O&M expenses which the staff considers tantamount to giving Edison a blank check. The staff sets forth the following policy reasons for adoption of a fixed O&M budget:

a. A reasonable budget provides the Commission with one of the few opportunities to influence efficiency and more fairly distribute benefits and burdens to ratepayers and stockholders.

b. The staff does not have personnel with nuclear expertise to review balancing account O&M expenditures.

c. Even if the staff could hire experts, it would not be to the benefit of ratepayers or the utility to examine O&M expenditures retrospectively.

d. The only way to review the reasonableness of O&M expenditures is to compare them with the expenses of other plants.

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2 In many instances, while reporting the staff's position and in the discussion section, references to Edison will apply equally to SDG&E.

e. If a balancing account is used in the early years of the plant's operation, these figures become the base for making future estimates and if the base is inflated, it would result in future inflated estimates.

Staff argues that Edison has failed to present any valid reasons for justifying the use of a balancing account. According to the staff, reasons set forth by Edison such as the lack of experience on SONGS 2, industry data on matured plants not being applicable to a new plant, industry data on new plant varying considerably, and rapidly changing regulatory requirements are not valid reasons for abandoning the traditional fixed estimate methodology.

The Revenue Requirements Division (RRD) made its estimate of O&M expenses by:

1. Analyzing the 1981 recorded O&M expenses for other large pressurized water reactors.
2. Developing a 1981 O&M expense estimate based on the average 1981 O&M expense for a group of Combustion Engineering (CE) nuclear units.
3. Escalating the 1981 O&M expense estimate to 1983.
4. Recognizing that labor expenses incurred in California have been much higher than the U.S. average and making an adjustment for this factor.

The RRD decided to focus its attention primarily on plants with CE units for two reasons. First, SONGS 2 nuclear steam supply system is of CE design and CE design has remained fairly consistent with time. Second, of the four nuclear steam supply systems in the US, CE is the only vendor with units which consistently achieve average annual capacity factors of 65% or better. For planning purposes, Edison expects SONGS 2 to achieve a 65% capacity factor. The staff also believes that the quality of plant performance is one of the main determinants of the level of O&M expenses.

Witness Myers, in developing his estimate, focused his attention on plants with pressurized water reactors, a capacity of over 700 megawatts (MW) and a nuclear steam supply system designed by

CE. He excluded the Palisades plant in developing his average because the plant had repeated and significant problems unusual to all other CE units. The average O&M expense for all CE units, excluding Palisades, was approximately $25 million for 1981. Myers escalated the 1981 average by 20.7% per year to arrive at an estimated 1983 O&M expense of $36,497,000. Myers then adjusted the 1983 estimated average O&M expense for regional labor cost differences by applying a 1.137 factor (Southern California labor adjustment of 20.9% x ratio of Edison labor expenses to total Edison O&M expenses). The adjusted O&M expense estimate for 1983 for SONGS 2 developed by the staff is $41,497,000 with Edison's 75.05% share of nuclear O&M expenses amounting to $31,144,000.

The staff accepted Edison's estimate of transmission expenses but used a different inflation rate to bring Edison's estimate in 1982 dollars to a revised $1,156,000 in 1983 dollars. The total O&M expense estimate for 1983 including nuclear and transmission O&M expenses for SONGS 2 is $42,653,000. Edison's 75.05% interest of this total is $32,300,000 and SDG&E's 20% interest is $8,300,000.

Staff contends that this estimate of O&M expenses for SONGS 2 is fair and reasonable since it is more than the average amount expected to be spent on O&M expenses for comparable nuclear plants in 1983. Staff concludes that under traditional fixed budget ratemaking, Edison will be rewarded if it performs well with any savings from the budgeted amount and if Edison is extravagant, the ratepayers will be protected from economic waste.

C. Rate of Return

Staff opposes the use of the last authorized rate of return in computing revenue requirements and investment-related balancing account entries. Staff argues that SONGS was explicitly excluded from consideration in Edison's and SDG&E's last general rate cases.

Therefore, the impact of the commercial operation of SONGS on the financial ratios was not considered in establishing the last authorized rate of return. Staff witness Chew recommends that the rate of return used in calculating the cost of investment be based on Edison's earned return and not the last authorized rate of return. The rationale for this recommendation was that the use of a balancing account would provide Edison with a guaranty in earnings, thereby reducing the risk to its shareholders. It is argued that the use of the recorded rate of return in this balancing account would preserve the same level of risk with respect to SONGS earnings as Edison and SDG&E investors' experience on other utility investments.

In its brief, staff counsel takes the position that the determination of the appropriate rate of return should be deferred to Phase 2. It is argued that the overall company risk has been reduced with the inclusion of SONGS in rates, rendering both the current authorized and recorded returns inappropriate for use here. Until the issue of the proper rate of return can be considered more fully, the staff counsel recommends the use of either the earned return as reported on Form 074 or the AFUDC rate for the interim purposes of computing investment-related entries to the SONGS balancing account.

D. Interim Rate Relief

Since the reasonableness of the costs incurred in constructing SONGS 2 will not be known until completion of Phase 2, the staff argues that the amount ratepayers should be required to pay cannot be determined with any degree of precision. Therefore, the RRD and Utilities Division staff recommend that in order to balance the interests of applicants and ratepayers, interim rate relief should be limited to the estimated fossil fuel savings from SONGS 2. The staff estimates that the fuel savings for Edison and SDG&E will be approximately $215.7 million and $61.7 million, respectively. These amounts would be subject to refund pending the Commission's final decision in Phase 2.

However, the Special Economics Section of the Revenue Requirements Division recommends the granting of the full amount of interim rate relief requested by applicants in order to promote intertemporal equity between ratepayers. If interim rates are limited to anticipated savings and a considerably higher revenue requirement is subsequently found reasonable, future ratepayers would then be required to make up such revenue deficiencies plus applicable carrying costs.

E. Alternative Ratemaking Options and the Target Capacity Factor Proposal

In staff witness Knecht's view, existing utility regulation does not adequately serve the goals of efficiency and equity in the case of new power plants. Under existing regulation, the costs associated with the utilities' inability to keep power plant construction on schedule, to keep costs within budget, to estimate properly the cost of capital needed to support new construction, and to achieve expected levels of power plant performance are all allocated to ratepayers even though management has the responsibility over these costs. Under these conditions, Knecht testified that there is little incentive for utilities to correct these failures. Staff argues that construction cost overruns and plant operating problems have been endemic to the utility industry over the last decade and are evident in Edison's recent experience. They believe that regulation has contributed to this state of affairs.

Beyond this inefficiency and inequitable allocation of risk between investors and ratepayers, staff also argues that present regulation contributes to intertemporal inequity among ratepayers, because capital intensive plants are paid for by ratepayers disproportionately in the early years of the plant's operation. This problem of front-end loaded capital cost recovery on new power plants is an artifact of the traditional accounting cost pricing used under present regulation and is a distortion that is exacerbated

significantly during inflationary periods such as those recently experienced.

Staff considered three alternative ratemaking options which might correct some of the problems associated with existing regulation as it pertains to new power plants such as SONGS 2. The first two, avoided cost pricing and trended original cost ratebasing, were found by staff to offer appealing theoretical improvements over conventional ratemaking on equity and efficiency grounds. However, staff concluded that it would be premature to adopt either of these proposals at this time. Moreover, they appear to suffer from certain practical problems that require further study.

Staff considers its third option, the target capacity factor, to be an incremental change in the existing regulatory framework which is ripe for adoption in the case of SONGS 2. The target capacity factor will, in staff's view, serve to more equitably allocate the risks associated with SONGS 2 operational performance between ratepayers and stockholders and create strong incentives for more efficient plant operation.

Staff argues that the cost-effectiveness of SONGS 2 is substantially in doubt because of higher than expected construction costs. Further, the actual cost-effectiveness to ratepayers of the power produced from SONGS 2 will depend to a significant degree on whether the plant achieves its expected level of output performance during operation. For baseload plants like SONGS 2, with high capital costs and low fuel costs, high output levels are critical in spreading the fixed costs over a maximum number of kilowatt hours to reduce the unit cost of power produced by the plant and to minimize the necessity of relying on expensive oil and gas based replacement power.

The target capacity factor that staff proposes would hold the utility to a standard of performance equivalent to its planned output or capacity factor level, thereby putting the utility at risk for actual performance levels. Utility returns would be tied to the

utility's ability to meet or exceed the standard of performance. Staff argues that this proposal will represent a more equitable allocation of performance-related risk and will spur achievement of higher levels of performance.

Staff rejects the utilities' contention that the target capacity factor represents an unfair change in the regulatory "rules of the game." Staff argues that the original SONGS Certificate of Public Convenience and Necessity, granted in 1971, specifically deferred ratemaking considerations to future proceedings and did not mandate any particular ratemaking treatment. Further, staff contends that many other rules and ratemaking procedures have already been altered since the SONGS certificate was issued, most of which have reduced the risks borne by the utility. These changes include the establishment of ERAM, the attrition allowance, the regulatory lag plan, and, most importantly, ECAC. In its opening brief, staff states that its "recommendation to base ECAC rates on SONGS generation at Edison's expected life-cycle capacity factor is nothing more than a partial return to the manner in which fuel costs were recovered when the SONGS project was certificated." (Staff Opening Brief, p. 13.)

Staff agrees with the utilities that the effect of the target capacity factor on the utilities' cost of capital should be weighed. In staff's view, the target capacity factor represents a small increment of added risk for the companies involved. Staff argues that even with the target capacity factor, ratepayers will bear most of the risks associated with the plant, including risks of construction cost overruns, nuclear fuel cost variation, service safety and liability, and other factors. More importantly, in staff's view, the small increment of added risk to the utility associated with the target capacity factor will be greatly outweighed by the reduced risks associated with having the plant come on line and be put into rates. Staff points out that testimony by both Edison and SDG&E in this proceeding indicates that the companies' financial performance measures will improve significantly after SONGS

commences commercial operations. Edison, for example, forecasts that when both SONGS units are put into rates, internal generation of funds will increase from 40.2% to 63.7%, pre-tax interest coverage will increase from 3.58 to 3.89, and AFUDC will decline from 35.67% of earnings available for common equity to 21.14%. In staff's view, the net effect on the utility's risk of having SONGS in commercial operation and having a target capacity factor applied to the plant is clearly a reduction in overall company risk. In fact, as noted elsewhere, staff believes that the Commission should consider a downward adjustment in the company's rate of return and should leave this proceeding open on the issue of the proper rate of return to be applied to SONGS.

Staff argues that its proposed 65% target is a valid standard of expected performance. Knecht testified that 65% is the figure that Edison has used for planning purposes and that the utility has continuously asserted that this is the best estimate for such purposes in filings before this Commission, the California Energy Commission, and elsewhere. Staff reasons that if Edison is allocating resource planning risks to ratepayers on this basis, pursuing a project that will substantially affect future rates, then this is also a valid standard through which to allocate performance risks to the company during the project's operating life. Staff admits that Edison's planning target is higher than staff's prediction of an actual life-cycle operating level for SONGS 2, which is in the range of 55-60%. However, staff contends that even if the plant does not exceed staff's predicted level of performance, the resulting penalty under the 65% target will be far less inequitable to stockholders than the $1.3 billion in net costs that staff expects ratepayers to pay over the life of the plant because of its lack of cost-effectiveness.

Staff notes in its opening brief the utilities' contention that NRC regulation and other factors leave management with little actual discretion over nuclear plant performance. The utilities

conclude that because of their limited control over plant operation the creation of a utility performance incentive can have little real effect on operating efficiency. Instead, the utilities argue, the proposed performance standard will generate rewards or penalties due to performance-related factors that are beyond the utilities' control. They consider this to be inappropriate in the absence of a specific finding by the Commission of prudency or imprudency.

Staff argues that utility control over nuclear plant performance, while limited, is extensive enough so that the performance standard can be expected to have a positive incentive effect. However, even if plant performance is affected by factors outside of management control, staff argues that it is not at all clear why only ratepayers should be at risk for such factors. An equitable allocation of risk cannot be achieved, in staff's view, if the ratepayers are required to bear all risks except in such cases where management control can be proven. Thus it is appropriate in staff's view that their performance standard contributes to a sharing of the risk on all factors affecting SONGS 2 operation. Indeed, staff argues that one of the most compelling reasons for the adoption of their proposed target capacity factor is that it will contribute to a more equitable allocation of the risks of SONGS 2 operation between ratepayers and shareholders.

Knecht further indicated that he felt that, even when the target capacity factor is in operation and the utility is at risk for plant operation, the utilities could always come to the Commission and plead for a modification of the standard in the case of an extreme contingency such as a lengthy NRC ordered shutdown. In this case the burden of proof as to the need for adjusting expected performance levels and reallocating costs and risks to ratepayers would be on the utility, where, staff believes, it should be.

Finally, on the issue of nuclear safety, staff does not believe that there is a conflict between the proposed TCF and safety. Knecht testified that the NRC has the responsibility for

assuring nuclear plant safety and he expects that Edison would abide by the NRC's rules and regulations as it operates the plant. Further, the economic incentive to increase output under the TCF would not conflict with safety because it is clearly outweighed by the economic loss that the utility would risk by compromising safety. Staff points out that safety concerns have not prevented other jurisdictions from adopting similar performance incentives for nuclear plants. Staff concludes that the TCF will not conflict with nuclear safety.

VIII. Position of Other Parties

A. PG&E

PG&E did not file a brief nor participate actively in the proceeding except to offer rebuttal testimony by Dr. Samir F. Barakat to staff witness Knecht's testimony on alternative ratemaking options. While acknowledging that economic efficiency and intertemporal equity among ratepayers criteria may have some merit, Dr. Barakat cautions that the use of these criteria needs to be carefully evaluated within the overall framework of regulated utilities. The superimposing of competitive market ideals of competition must be reconciled with the regulated monopoly framework.

Arguing that Knecht's testimony seems to imply that producers bear all the risk in a competitive society, Dr. Barakat notes this is not always true and there are many examples of consumers assuming risks in a competitive society. If the Commission believes that the utilities should assume additional risks, he cautions that it should carefully analyze the benefits and costs of having the utility assume the additional risks. If greater risk is imposed on the shareholders, investors would require a higher return in exchange for assuming the risk. Should the Commission decide to impose greater risks on the utility, it should be a fair risk rather than a risk that will most likely result in a rate of return penalty which is not the result of any specific management shortcomings.

Dr. Barakat argued that if the Commission considers implementation of the TCF option, it should be done only after careful review and it should be introduced gradually to allow sufficient experience to enhance evaluation of its effectiveness. Dr. Barakat further testified that if the Commission is considering deferral of rate recovery to avoid rate shock, it should carefully examine the associated costs. He further suggests that if the Commission decides to reduce rate shock, it can correct alleged efficiency and intertemporal equity problems by using a conventional ratemaking mechanism like a balancing account. By using a variant of an understood ratemaking methodology rather than a novel one, the Commission can reduce the investors' perception of risk.

B. City of San Diego

The City of San Diego participated in the cross-examination of various Edison and SDG&E witnesses, particularly those who testified on matters affecting SDG&E rates. It did not file a brief in these proceedings.

C. TURN

In the oral arguments TURN stated that there is a need for the nuclear power industry to regain the confidence of the ratepayers. This can be done by imposing a warranty of performance requirement on the utility. TURN believes that applicants should be required to meet the 80% capacity factor originally used by applicants when they first proposed construction of SONGS 2. TURN also opposes the levelizing of rates since it confuses the public by masking the effect of any rate actions taken by the Commission.

D. Friends of the Earth

Friends advocated the adoption of avoided cost rates to get away from the arbitrariness of establishing a set target capacity factor. Friends argues that sufficient financial incentives and penalties do not exist under the current regulatory system and that the adoption of a performance mechanism like TCF or avoided costs would serve a clear public interest.

E. Community Energy Action Network

Community Energy Action Network takes the position that this proceeding is a precedent setting case for future projects. Therefore, in order to deal fairly with ratepayers as well as investors. it recommends the adoption of a formula which includes avoided cost, trended original cost, and target capacity factor. Such formula should be subject to evaluation every two or three months, as an ongoing process, to evaluate its performance and the sharing of risks.

F. Mr. Duncan

Mr. Duncan argued that there are many phantom taxes charged to ratepayers which are never paid to the government by the utilities. He believes that ratepayers should get an equity return on the interest-free capital provided by ratepayers to the utilities in the form of phantom taxes.

IX. Issues

During the course of the hearings certain major issues emerged that must be addressed in this decision. These include the following:

1. Should SONGS 2 O&M expenses be set on a conventional test year fixed estimate basis or should they be given balancing account treatment?
2. If conventional test year ratemaking is adopted, what level of expenses should be adopted?
3. Of the overall revenue requirement increase sought in the application, what portion should be allowed as interim cash revenues?
4. What rate of return should be applied to SONGS 2 investment for the purpose of setting interim rates?
5. Should SONGS 2 and 3 project costs be divided on a 50-50 basis to allocate common plant equally to SONGS 2 and 3 or should it be allocated on a 60-40 basis to recognize that

common plant goes into service when SONGS 2 goes into service?

6. Should the staff's proposed target capacity factor be adopted?

7. Should other alternative ratemaking treatments discussed by staff also be considered?

8. What adjustment to ECAC and AER rates should be made, if any, to recognize fossil fuel savings from the operation of SONGS 2?

X. Discussion

A. Fixed O&M Expense Estimates or Balancing Account

Edison initially argued that the uniqueness of SONGS 2, the lack of experience in operating the plant, the volatile nature of the nuclear regulatory environment, the large range of variability in the performance level of new nuclear power plants, and the relationship which exists between plant performance and O&M expenses all are factors which make accurate estimates of O&M expenses extremely difficult. Therefore, the adoption of balancing account treatment for O&M expenses is warranted.

SDG&E supports Edison's position. Although SDG&E believes O&M expenses for SONGS 2 are capable of estimation, it doubts the reliability or accurateness of such estimates.

The staff, on the other hand, strongly opposes balancing account treatment of O&M expenses and argues that a reasonable estimate can be made by averaging recorded O&M expenses of comparable pressurized water reactors with CE nuclear steam supply systems and a capacity of at least 700 MW. The staff believes the only way to control O&M expenses is to establish a budget and that the adoption of a balancing account is merely an invitation for utilities to spend freely.

Edison abandoned its request for balancing account treatment of O&M expenses and A&G expenses at the oral argument. However, SDG&E has continued to request balancing account treatment while admitting that the level of O&M expenses rather than balancing account treatment is the real issue.

We agree with staff that the cost of O&M expenses should be recovered through fixed rates. An open-ended balancing account gives a utility no incentive to control costs within the limits of a fixed budget. Although Edison revised its position to adopt a fixed figure for O&M costs, SDG&E still argues that its status as a nonoperating partner suggests that it should place its share of O&M expenses in a balancing account. SDG&E seems to imply that, due to its status, it is to some extent less responsible for the proper operation and maintenance of SONGS Units 2 and 3 and the control of related costs. SDG&E has failed to demonstrate why it should be granted an O&M balancing account. As a 20% owner of SONGS Units 2 and 3, SDG&E is responsible for its share of the proper operation and maintenance of those facilities. As such, SDG&E can expect to carry 20% of the liabilities and receive 20% of the benefits related to SONGS 2 and 3, as if it were fully in control of the status of its 20% interest. Since SDG&E is expected to carry full responsibility for its share of O&M expenses, we find that it, like Edison, should recover those expenses through fixed rates.

B. Appropriate O&M Expense Level

In this proceeding we are confronted with a choice between Edison's effort to rely largely on internal cost estimates to predict O&M expenses and an estimate prepared by the staff based primarily on an average of recorded O&M expenses of large nuclear power plants having a CE nuclear steam supply system. Edison argues that had the staff consistently and logically applied the averaging methodology to all available data and had considered the variance among the data in arriving at its estimate, the results would have been close to

Edison's plant specific estimate. Edison states that the increase in its projection of O&M expenses between the original and revised estimates reflects the experience gained by the company in operating the plant during the period and not simply a response to the staff's recommendation for adoption of fixed estimates. Edison contends that each nuclear power plant is unique and that the averaging process used by the staff fails to recognize any of these unique factors.

Staff argues that its estimate does not require applicants to exhibit a superior performance, but only an average one. Staff believes its estimation process utilizing an industry average is clearly preferable to Edison's method which relies heavily upon SONGS 1 experience. Although the staff primarily relied on an average based upon the O&M expense experience of six CE units, it also compared such results with the experience of other large pressurized water reactors and the experience of newer units. Staff contends that Edison's $65 million estimate is unreasonable as demonstrated by the $18 million dollar increase between the original and revised estimates with no explanation except for its better understanding of NRC requirements and the additional experience gained with SONGS 2 during the testing phase. The staff also argues that Edison's original estimate of total SONGS 2 O&M expenses of $47,540,000 is more reasonable than the revised estimate of $65,287,000. Edison's 75.05% share of these total expenses would be $35,754,000 and $49,365,000, respectively, and SDG&E's portion would be $9,785,000, and $12,762,000, respectively.

Based on the record in this proceeding we do not believe the level of expenses estimated by Edison has been adequately supported nor does it appear to be reasonable compared to O&M expenses of other nuclear power plants. We find that the staff's effort to derive an O&M budget by studying substantially similar existing facilities and adjusting for California labor conditions

provides us with the best available data upon which to set O&M expenses. We agree with the staff that the averaging process should compensate for the uniqueness of SONGS 2 due to other factors which are unique to the plants used in arriving at the staff estimate. In fact, we note that the staff O&M estimate appears liberal in comparison with costs at most other similar plants.

Table 4 shows our adopted level of O&M expenses for Edison and SDG&E as well as pensions and benefits, payroll taxes, property insurance, excess property liability insurance, and replacement generation insurance. Since there was no difference between the staff and applicants' estimate for payroll taxes, property insurance, and excess property liability insurance we will adopt applicants' estimates for these items.

While the staff does not disagree with applicants' cost estimate for replacement generation insurance or Nuclear Electric Insurance Limited (NEIL I) it did not include such cost in its estimate to highlight this expense to the Commission. The RRD staff witness, Coughlan, testified that he was unable to evaluate whether such insurance is reasonable or not.

TABLE 4

SONGS Unit 2
Non-Investment Related Costs
(Dollars in Thousands)

Line No.	Description	Utility Estimates: SCE Share	Utility Estimates: SDG&E Share	Staff Estimates: SCE Share	Staff Estimates: SDG&E Share	Adopted Results: SCE Share	Adopted Results: SDG&E Share
		(A)	(B)	(C)	(D)	(E)	(F)
1	Operation & Maintenance						
2	Production	$48,210	$12,762	$31,145	$ 8,300	$31,145	$8,300
3	Transmission	1,155	-	1,155	-	1,155	-
4	Subtotal, O & M	49,365	12,868	32,300	8,300	32,300	8,300
5	Pensions & Benefits	2,929	745	1,860	478	1,860	478
6	Payroll Tax	842	224	842	224	842	224
7	Insurance						
8	Property	2,980	794	2,980	794	2,980	794
9	Excess Prop.	712	190	712	190	712	190
10	Liability	439	117	439	117	439	117
11	Replacement	1,343	358	-	-	1,343	358
12	Subtotal, Insur.	5,474	1,459	4,131	1,101	5,474	1,459
13	SUBTOTAL	58,610	15,190	39,133	10,103	40,476	10,461
14	Franchise & Uncoll.	395	324	400	216	413	223
15	TOTAL	59,005	15,514	39,533	10,319	40,889	10,684
16	CPUC Jurisdictional	55,112	N/A	36,924	N/A	38,191	-

Replacement generation insurance is intended to provide insurance to recover replacement power costs resulting from nuclear outages as a result of an accident. The coverages provided under NEIL I are:

a. A six-month deductible period.

b. A maximum payout of $3.2 million per week for 52 weeks.

c. A maximum payout of $1.6 million per week for another 52 weeks. (The payout cannot be greater than 90% of the estimated excess cost of replacement power.)

Over a two and one-half-year period, the maximum payment the owners of SONGS 2 could receive would be approximately $250 million. During this same period, SONGS 2 would require approximately $780 million in replacement energy costs, assuming a shut down of 2½ years and replacement at 50% oil and 50% gas and a 55% capacity factor.

The insurance policy also provides that any insurance payment would be provided from any accumulated reserves and premiums received during the year. Any requirements in excess of such reserves and current premiums would be obtained from a retroactive premium adjustment up to five times the annual premium.

If replacement insurance is not acquired, the owners of SONGS 2 are concerned only with the probability of an accident at SONGS 2 and the need to replace the energy which would be generated at SONGS 2. If replacement energy insurance is acquired, Edison and the other owners would be affected by accidents occurring at other covered nuclear power plants. The more plants covered by this policy the higher the probability would be for an accident to occur which may require retroactive premium adjustments. Offsetting this higher probability of an accident occurring at any one plant is the reduced cost for replacement energy should an accident occur at SONGS 2. Other considerations in evaluating the need for replacement energy insurance are the probability of an accident extending beyond the six-month deductible period, the probability of the plant closure

extending beyond the two and one-half-year period, and the amount of the insurance coverage vis-a-vis the net cost of replacement energy. The RRD was unable to evaluate whether such insurance is reasonable or not. If the Commission should allow rate recovery of replacement energy premiums, the RRD staff recommends that annual premiums be recovered in base rates, make-up premiums in ECAC, and that replacement energy insurance proceeds be credited to ECAC.

Edison and SDG&E argue that the Commission allowed replacement energy insurance premiums for SONGS 1 in D.82-12-055, Edison's last general rate increase application, and there is no reason for not allowing similar expenses for SONGS 2. While the staff has raised some valid concerns about the problems associated with evaluating the reasonableness of replacement generation insurance, we do not, at this time, believe it would be reasonable to abandon our past practice of allowing such insurance expense in rates. Therefore, we will allow replacement generation premiums of $1,343,000 for Edison and $358,000 for SDG&E. We will, however, adopt the staff's accounting recommendations relating to replacement generation insurance as reasonable. Our action in authorizing replacement generation insurance premiums in this proceeding will not preclude the staff from raising the issue in a subsequent proceeding if it feels it is ready to make a recommendation on the merits of such insurance.

C. Rate of Return to be Applied to SONGS 2 Rate Base for Interim Rates

Edison and SDG&E both request that rate of return on SONGS 2 investment be based on the rate authorized for each company in its last general rate case.[3] Staff opposes the use of the last authorized rate of return arguing that adoption of balancing account treatment on such investment-related revenue requirement would guarantee such return, whereas plant not subject to balancing account treatment may or may not earn such a return. Staff further argues that since the rate cases in which the last authorized rates of return were established had specifically excluded the effect of SONGS 2, such returns had not considered the effect of SONGS 2 being in operation. Although it is true that operating expenses and rate base relating to SONGS 2 were specifically excluded from the last general rate cases for both Edison and SDG&E, the records include the analysis of cash flow and borrowing requirements that reflect the potential for test year SONGS operation. We will leave for consideration in each company's next general rate case the full range of implications stemming from each company's changing financial requirements. We concur with applicants that there is no need to hold further hearings at this time to establish a reasonable rate of return on SONGS 2 investment for the purposes of setting interim rates. We also see no point in requiring that the rate of return be based on either actual earned rate of return or AFUDC rates.

We will adopt the last rate of return found reasonable by this Commission for 1983 as the reasonable rate of return to be used for the purposes of this proceeding for each company. We disagree with staff's assertion that the use of authorized rates of return in balancing accounts such as these would guarantee the attainment of

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[3] D.82-12-055 authorized a 12.55% rate of return with a corresponding 16% return on common stock equity for Edison and D.93892 authorized a 13.25% rate of return with a corresponding 16.25% return on common equity for SDG&E.

the authorized return. In the normal process, rates are set so as to enable the company to attain the authorized return if expenses do not exceed projected levels. In this instance as well, the use of a fixed O&M budget will assure that earnings will be subject to fluctuation as expenses vary. We therefore will adopt the 12.55% rate of return found reasonable for Edison for 1983 and the 13.25% rate of return found reasonable for SDG&E as reasonable in establishing rates for this interim decision.

D. What Portion of the Revenue Request <u>Should be Granted in Interim Rates?</u>

In this order, we will adopt the staff's proposal to grant MAAC account rate increases equal to the anticipated first year fuel savings to be reflected in concurrent ECAC and AER reductions. The net effect will be no overall rate change at this time for either SDG&E or Edison.

SDG&E proposed that its rates remain unchanged as a result of this decision. The company requested in oral argument that SDG&E's base rates be increased by $100 million while its ECAC and AER rates are decreased by the same amount. Compared with its estimated $120 million in base rate requirements and $52 million in fuel savings, its requested rate treatment would leave overall rates unchanged and create undercollections of approximately $20 million in its MAAC account and $48 million in its ECAC account. While agreeing with SDG&E that rates should remain unchanged at this time, we believe it is more proper to place any SONGS-related undercollection resulting from this decision in the SONGS MAAC account only. We will, therefore, increase base rates by staff's estimate of SONGS fuel savings of $61.7 million and decrease SDG&E's ECAC and AER rates by an equivalent amount. As noted below, the resulting MAAC undercollection is uncertain at this time, as the proper first year SONGS revenue requirements for SDG&E remains to be finally determined.

We note that during these hearings, SDG&E's bond rating was upgraded to an A3 rating by Moody's and to an A rating by Standard and Poors. These improvements in SDG&E's financial ratings are an expression of confidence in SDG&E on the part of the financial community and were made while the staff's interim proposal, adopted here, was pending before the Commission.

Unlike SDG&E, Edison argues that we should institute a rate increase to account for SONGS 2 at this time. Edison argues that it requires substantial cash rate relief at present to satisfy the financial community and maintain its bond rating. However, Edison's own actions in this proceeding do not support this contention. Early in the hearings in this phase, Edison indicated that total plant costs had exceeded its projections as reflected in the application. The staff immediately encouraged each company to amend its application to reflect the updated costs. The staff even introduced a motion to compel each utility to file an amendment. The ALJ denied the motion, but indicated to each utility that a failure to amend its application would leave it at risk for any additional sums. Nonetheless, neither company filed an amendment. Edison's refusal to amend its application contradicts its expressed concern for the precise amount of current rate relief. As discussed above, Edison also commented, at the oral argument, that it would be willing to forego the benefits of some cash flow in the interest of rate stability. We believe that the ratesetting approach adopted herein best serves that goal.

Edison argued that considerations of intertemporal equity for ratepayers imply that all or most of the requested rate relief should be granted now. We are not convinced that this is the case. As discussed below, it appears that intertemporal equity would best be served by deferring a portion of SONGS capital cost recovery, and we are interested in further exploring types of ratemaking treatment which might more fairly distribute the costs of the SONGS facilities to those most likely to receive the benefits. To keep these options

open, we have adopted this moderate interim increase, at a level which will not preclude later choices for implementation of alternative ratemaking techniques, if such were to be adopted.

As discussed above, Edison further argued that, if $340 million in current rate relief were granted, 34.5% of plant costs would remain at risk. We cannot rely on Edison's estimate for the purposes of this proceeding. The calculation of the amount of plant "at risk" after the granting of a given level of rate relief depends on the O&M budget which the Commission approves, the treatment of investment tax credits, the amount of accumulated depreciation at the completion of Phase 2, the level of rate relief required for decommissioning expenses and, of course, the reasonable and prudent costs related to the facility. Except for the adopted O&M budget, none of the other factors can be determined until the completion of Phase 2. In addition, Edison's calculations assumed that 60% of all costs related to Units 2 and 3 and common facilities would be considered in conjunction with Unit 2. SDG&E's 50-50 cost splitting approach which is adopted in this order, and the lower staff estimate for O&M expenses which is adopted, mean that Edison's estimate of the amount of plant "at risk" is substantially overstated. Since the percentage of plant left at risk by a given level of rate relief cannot currently be calculated, we must establish the proper level of rate relief on different grounds.

In view of these uncertainties and the need to allow for full consideration of alternative ratemaking approaches, the staff recommends that MAAC rates be set so as to offset anticipated first year fuel savings. Staff also argues that fuel savings represent a measure of the first year benefits to ratepayers associated with the plant. Staff's recommended MAAC rate level is the most reasonable approach to adopt at this point in the proceeding.

In this proceeding we are starting the process of adjusting the basic electrical rates of the utilities pending final determination of the value of the plant to be placed in the rate

base. Implicit in the establishment of an MAAC account is the recognition that undercollections may occur in relation to earnings of capital for plant that is used and useful. This is the case whether the rate adjustments allowed at this time reflect the adopted fuel savings as recommended by staff or the larger amount requested by the applicants. The magnitude of any undercollections, however, cannot be reasonably estimated at this time. The prudency review of construction costs has not yet been conducted. In addition, other critical factors affecting the level of any undercollections are still to be determined with regard to the rate stabilization and intertemporal equity issues discussed above. These issues are deferred for further hearings when Edison makes its supplemental SONGS Phase #1 application. The utilities here and the financial community at large, however, need to be assured that the applicants will be made whole on the basis of these forthcoming decisions through the operation of the MAAC. Actual undercollections, if any, will earn a return to cover opportunity costs to the utilities. The value of the fuel savings being used as the amount to be put into basic electrical rates at this time is the result of commercial operation of the entire facility. The Commission has yet to determine the ultimate amount to be rate based, and the degree to which intertemporal equity goals or rate stabilization are to be implemented with this major addition.

The question remains as to how best to determine the anticipated level of fuel savings for ratesetting purposes. In this proceeding, staff estimated that Edison would experience $215.7 million in fuel savings during the first year of operation and that SDG&E would save $61.7 million. Neither utility offered contradictory estimates. However, on August 16, 1983, Edison filed Application (A.) 83-08-42 in which it estimates first year fuel savings to be $206.9 million. While the staff should have an opportunity to respond to Edison's new estimate, the two estimates do not differ substantially. Thus, it is reasonable to use Edison's figure of $206.9 million for an interim AER/ECAC adjustment for

Edison in the interim decision issued today in response to A.83-08-42, and staff's figure of $61.7 million for SDG&E in this decision. Offsetting rates will also be adopted herein for each utility's MAAC account.

E. Should Common Plant be Allocated Equally to Units 2 and 3

SDG&E recommends that the cost of plant common to Units 2 and 3 should be shared equally between the two units rather than be considered entirely as a cost of Unit 2. This can be done by allocating the total project costs on a 50-50 basis rather than on the 60-40 basis used by Edison and by SDG&E prior to making its alternate proposal its primary proposal. SDG&E testified that allocation of common plant equally between the two units would lead to rate stabilization and the reduction of rate shock when the two plants become operational. Neither Edison nor staff supported SDG&E's proposal. On the other hand, there was no strong opposition to the proposal.

We believe there is merit to SDG&E's proposal since SONGS 2 and 3 were planned, constructed, and accounted for as a single project. While we recognize that the Uniform System of Accounts does provide for common plant to be placed into utility plant in service when the initial unit goes on line, we believe for ratemaking purposes it is fairer to the ratepayers to divide the costs equally between the two units and thereby result in greater stabilization in rates when the units go on line. We will not only adopt SDG&E's proposal, but also adopt similar treatment for Edison.

By adopting SDG&E's proposal to allocate total project costs for SONGS 2 and 3 on a 50-50 basis the revenue requirement necessary to service SONGS 2 is substantially altered. Under the 60-40 allocation basis, Edison's 75.05% interest in SONGS 2, based on the original total project cost estimate of $3.5 billion, was $1.596 billion. The corresponding amount for SDG&E based on its 20% interest would be $413 million. Using a 50-50 allocation basis of

total project costs and the updated total project cost of $4.2 billion, Edison's 75.05% interest would be $1.569 billion and SDG&E's 20% interest would be $411 million. The adoption of the 50-50 allocation basis not only enables us to recognize the higher estimated project costs, but also reduces the level of rate adjustment for SONGS 2 the utility may request to become effective on January 1, 1984. When SONGS 3 attains commercial operation, we would, of course, expect a revenue requirement increase request of comparable magnitude.

F. Should an Alternative Ratemaking Treatment for SONGS 2 be Adopted in this Proceeding?

Target Capacity Factor

There was substantial argument in this proceeding concerning the recommendation made by staff witness Knecht for adoption of a target capacity factor for SONGS 2. The utilities argue that it is not appropriate for this Commission to consider the TCF proposal here because it is based on some implied imprudence on their part. The prudency of their construction costs is an issue in Phase 2 of this proceeding, they point out, and the prudency of future operating performance is speculative at this point.

We affirm the ALJ's ruling that the TCF proposal is appropriate for our consideration here. The concept of a target capacity factor applies to the operational performance of the plant, not the utilities' construction performance. The performance of the plant once it is operational and put into rates is clearly a matter that should concern us as we establish these rates. For a baseload plant with high capital costs and low operating costs such as SONGS 2, the cost to ratepayers of power produced from the plant and the degree to which expensive oil- and gas-based replacement power is needed will depend to a significant degree on the operating performance of the unit. It is important that we concern ourselves

with the incentives for good performance, and the allocation of risks related to performance, as we establish rates for this newly commercial facility.

The utilities also argue that it is inappropriate for us to consider the TCF proposal because it represents an unfair change in the regulatory "rules of the game." We consider the concept of a plant performance standard to be an incremental adjustment in the present regulatory framework which is properly within our purview. Regulation is an evolutionary enterprise. Numerous changes in our regulation have occurred since this plant was certified. Indeed, as we note below, some of these other changes provide motivation for seriously considering the TCF proposal at this time.

We agree that, as a general rule, changes in regulation should be thoroughly deliberated and made with care, because of the potential consequences for investors and ratepayers that such changes create. This we will do here as we consider staff's proposal.

Edison argues that the staff's proposal is based on faulty economic logic because it assumes that greater investor risk-bearing will promote efficiency. Edison's witness, Dr. Jurewitz, testified that competitive, unregulated markets exhibit widely varying degrees of investor risk-bearing. The risk allocation that exists between producers and consumers in these markets is arrived at through the process of negotiation between the parties, with the outcome depending on their respective attitude toward risk and their subjective evaluations of the uncertainties they face. Therefore, he argues, the experience in competitive markets indicates that greater producer risk-bearing is not inherently more efficient and beneficial.

We agree with Dr. Jurewitz's characterization of nonutility markets. However, in the case of the electric utility "market," consumers, as recipients of monopoly services, cannot negotiate a particular allocation of risk to their satisfaction. It is the Commission that administers the utility-consumer "contract," and it is the Commission that must see that an equitable and efficient

outcome is achieved. Edison gives us no evidence regarding why the present allocation of risk, wherein consumers take the bulk of the risk for power plant performance subject only to ECAC reasonableness review, is superior to the allocation of risk that occurs with the TCF, where the utility takes a higher proportion of performance-related risk. Indeed, we find strong appeal in the staff's argument that the use of prospective standards of performance such as the TCF will more equitably allocate risks and increase the likelihood of efficient plant performance.

Edison argues that putting the utility more at risk for SONGS 2 plant performance will not induce performance efficiency because nuclear plants are heavily impacted by NRC regulations and other factors and the utility has limited control over performance. SDG&E adds that a performance standard cannot spur operational efficiency on its part, as it has no control over plant operation.

We believe that capacity factor is a fuel cost variable that is more within management control than are many other such variables, even in the case of nuclear plants. Further, we agree with staff that even if a performance variable is not fully within management control it does not follow that all risks associated with the variable should be borne by ratepayers. In our recent AER decisions, D.82-12-105, D.83-08-057, for example, we put the utility at risk for an increased percentage of fuel cost variations, whatever their source. These decisions put the utility at risk for fuel cost variables that are less within their control than is the SONGS 2 capacity factor. Our rationale for favorably considering a performance standard here is similar to our rationale for considering and adopting an increase in the AER percentage in these earlier decisions. In both cases the proposed changes promise to create a more equitable allocation of fuel-cost related risks between ratepayers and investors, and a greater incentive for utility efficiency than that which occurs when all fuel costs are completely

passed through to ratepayers subject only to a reasonableness review. For reasons of equitable risk allocation, any performance standard adopted for SONGS 2 should apply to both Edison and SDG&E.

SDG&E also argued that the TCF performance standard would merely duplicate the effect of our adopted higher AER percentages. As explained further below, we consider a SONGS 2 performance standard to be complementary to the AER. At the present time, a relatively small percentage of fuel costs are placed in the AER for both Edison and SDG&E. A SONGS 2 performance standard would apply to the ECAC portion of costs and would therefore contribute further to performance efficiency and equitable risk allocation. Moreover, whereas there appear to be upper limits on the reasonable size of the AER percentage due to forecasting problems and the effect of random fuel cost variables such as rainfall, it is sensible to go beyond the AER with plant specific incentives based on more easily projected performance variables such as capacity factor that are more within the arena of management control. We note that we have already adopted performance standards for Edison's Mohave and Four Corners plants. SONGS represents a particularly important component of Edison's and SDG&E's systems, where performance has a critical effect on ratepayer costs. This further underscores the importance of a plant specific performance standard for SONGS that would operate in addition to the AER.

Edison and SDG&E argued that in considering the desirability of the TCF we must consider the effect of this change in ratemaking on their cost or capital. The utilities contended that the TCF proposed by staff would increase their cost of capital. They reasoned that if the Commission were to adopt the TCF without concomitantly increasing the companies' rate of return the effect on the utilities' investors would be punitive. They argued that even if the Commission were to correctly increase their rate of return, the resulting increase in ratepayer costs associated with the TCF must then be compared with the alleged efficiency gains resulting from TCF

to determine whether this regulatory change is really beneficial to ratepayers. The utilities strongly question if it would be beneficial.

Staff responds that the earnings variations associated with the TCF will not translate directly into increased costs of capital demanded by investors because at least some of this variation represents risk that investors can diversify away simply by holding a portfolio of assets (i.e. nonsystematic risk). Therefore, the link between TCF risks and utility costs of capital is not even a direct one.

More importantly, according to staff, the TCF represents an incremental increase in risk that is more than offset by the reduced risk associated with having SONGS commercially operable and in rates. In fact, as noted elsewhere, staff would like to keep this proceeding open on the issue of rate of return with the intent of reflecting what they see as an overall reduction in the level of company risk.

We agree with staff that the company's risk has been reduced with the commercial operation of SONGS and its reflection in rates. Even if investors' expectations about future earnings already included an assumption that SONGS 2 would become commercial at some point, as Edison argues, it is undeniable that the uncertainty surrounding this assumption has been reduced by the fact that Edison has successfully completed all NRC tests on SONGS 2 and the plant is now being put into rates. It is unlikely that the incremental increase in risk associated with the TCF will exceed this reduction in uncertainty that is associated with the commercial operation of SONGS 2. This is particularly true because the modified TCF that we discuss below involves significantly less risk to the companies than the staff proposal.

Overall, with regard to the cost of capital issue, we conclude that utility investors will be no worse off due to the TCF (particularly as modified below) because the effect of TCF on required returns and cost of capital will be small and will likely be

totally offset by the reduction in investor risk associated with the commercial operation of the plant. Similarly, we believe that ratepayers will be better off due to the TCF because any associated increased cost of capital for which they must compensate investors (or a foregone decrease that might have occurred with conventional treatment of SONGS) would be negligible at most and will be more than offset by the benefits of decreased risk-bearing on their part and increased performance efficiency on the utility's part.

The utilities also raise the issue of nuclear safety. We agree with staff that a performance standard such as the TCF would not compromise the maintenance of safe plant operation. We expect Edison to abide by all applicable NRC rules and regulations. Further, we agree with staff that with the TCF the potential economic costs of safety violation will outweigh the benefits of output maximization at the expense of safety. We also note that the record includes examples of other jurisdictions that have instituted nuclear plant performance standards without apparent detriment to nuclear safety.

Finally, the utilities contend that the adoption of a performance standard for SONGS 2 would be premature given the fact that the Commission has recently initiated a study of the efficiency of a nuclear plant performance standard in the case of SONGS 1. In our view, the adoption of the staff proposal in SONGS 2 would not be incompatible with the continued study of performance standards for SONGS 1. The SONGS 1 study was initiated as a response to increasing operating problems in an aging nuclear unit that had already been in operation many years. The intent of the study was to develop a precisely engineered efficiency standard to counteract those particular plant problems. The intent of the staff proposal here is somewhat different. It is aimed at establishing broader guidelines for allocating future risks associated with a new plant's performance prior to the time of commercial operation. We believe that it is important to consider the allocation of performance risks and

incentives for superior performance at the beginning of the SONGS 2 plant life, so that as the plant goes into rates, proper rules are in place to explicitly govern the ratemaking treatment of the plant.

We conclude on balance that a capacity factor performance standard for SONGS 2 should be adopted. However, while agreeing with staff that such a standard should be approved we believe that the staff proposal should be modified. We agree with staff that in ascertaining the proper allocation of plant performance risk we should not disregard the estimates of plant performance that Edison has used to gain plant approval and to justify resource planning decisions in general. On the other hand, staff has not demonstrated why Edison's most recent planning target of 65% is more proper than the 80% Edison used at the time of certification or the 55-60% that staff believes to be the best current estimate of life-cycle capacity factor. Further, we agree with the utilities that by setting the target higher than the operational level staff expects, staff has created a probable penalty without sufficient justification.

We also believe that staff has not adequately justified why the proposed performance standard should be set at a precise point so that minor deviations in performance above and below this point are rewarded or penalized. It would be more reasonable to set up a target range of performance. Other power plant performance standards discussed in this record uniformly include such a range or "deadband."

The capacity factor standard that we adopt will include a wide deadband so that the focus of risk allocation and performance incentives is on markedly superior or inferior performance. The lower end of the deadband will be set at 55%. This is the bottom end of the range of staff's forecast of actual SONGS 2 performance, and, according to staff, it is also the national industry average for large nuclear plants. We would consider SONGS 2 performance below this level to be definitely substandard. Ratepayers should not be at risk for all of the replacement fuel costs associated with such substandard performance.

The upper end of the deadband will be set at 80%. This is the level of performance used by Edison to justify the plant at the time it sought a certificate from this Commission. We cannot reasonably pass along supranormal returns to the utility for plant performance below that which the company utilized to gain certification of the plant. Therefore 80% is the proper level at which TCF-related rewards should begin to accrue.

The second area where we think the staff proposal should be modified concerns the level of reward or penalty associated with the TCF mechanism. Staff would have the utility gain or lose all fuel cost savings or excesses associated with SONGS 2 operation above or below the performance standard. We believe that a more equitable concept of risk allocation provides for the equal sharing of such fuel cost variations between ratepayers and investors. We will reduce the utilities' level of exposure to 50% of the fuel cost gains or losses associated with plant operation under the modified TCF.

A related question is whether the utility exposure due to the TCF should be limited further in some manner. In our recent consideration and adoption of increased AER percentages for Edison and SDG&E, we adopted caps on the variation in pretax return on common equity allowed due to differences between predicted and realized AER-related fuel costs. Those caps were set cautiously relative to staff recommendations at 160 basis points for Edison and 120 basis points for SDG&E. D.83-08-057 gives three reasons for our caution:

> "First, we recognize the difficulty in evaluating the effects of incentives or disincentives on utility's cost of capital.
>
> "Second, we acknowledge the difficulty in assessing the effectiveness of any utility incentive/disincentive until it is carefully evaluated over time. Finally, the AER/ECAC mechanism represents only one of a possible range of programs to reduce the use of oil and natural

> gas for California utilities. Until we have identified and evaluated the complete range of possible options, we should not advance too quickly with any single incentive mechanism." (D.83-08-057, pp. 21a, 21b).

These factors also bear on our consideration of a cap on the TCF. Use of a generous deadband and a 50-50 sharing of the plant performance risks outside the deadband will significantly reduce the earnings variation that the TCF potentially can create for the utilities. This in turn will reduce any potential effect of the TCF on the utilities' cost of capital.

Staff witness Knecht's testimony indicates that the staff's proposed TCF would be expected to reduce Edison's 1984 earnings available for common equity by approximately $25 million (or roughly 4%) for a reduction in capacity factor of 10% below the target. For a minimum capacity factor performance of 0%, that is, the failure of the plant to operate at all for a full year, the earnings reduction would be approximately $165 million (roughly 26%). If half the replacement fuel cost excesses associated with operation levels below the deadband were borne by Edison, the earnings reduction associated with a 10% drop in capacity factor below the deadband would be $12.5 million (roughly 2%) and the earnings reductions associated with a minimum of 0% capacity factor would be $69.5 million (roughly 11%).

For the same reasons that we adopt a TCF procedure for SONGS 2, we certainly expect to consider similar proposals for SONGS 3. Adoption of a similar TCF procedure for SONGS 3 would mean that Edison's exposure for the two plants' performance would be increased further. With the adoption of the TCF as discussed above, we believe that further examination is desirable regarding whether a cap beyond the 50-50 sharing, and if so what size cap, should be placed on the TCF procedure adopted for SONGS 2. We defer this restricted portion of the TCF issue to the hearings which will be held pursuant to the utilities' forthcoming supplemental SONGS Phase 1 applications.

The utilities argued that the TCF incentive structure is also flawed because the rewards and penalties are tied to replacement fuel costs and, thus, to volatile oil and gas prices. We believe that this aspect of the TCF is proper, because the value of nuclear plant performance, and the costs and risks of nonperformance, do actually vary with changing replacement fuel costs. We note that as Edison replaces expensive oil and gas facilities the utility's exposure to earnings fluctuation through the TCF will also be reduced. Thus, an incentive for future reductions in oil and gas use is created by the TCF, and staff is correct in asserting that the TCF will create positive incentives for resource planning efficiency as well as operating efficiency.

Our modified TCF standard will moderate the increase in investor risk associated with the mechanism and will allow for more flexibility for varied operating levels with the deadband. Each year an appropriate target level for the plant's capacity factor will be set, as it is now, in the ECAC/AER forecast proceeding. In no case shall the SONGS 2 forecasted capacity factor for ECAC/AER purposes fall outside of the deadband. Assuming that the forecasted capacity factor for ECAC/AER purposes falls somewhere within the middle of the deadband (e.g., 72%)* the current AER incentive (for Edison, ten cents on the replacement fuel dollar) will apply to actual annual capacity factor performance that is above or below the target but within the deadband (e.g., 55-72, 72-80). When capacity factor performance diverges from the target to the extent that it falls outside of the deadband, an additional TCF reward or penalty of 50% of associated replacement fuel savings or costs shall apply.

* As we note in our companion ECAC/AER decision today, Edison's first-year capacity factor forecast for SONGS 2 is 72%.

A principal motivation for increasing the percentage of fuel costs in AER and for adopting a TCF incentives plan is the difficulty in evaluating the prudency of utility operations. However, as discussed above, we are proceeding cautiously in our implementation of these procedures. We are not willing to rely totally on the automatic reward/penalty incentives adopted to date to protect ratepayers' interests. Recovery of the portion of replacement fuel costs for SONGS 2 not subject to AER and the adopted TCF will still be subject to annual prudency reviews through the ECAC procedure.

Similarly, the adopted TCF procedure is not meant to be totally inflexible. We recognize that some plant outages, particularly for nuclear facilities, may be due solely to factors outside the utilities' control. The Commission may agree to consider the impact of such events on the operation of SONGS 2 and, consequently, on costs to the utilities and to ratepayers. However, we envision this occurring only under such extreme circumstances that we would wish to review not only recovery of replacement fuel costs but also whether the SONGS 2 investment should remain in rate base as a used and useful facility.

Such events must be raised on a case-by-case basis. Under such circumstances, the utilities will bear a heavy burden of proof to show the existence of extraordinary events beyond the control of management and further that no action could have been taken to mitigate the effect of the event.

Trended Original Cost Ratebasing

Staff's alternative ratemaking discussion addresses the objectives of efficiency, equitable allocation of risk, intertemporal equity among ratepayers, and avoidance of rate shock. As the foregoing discussion has indicated, our adoption of a TCF for SONGS 2 is directed primarily at achieving greater utility efficiency and a

more equitable distribution of risk between ratepayers and investors. We realize that the adopted TCF does not address the objectives of intertemporal equity and avoidance of rate shocks. However, we certainly do consider these to be worthy goals as well.

Edison emphasized that it shares the goal of avoidance of rate shocks. In the SONGS 2 oral argument Allen described the company's recent rate stabilization plan, submitted in A.83-03-36, at length. This plan is aimed at avoiding rate shocks over the next few years. A perusal of the proposed plan indicates that one of the primary reasons why it is necessary to focus on the issue of rate stabilization at this time is because of the rate increases that are projected to occur as SONGS 2 and 3 are placed in rates.

As Exhibit 56 indicates, under traditional capital cost recovery methods, ratepayer payments for SONGS 2 and 3 are expected to greatly exceed ratepayer savings from the plant (fuel cost savings) in the early years of the plant's operation, while ratepayer savings should greatly exceed ratepayer payments for the plant in the later years of the plant's life. Thus, the projected SONGS 2 and 3 rate hikes are driven largely by the timing of capital cost recovery. Obviously then, the rate hikes associated with SONGS 2 and 3 raise the issue of intertemporal equity.

Knecht discussed one ratemaking option which is aimed at addressing the intertemporal equity problem: trended original cost ratebasing (TOC). He concluded that while it is an appealing concept theoretically it is not ripe for implementation at this time. In our view, it may very well be true that this mechanism is not ripe for approval at this time. But we are not sure, because it was not adequately explored on this record. For example, Knecht testified that a serious practical problem associated with the implementation of TOC is that changes in the replacement value of nuclear plant assets must be estimated. This is not necessarily the case, because TOC is aimed primarily at accounting for inflation differently, and it is therefore appropriate to use a general inflation index to write

up the asset value of the plant. On the other hand, Knecht does mention a practical problem associated with TOC that is worthy of more serious scrutiny, namely, whether asset appreciation is reportable as income for financial purposes.

Cavagnaro suggested other options that are less far reaching than TOC but which might still serve as useful vehicles for rate stabilization in the case of SONGS. For example, he testified that in the past the Commission has utilized sinking fund depreciation, wherein less depreciation is taken in the early years of the plant life, as an alternative to straight line depreciation. Cavagnaro also described other approaches to rate stabilization that are being proposed for the Shoreham nuclear plant in New York.

Dr. Barakat of PG&E made the point that deferred capital cost recovery might be achieved with less investor uneasiness if more familiar vehicles such as balancing accounts are utilized, rather than TOC. There may be useful rate stabilization alternatives for SONGS that rely solely on capital cost balancing accounts.

Dr. Barakat also testified that mechanisms which are aimed at deferring utility capital cost recovery are likely to have an adverse impact on investors and, hence, on the utilities' cost of capital. We are not convinced why this is necessarily the case when such mechanisms guarantee that investors will be made whole and only alter the timing of their cash flow. Also, even if there is a potential adverse impact, its extent would certainly depend on the particular mechanism that is utilized, as Dr. Barakat admits.

We note that Edison, in it oral argument before us, stated that "...the company is willing to defer benefits of some cash flow in the interest of more stable, moderated increases in the level of rates to our customers." (Tr. 3863.) Moreover, Edison proposed a rate stabilization plan that included up to $500 million in deferred cash flow. We are interested in pursuing such concepts further within the SONGS proceeding. As a part of such further investigation, we would expect that the rate stabilization and

intertemporal equity benefits of SONGS cash flow deferral will be weighed carefully aginst any possible cost of capital ramifications.

We will direct Edison and other parties to explore whether rate stabilization and intertemporal equity goals can or should be pursued through deferred capital cost recovery mechanisms in relation to SONGS. We expect this to be a central issue in the hearings held pursuant to Edison's forthcoming supplemental SONGS Phase 1 application.

Avoided Cost Pricing

Staff and other parties also discussed the concept of avoided cost pricing in relation to SONGS 2. Staff considers this alternative ratemaking treatment to be the most theoretically desirable approach to ratemaking on efficiency and equity grounds. However, staff concludes that it would be premature to adopt such an approach for this case. We concur that avoided cost pricing is not ripe for implementation in the case of SONGS 2.

G. ECAC and AER Adjustments

Prior to the commercial operation of SONGS 2, the electricity generated by SONGS 2 is being priced at the avoided cost for ECAC purposes. The Fuels and Operations Branch of the Utilities Division recommends that the following principles be applied in treating fuel-related costs of SONGS 2:

1. Edison and SDG&E should be essentially treated the same.
2. The ECAC and AER rates should reflect SONGS 2 fuel costs beginning on the commercial operating date.

For SDG&E the AER established by D.82-12-056 assumed that SONGS 2 would not be a part of the fuel mix. Energy that would have been generated by SONGS 2 was replaced by oil and gas. This was done under the assumption that an adjustment would be made and applied to rates when SONGS 2 achieved commercial operation. Staff witness

recommends that SDG&E be authorized to revise its AER rate on the first date of commercial operation in accordance with Table 3 of Exhibit 36 (Appendix B), without further hearing. Staff witness Davis recommended that the ECAC adjustment be addressed at the next ECAC hearing.

SDG&E takes the position that both the ECAC and AER rates should be adjusted in this proceeding because it is the only proceeding in which the matter is under consideration. We agree with SDG&E that both ECAC and AER rates should be revised in this proceeding. If the ECAC or AER rates are not adjusted, current ratepayers will be subject to increased base rates without receiving any of the immediate benefits from the reduction in fuel costs. While balancing account treatment will ultimately result in a rate adjustment in the future, ratepayers will receive an exaggerated picture of the costs relating to the placing of SONGS 2 into service.

As noted above, Edison has filed an application which estimates that the proper ECAC/AER fuel savings level for SONGS 2 is $206.9 million. This is close to the staff estimate in this proceeding and will be adopted in a separate decision today. As for SDG&E, we believe the staff estimate of fuel savings is reasonable for the purposes of this proceeding and will require SDG&E to file revised ECAC rates to reflect the savings in energy costs of $67.7 million less the reduction in AER rates shown in Appendix B.

H. COD Criteria

On June 14, 1982, the Administrative Law Judge issued a ruling in this proceeding that the commercial operating date would occur when all initial start-up testing, including the warranty run, had been successfully completed. In D.82-09-111, in response to Edison's petition for rehearing, we affirmed the ALJ's ruling. It must be demonstrated to the staff's satisfaction that the plant will meet the criteria in an acceptance test of 200 hours of continuous operation (the warranty run). We viewed the demonstration in the acceptance test, that the plant could meet the required criteria, to be the best indication of the COD.

At the July 15, 1983 oral argument, Edison once again renewed its request that the Commission reconsider its COD criteria. Edison argued that the requirement that the plant complete its 100% power level testing as well as the 200-hour warranty run is too rigid and unrelated to what should be considered for declaring a plant to be "used and useful." Edison stated on July 15, 1983 that it has resumed power testing at the 100% power level and that it would soon complete all of its tests at the 100% power level as well as the warranty run. In renewing its request for reconsideration of the COD criteria at this late date Edison must be concerned about the precedential nature of our COD criteria. We agree that our criteria are rigid; however, we believe it was and is in the ratepayers' interest to set high standards to assure ourselves that the plant would be capable of producing power as planned, even though the delay in placing the plant into service may result in somewhat higher costs to ratepayers in the long run. We believe it would have been more detrimental to have allowed the plant in rate base after the 20% power tests or 50% power tests had been completed and then to have been confronted with a series of plant shut downs because of the need to repair flaws or defects in the plant. While the imposition of our rigid criteria in no way guarantees that the plant will operate without trouble, it does indicate that we have taken reasonable steps to assure all parties that flaws and defects will have been eliminated and corrected to the extent possible. With a satisfactory experience on SONGS 2, we may indeed agree that the criteria should be relaxed. We will be willing to have applicants reopen this issue in connection with SONGS 3 or any other nuclear power plant project.

XI. FINDINGS AND CONCLUSIONS

Findings of Fact

1. Without the adoption of a MAAC procedure, Edison and SDG&E will experience a decline in earnings when SONGS 2 goes into commercial operation and accrual of AFUDC is terminated on SONGS 2.

2. Edison and SDG&E's ownership interests in SONGS 2 are 75.05% and 20%, respectively. The Cities of Anaheim and Riverside have the remaining 4.95% ownership interest in SONGS 2.

3. SONGS 2 and 3 are two-1100 MWe nuclear power plants located in San Diego County south of the City of San Clemente, adjacent to the SONGS 1 site.

4. SONGS 2 and 3 were constructed as a single project and share certain common facilities.

5. A Certificate of Public Convenience and Necessity for SONGS 2 and 3 was authorized by D.78410 on March 9, 1971.

6. Edison has acted and continues to act as project manager of SONGS 2 and 3 in the design, construction, operation, and maintenance of the units.

7. A low-power testing license was received from the NRC on February 16, 1982 which authorized the fuel loading and low-power testing of SONGS 2.

8. This proceeding was bifurcated to enable the staff to undertake and complete studies to evaluate the reasonableness of the investment in SONGS 2. Phase 1 was limited to procedural issues and the setting of interim rates, and Phase 2 will be devoted to the reasonableness of the investment and investment-related cost issues.

9. A full-power operating license was received from the NRC on September 7, 1982 which authorizes applicants to operate SONGS 2 at full-rated power upon completion of low-power testing.

10. Edison's revenue requirement request for the purposes of Phase 1 is limited to $361.6 million even though O&M expenses, rate of return, and the estimated investment in SONGS 2 have substantially increased since the filing of the application on February 18, 1982.

11. SDG&E's revenue requirement request for the purposes of Phase 1 is $119.9 million on an annualized basis.

12. All of the revenue requirements relating to rate base and operating expenses for SONGS 2 which Edison and SDG&E are requesting in this proceeding have not been included in any other rate filings before this Commission.

13. SDG&E relies on Edison's justification of O&M expenses since Edison will be operating the plant and will be billing SDG&E for 20% of such costs. Similarly SDG&E relies upon Edison's accounting for the direct plant investment in SONGS 2.

14. The revised total cost of SONGS 2 and 3 to the second quarter of 1983 is estimated to be $4.2 billion compared to an estimated total cost figure of $3.5 billion used in the original application.

15. A 60-40 allocation of total SONGS 2 and 3 plant costs is based on an engineering study which assigns all common plant to SONGS 2.

16. Based on a 60-40 allocation of total revised SONGS 2 and 3 plant costs, Edison's 75.05% interest in SONGS 2 is estimated to be $1.882 billion.

17. Edison's $361.6 million revenue requirement is based on the original $3.5 billion total project cost. Edison's 75.05% interest of SONGS 2 was estimated to be $1.596 billion.

18. Based on a 60-40 allocation of the original total project cost for SONGS 2 and 3 of $3.5 billion, SDG&E's 20% interest is estimated to be $413 million. Based on a similar allocation of the revised total project cost of $4.2 billion, SDG&E's 20% interest is estimated to be $485 million.

19. SONGS 2 and 3 are accounted as one project with no separation of costs among SONGS 2, SONGS 3, and common facilities.

20. SDG&E did not make a calculation as to the estimated investment in SONGS 2 based on a 50-50 allocation of total project costs between SONGS 2 and 3.

21. SDG&E believes it is reasonable to allocate the common plant equally to SONGS 2 and 3 which it believes can be accomplished by dividing the total project costs equally.

22. SDG&E believes that since a final cost figure for SONGS 2 will not be known until completion of SONGS 3, the $413 million cost figure used in its application as the cost of SONGS 2 is a reasonable estimate to be used for this proceeding since it would approximate an equal allocation of the revised project cost.

23. SDG&E believes a 50-50 allocation of total project costs will lead to greater rate stabilization since one-half of the common plant cost will be deferred to SONGS 3.

24. Considering the magnitude of the investment and the benefit of rate stabilization, it is reasonable to allocate total project costs equally between SONGS 2 and 3 for both Edison an SDG&E, even though Edison did not support SDG&E's proposal.

25. It is reasonable to adopt a balancing account for investment and investment-related costs since the issue of the reasonableness of investment in SONGS 2 is being deferred into Phase 2, and the issue of the timing of capital cost recovery will be considered in the hearings held pursuant to Edison's and SDG&E's forthcoming supplemental applications.

26. Based on a 50-50 allocation of total estimated project cost of $4.2 billion, the investment in SONGS 2 for the purposes of this interim proceeding for Edison is $1.569 billion, and for SDG&E is $411 million.

27. Although O&M expenses for a new nuclear power plant are difficult to estimate, it is possible to make a reasonable fixed estimate.

28. The nature of SONGS 2 O&M expenses is not comparable to the fuel supply and pricing situation which led to the adoption of an ECAC balancing account, both with respect to the magnitude of the dollars involved and the degree of control exercised by the utility over such costs.

29. Edison's O&M expense estimate on which SDG&E also relies was developed by managers and supervisors responsible for the operation and maintenance of SONGS 2 and is plant specific.

30. Staff's O&M expense estimate is primarily based on the average experience of other large pressurized water reactors with a CE nuclear steam supply system. The recorded average based on 1981 recorded figures has been escalated to 1983 and further adjusted to recognize the higher labor expenses experienced in California.

31. Edison's estimate of O&M expenses for all participants of $65,287,000 is excessive and not adequately supported.

32. Staff's estimate of O&M expenses for all participants of $41,497,000 is reasonable.

33. The staff's estimate of pensions and benefits expenses is reasonable for the purposes of this proceeding.

34. There are no differences in the staff estimate and Edison's estimate for payroll taxes and insurance expenses except for replacement generation insurance.

35. Staff is unable to make a recommendation as to the reasonableness of replacement generation insurance.

36. Based on the evidence in this record, we are not convinced that replacement generation insurance should be disallowed. This will not preclude the staff from raising this issue in a future proceeding when it feels it can make a recommendation justifying disallowance of such insurance.

37. It is reasonable for the purposes of this proceeding to allow nuclear replacement insurance expenses of $1,343,000 for Edison and $358,000 for SDG&E as a noninvestment-related cost.

38. Replacement generation insurance expenses have been allowed for SONGS 1 in D.82-12-055.

39. The reasonable level of noninvestment-related expenses to be allowed in this phase for Edison is $38.2 million and for SDG&E is $10.7 million. Noninvestment-related expenses include O&M expenses (including transmission expenses), pensions and benefits, payroll tax and insurance plus applicable franchise taxes, and uncollectible expenses.

40. The last authorized rates of return for Edison of 12.55% and for SDG&E of 13.25% are the reasonable rates of return to be applied in computing the revenue requirement on SONGS 2 investment and balancing account for the purposes of this interim decision.

41. Edison requested rate relief of $340 million of the $361.6 million requested in these evidentiary hearings.

42. In the oral arguments Edison revised its request and now seeks the full $361.6 million with no balancing account treatment.

43. SDG&E requested the full $119.9 million as interim relief with an equal and offsetting reduction in AER and ECAC rates.

44. In the oral argument SDG&E revised its request and now seeks a base rate increase of $100 million with approximately $20 million given balancing account treatment. SDG&E further proposed that ECAC rates be reduced by $52 million for anticipated fuel savings from operation of SONGS 2 and that a $47.6 million ECAC reduction scheduled for November 1983 be authorized concurrent with a SONGS 2 decision resulting in no net rate increase to its customers.

45. Staff recommends limiting interim rate relief to the anticipated savings on energy costs from the commercial operation of SONGS 2. Staff's proposal would limit interim relief for Edison to $215.7 million and for SDG&E to $61.7 million.

46. Neither utility offered contradictory fuel savings estimates in this proceeding, however, Edison estimated $206.9 million in fuel savings in A.83-08-042, and it is reasonable to take official notice of that filing here.

47. Fuel savings estimates of $206.9 million for Edison and $61.7 million for SDG&E are reasonable.

48. Limiting interim rate relief will result in a lower increase to current ratepayers; however, any undercollections and related carrying charges will have to be borne by future ratepayers.

49. It is reasonable to grant interim rate relief in the magnitude of estimated SONGS 2 fuel savings for both Edison and SDG&E.

50. Balancing account treatment of investment-related costs will provide adequate protection to ratepayers by enabling adjustments to be made for any disallowances on plant costs and investment-related costs which may be made in Phase 2.

51. Balancing account treatment of investment-related costs will provide adequate protection to investors as it constitutes a mechanism through which they can be made whole on investment-related costs determined by this Commission to be prudent expenditures.

52. It is reasonable to adjust SDG&E's AER rates at the same time the MAAC rates go into effect in accordance with the computations made by the staff and shown in Appendix B.

53. It is reasonable to adjust SDG&E's ECAC rates to reflect the estimated fuel savings resulting from the commercial operation of SONGS 2, less the AER adjustment, at the same time MAAC rates go into effect as shown in Appendix C.

54. It is reasonable to require SDG&E to further review and revise the AER and ECAC rates to the extent necessary relating to SONGS 2 fuel savings in A.83-07-016.

55. It is reasonable for Edison to adjust its AER and ECAC rates at the same time MAAC rates go into effect as provided in the ECAC decision issued today.

56. The reasonable interim rate increase for Edison under its MAAC is $206.9 million. $38.2 million of this increase is to cover noninvestment-related expenses and is not subject to balancing account treatment. The remainder relates to investment-related costs and will be subject to balancing account treatment.

57. The reasonable interim rate increase for SDG&E under MAAC is $61.7 million. $10.7 million of this increase is to cover noninvestment-related expenses and is not subject to balancing account treatment. The remainder relates to investment-related costs and will be subject to balancing account treatment.

58. It is reasonable to adopt a MAAC for Edison as shown in Appendix D.

59. It is reasonable for SDG&E to adopt a MAAC similar to Appendix D.

60. The adopted MAAC provides for balancing account treatment of investment-related costs and noninvestment-related expenses consisting of O&M expenses, pensions and benefits, payroll taxes, insurance expenses and related franchise fees, and uncollectibles are not subject to balancing account.

61. It is reasonable to increase rates under MAAC on a uniform ¢/kWh basis to all classes of customers and schedules.

62. The cost to ratepayers of power produced from SONGS 2, and the degree to which expensive oil- and gas-based replacement power is needed, will depend to a significant degree on the operating performance of the unit.

63. It is appropriate that the incentives for good plant performance and the allocation of risks related to performance be explicitly considered by the Commission as SONGS 2 is put into rates.

64. A target capacity factor standard will provide a more equitable allocation of risk between ratepayers and investors and a stronger incentive for superior performance on the part of the utilities than would reliance solely on performance reviews in future ECAC reasonableness proceedings.

65. A target capacity factor performance standard for SONGS 2 will not conflict with safe plant operation.

66. It is reasonable to adopt a target capacity factor for SONGS 2.

67. For the reason of equitable risk allocation, it is reasonable that the target capacity factor apply to SDG&E as well as the plant operator, Edison.

68. The target capacity factor standard proposed by staff would be more appropriate if modified to include a deadband between 55% and 80% wherein TCF rewards and penalties do not apply.

69. The target capacity factor standard proposed by staff would be more appropriate if modified so that TCF rewards and penalties above and below the deadband comprise 50% rather than 100% of replacement fuel cost savings or excesses.

70. Further study is desirable to determine whether a cap beyond the 50-50 sharing should be placed on utility exposure resulting from the adopted TCF procedure and, if so, what size a cap.

71. The staff's proposed standard, with the modifications found to be appropriate herein, is a reasonable standard to apply to SONGS 2.

72. Edison and SDG&E stockholders and bondholders will be no worse off due to the adopted TCF because the effect of the adopted TCF on investor risk will be small and will likely be offset by the reduction in investor risk associated with commercial operation of SONGS 2.

73. It is reasonable that for the purposes of future ECAC/AER forecasts, the capacity factor assumed for SONGS 2 be no greater than 80% nor less than 55%, based on its original nameplate capacity.

74. Under conventional ratemaking treatment of investment-related plant costs, ratepayer payments for SONGS 2 and 3 would be expected to greatly exceed fuel cost savings resulting from the operation of these units during the first few years of plant operation.

75. Ratepayer payment for SONGS 2 and 3 under conventional ratemaking treatment of investment-related costs raises the problemsof intertemporal inequity between ratepayers and rate shock.

76. It is reasonable to consider alternative ratemaking treatments of investment-related plant costs for SONGS 2 and 3 which are aimed at avoiding rate shock and promoting intertemporal equity among ratepayers.

77. Alternative ratemaking treatments aimed at avoiding rate shock and promoting intertemporal equity among ratepayers were inadequately examined in this proceeding.

78. It is reasonable for Edison and SDG&E to file tariff changes under MAAC after meeting the COD criteria set forth in the ALJ's ruling dated June 24, 1982, which was affirmed by Commission Minute Order dated July 21, 1982, and modified by D.82-09-111 dated September 22, 1982.

79. Should the COD requirements be met prior to the issuance of this decision, it is reasonable for applicants to continue accruing AFUDC on SONGS 2 investment, capitalize operating and maintenance expenses, and credit any energy generated by SONGS 2 at avoided costs to the work order until MAAC rates become effective.

80. The COD criteria set forth by this Commission for SONGS 2 are reasonable for the purposes of this proceeding.

Conclusions of Law

1. Edison should be authorized to file a MAAC procedure as set forth in Appendix D, and establish an initial noninvestment-related expense rate of 0.071 ¢/kWh and an investment-related cost rate of 0.311 ¢/kWh. The investment-related costs are subject to balancing account treatment.

2. SDG&E should be authorized to file a MAAC procedure similar to Appendix D, and to establish initial noninvestment-related expense rate of 0.109 ¢/kWh and an investment-related cost rate of 0.518 ¢/kWh. The investment-related costs are subject to balancing account treatment.

3. Edison should be authorized to file its initial rates under MAAC upon achieving the COD criteria established by this Commission.

4. SDG&E should be authorized to file its initial rates under MAAC upon achieving the COD criteria established by this Commission.

5. The target capacity factor performance standard proposed by staff, as modified by this decision, should be adopted and applied to SONGS 2.

6. Parties should investigate, during hearings held pursuant to Edison's and SDG&E's forthcoming supplemental SONGS applications, whether a cap beyond the 50-50 sharing should be placed on utility exposure resulting from the adopted target capacity factor standard and also whether alternative ratemaking treatments related to SONGS 2 and 3 which are aimed at avoiding rate shock and promoting intertemporal equity among ratepayers are appropriate.

7. The rates and charges authorized in this decision are justified and reasonable.

8. The effective date of this order should be the date on which it is signed to enable Edison and SDG&E to receive appropriate rate treatment when SONGS 2 goes into commercial operation.

INTERIM ORDER

IT IS ORDERED that:

1. Southern California Edison Company (Edison) is authorized and directed to file with this Commission, on or after the effective date of this order, the Major Additions Adjustment Clause (MAAC) tariff as set forth in Appendix D and to file an advice letter requesting the initial rates set forth in Appendix E. The filing shall be made not earlier than the date when the commercial operating date (COD) criteria adopted in D.82-09-111 have been met and shall be accompanied by operating records and other pertinent information demonstrating that the COD criteria have been met. This filing shall be reviewed by staff. If the staff determines that the COD criteria have not been met, it shall immediately inform the Commission, which may suspend the effective date of the tariffs. If not suspended, the tariff schedules will become effective 20 days after filing. The tariff schedules shall comply with General Order 96-A and shall apply to service rendered on or after the effective date of the tariff schedules.

2. San Diego Gas & Electric Company (SDG&E) is authorized and directed to file with this Commission, on or after the effective date of this order, a MAAC tariff similar to Appendix D and to file an advice letter requesting the initial rates as set forth in Appendix E. The filing shall be made not earlier than the date when the COD criteria adopted in D.82-09-111 have been met and shall be accompanied by operating records and other pertinent information demonstrating that the COD criteria have been met, unless Edison has filed such information pursuant to the preceding paragraph. This filing shall be reviewed by staff. If the staff determines that the COD criteria have not been met, it shall immediately inform the Commission, which may suspend the effective date of the tariffs. If not suspended, the tariff schedules will become effective 20 days after filing. The tariff schedules shall comply with General Order 96-A and shall apply to service rendered on or after the effective date of the tariff schedules.

3. SDG&E is authorized and directed to file revised Annual Energy Rate (AER) in the manner set forth in Appendix C. SDG&E shall file revised Energy Cost Adjustment (ECAC) rate to reduce ECAC rates to reflect the savings in energy costs of $61.7 million less the reduction in AER made pursuant to this ordering paragraph. Such revised rates shall become effective on the date of filing, but not earlier than the date when the MAAC interim rates shall become effective and shall comply with General Order 96-A and shall apply to service rendered on or after the effective date of the tariff schedules.

4. If the plant meets the COD criteria prior to the issuance of this decision, Edison and SDG&E are authorized to continue accruing Allowance for Funds Used During Construction for SONGS 2, capitalizing operating and maintenance expenses, and crediting any energy generated at avoided costs to the SONGS 2 work order until the MAAC rates are placed into effect.

5. Edison and SDG&E are directed to file, within 30 days, advice letters, consistent with this order, which state proposed accounting treatment of replacement fuel-related gains and losses associated with the operation of the target capacity standard adopted in this decision for SONGS 2. The accounting treatment should provide for annual adjustment of these costs. The Executive Director shall review this advice letter and make recommendations to the Commission, within 30 days, on whether the proposed accounting treatment should be adopted.

6. During the consideration of any supplemental revenue requirement request in this proceeding, applicants and staff are directed to analyze whether a cap beyond the 50-50 sharing should be placed on utility exposure resulting from the adopted target capacity factor performance standard and whether alternative ratemaking

treatments involving deferred capital recovery can or should be adopted by this Commission for SONGS 2 and 3. The alternatives that are considered should include: (1) trended original cost ratebasing, (2) levelization and sinking fund depreciation, (3) units of production depreciation, (4) deferral mechanisms such as those proposed for the Shoreham nuclear generation station before the New York Public Service Commission, and (4) extended deferral within the MAAC balancing account.

This order is effective today.

Dated September 7, 1983, at San Francisco, California.

LEONARD M. GRIMES, JR.
President
VICTOR CALVO
PRISCILLA C. GREW
DONALD VIAL
Commissioners

I dissent in part.

/s/ VICTOR CALVO
Commissioner

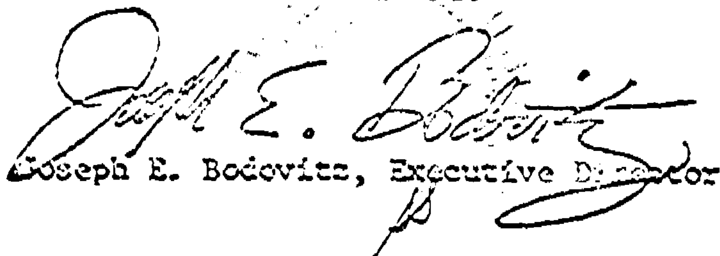
I dissent in part.

/s/ PRISCILLA C. GREW
Commissioner

I will file a written dissent.

/s/ WILLIAM T. BAGLEY
Commissioner

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



Joseph E. Bodovitz, Executive Director

A.82-02-40, A.82-03-63
D.83-09-007

WILLIAM T. BAGLEY, Commissioner, Dissenting:

This dissent is written in cryptic form to accommodate the scheduled release of the majority opinion.

I would have adopted the conclusions, for the reasons stated therein, of the Administrative Law Judge in this matter.

Alternatively, if the format of the current majority opinion were followed, I would have supported and do support the following:

a. To ensure safety of operation, an Operations and Maintenance budget in the magnitude proposed by the utilities;

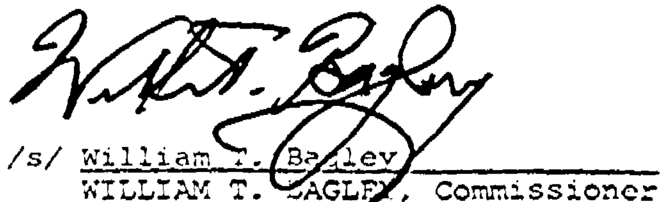
b. In reference to Edison, instead of the arbitrary juxtaposition of fuel savings money ($206 million) as the measure of rate base return, the figure of $340 to $360 million would have been and is much more defensible. The delayed imposition of approximately $150 million (360 minus 206) together with other pending Edison requests eminating from San Onofre Unit 2 (about $170 million) and an expected filing for San Onofre Unit 3 in the same general magnitudes as above, if granted, will cause burdensome rate increases within a much shorter time frame and thus will cause unnecessary rate shock. One reason expressed for such a delay was to provide the Commission "flexibility" for the possible adoption of a rate-trending pattern of capital payback. But such a pattern can only be adopted in advance so that debt reduction can be indexed or syncronized with the future trended rates. After the fact, trending is not possible - thus there is no such need for that "flexibility". We, the choreographers, will have unnecessarily caused a delayed but ballooned payment to the fiddlers.

I would and do support comparable adjustments in reference to San Diego's request.

Additionally, San Diego has available an even greater (proportionately) fuel saving allowance which could be used to offset additional rate base return. That full offset should be used at present rather than deferring rate base return.

c. The adoption of any target capacity factor, appropriately ensuring some shareholder risk, should also have an appropriate minimum and maximum "cap". Without a cap, the mechanism simply will not work - because we would not allow it to work - in its extremes. But not knowing just what remedial steps we would take in the extremes of capacity operation or inoperation, we cause financial uncertainty which in turn taints all future capital raising efforts of the utilities. Any incident interest rate increases could be avoided by a "cap". Further, I would alter the target capacity formula to more accurately deal in advance with real world situations as they do occur in the operations of a nuclear plant.

It is my judgment, in conclusion, that the combined effect of the majority's determination in a, b, and c above can unnecessarily lead to a lowering of financial ratings with no concomitant benefit. We expose the utilities to that risk but accord no benefit to the ratepayer while so doing. If that is the end result, it makes little sense for this Commission to have gone through this particular exercise in futurity.



/s/ William T. Bagley
WILLIAM T. BAGLEY, Commissioner

September 7, 1983
San Francisco, California

APPENDIX A

List of Appearances

Applicants: Richard K. Durant, Donald M. Clary, John R. Bury, David N. Barry, III, and Stephen E. Pickett, Attorneys at Law, and Orrick, Herrington & Sutcliffe, by David R. Pigott and Edward B. Rogin, Attorneys at Law, for Southern California Edison Company; and William L. Reed, Jeffrey Lee Guttero, and Randall W. Childress, Attorneys at Law, for San Diego Gas & Electric Company.

Protestants: Herman Mulman, for Seniors for Political Action; Virginia Jarrow, for Consumer Coalition of California; Tim Carpenter, for Alliance for Survival; and Edward Duncan and Ralph J. Gambina, for themselves.

Interested Parties: John W. Witt, City Attorney, by William S. Shaffran, for City of San Diego; Allen R. Crown, Glen J. Sullivan, and Antone S. Bulich, Jr., Attorneys at Law, for California Farm Bureau Federation; Brobeck, Phleger & Harrison, by Gordon E. Davis, William H. Booth, and Richard C. Harper, Attorneys at Law, for California Manufacturers Association; Downey, Brand, Seymour & Rohwer, by Philip A. Stohr, Attorney at Law, for General Motors Corporation, Otis M. Smith, General Counsel, and Julius Jay Hollis; Dan Hyska, for Department of Water and Power, City of Los Angeles; Daniel E. Gibson and Ivor E. Samson, Attorneys at Law, for Pacific Gas and Electric Company; Kathryn Burkett Dickson, Attorney at Law, for People for Utility Rate Reform; Dian Grueneich, Attorney at Law, for California Energy Commission; Michel Peter Florio, Robert Spertus, and Michael V. Mahoney, Attorneys at Law, and Sylvia M. Siegel, for Toward Utility Rate Normalization; Jim Jacobson, for Community Energy Action Network; William Knecht, Attorney at Law, for California Association of Utility Shareholders; Harry K. Winters, for University of California; Mark Evanoff, for Friends of the Earth and People for Utility Rate Reform; and Charles McClung, Jr., Attorney at Law, and William M. Marriott, for themselves.

Commission Staff: Edward W. O'Neill and Richard D. Rosenberg, Attorneys at Law, and Kenneth K. Chew and A. V. Garde.

(END OF APPENDIX A)

APPENDIX B

SAN DIEGO GAS & ELECTRIC COMPANY

SONGS 2 AER Adjustment at Date of Commercial Operation $(000)

Commercial Operating Date	Fuel Saved	2%	Sales 1/ (Gwhrs)	AER Adj. (¢/Kwhr)
April, 1983	$ 36,169.9	$ 723.4	5,584.80	.01295
May	30,960.7	619.2	4,814.38	.01286
June	25,721.5	514.4	4,063.64	.01266
July	20,650.4	413.0	3,278.76	.01260
Aug	15,411.2	308.2	2,494.90	.01235
Sep	10,172.0	203.4	1,679.90	.01211
Oct, 1983	5,100.9	102.0	834.61	.01222

NOV. 1, 1983 Next AER Review Date

Example: Assume SONGS 2 is in Commercial operation anytime during July 1983. Then the AER adjustment would be a reduction of 20,650.4 million dollars, or .01260¢/Khwr until the November 1, 1983 AER revision date. The decrease would be spread uniformly to all Kwhr Sales.

1/ Anticipated remaining sales to November 1, 1983

(END OF APPENDIX B)

APPENDIX C

SAN DIEGO GAS & ELECTRIC COMPANY ECAC ADJUSTMENT

SDG&E shall file revised ECAC tariffs effective on the date when MAAC schedules go into effect to reflect reductions in ECAC rates for anticipated annual energy savings of $61.7 million from the commercial operation of SONGS 2 less the amount of savings recognized in the AER adjustment shown in Appendix B.

Decreases to ECAC and AER shall be allocated to all applicable classes of service and to each schedule within each class on a uniform cents per kilowatt-hour basis.

(END OF APPENDIX C)

APPENDIX D
Page 1

PRELIMINARY STATEMENT

J. MAJOR ADDITIONS ADJUSTMENT CLAUSE (MAAC)

1. Purpose. The purpose of the Major Additions Adjustment Clause (MAAC) is to reflect in rates, through application of the Major Additions Adjustment Billing Factor (MAABF) and the Annual Major Additions Rate (AMAR), certain costs of owning, operating, and maintaining (excluding all costs recovered through the Company's Energy Cost Adjustment Clause or through the currently effective base rates) specified major plant additions (Specified Major Additions) authorized for inclusion in the MAAC by the California Public Utilities Commission (Commission). The currently authorized Specified Major Additions are set forth in Paragraph 3g. The costs applicable for inclusion in the MAAC for each Specified Major Addition will be recovered through the MAAC until base rates become effective which include all such costs. At such time as the MAAC provision is terminated, any accumulated differential in the Major Additions Adjustment Account, as described and limited in Paragraph 7, shall be transferred to the Energy Cost Adjustment Account or such other appropriate balancing account.

2. Applicability. The MAAC provision applies to certain rate schedules and certain special contracts subject to the jurisdiction of the Commission.

3. Definitions.

a. Authorization Date:

The Authorization Date shall be the date on which the Commission authorizes the inclusion of a Specified Major Addition in the MAAC.

b. Effective Date:

The Effective Date for the revised MAAC rates shall be the Revision Date or such other date as the Commission may authorize. The revised MAAC rates shall be applied to sales for service rendered on and after the Effective Date and shall continue thereafter until the next such MAAC rates become effective or until the MAAC is terminated.

APPENDIX D
Page 2

c. Forecast Period:

The Forecast Period for calculating the MAABF and the AMAR shall be the twelve-calendar-month period commencing with the Revision Date.

d. Franchise Fees and Uncollectible Accounts:

Franchise Fees and Uncollectible Accounts shall be the rate derived from the Company's most recent general rate decision to provide for franchise fees and uncollectible accounts expense.

e. Interest Rate:

The Interest Rate shall be 1/12 of the most recent month's interest rate on Commercial Paper (prime, three months) published in the Federal Reserve Statistical Release, G.13. Should publication of the interest rate on Commercial Paper (prime, three months) be discontinued, interest will so accrue at the rate of 1/12 of the most recent month's interest rate on Commercial Paper, which most closely approximates the rate that was discontinued and which is published in the Federal Reserve Statistical Release, G.13, or its successor publication.

f. Revision Date:

The Revision Date for calculating the MAABF and the AMAR shall be January 1 of each year. Applications for MAAC rate revisions calculated in accordance with the provisions described herein shall be filed with the Commission at least 90 days prior to the Revision Date.

g. Specified Major Addition:

A Specified Major Addition is an addition to the Company's Electric Plant in-Service between general rate proceedings which has been authorized for inclusion in the MAAC by the Commission. For purposes of calculating revisions to the MAAC rates and the entries to the Major Additions Adjustment Account, only those costs applicable for inclusion in the MAAC associated with the following Specified Major Additions shall be included:

APPENDIX D
Page 3

Specified Major Addition	Authorization Date	Noninvestment-Related Expense Rate ¢/kWh	Average Ownership Rate ¢/kWh
San Onofre Nuclear Generating Station Unit 2	-		

4. Calculation of the Average Ownership Rate. Individual rates to reflect certain costs of owning each specified major addition shall be calculated as authorized by the Commission. The Average Ownership Rate for the San Onofre Nuclear Generating Station Unit 2 shall be determined from the following calculations:

a. The authorized annual revenue of $168,700,000.

b. The amount in "a" shall be allocated to the sales subject to the MAAC estimated to be sold during the Forecast Period in direct proportion to the ratio of generation for such sales to total system sales.

c. The amount in "b" above, increased to provide for Franchise Fees and Uncollectible Accounts, shall be divided by the sales subject to the MAAC estimated to be sold during the Forecast Period. The result shall be the Average Ownership Rate, expressed in cents per kilowatt-hour, as set forth in Paragraph 3g.

At such times as the Commission authorizes any adjustments which affect the amounts applicable for inclusion in the Average Ownership Rate, the Average Ownership Rate shall be appropriately revised.

5. Calculation of the Balancing Rate. The Balancing Rate shall be calculated as authorized by the Commission. The current Balancing Rate is 0.000 cents per kilowatt-hour.

6. Major Additions Adjustment Billing Factor (MAABF). The MAABF shall be the sum of the Average Ownership Rates for each Specified Major Addition and the Balancing Rate. Such MAABF, expressed in cents per kilowatt-hour, shall be applied on a uniform cents-per-kilowatt-hour basis to all sales subject to the MAAC. The application of the MAABF to sales shall be as set forth on the applicable rate schedule.

APPENDIX D
Page 4

The MAABF listed below have been, or are, in effect for the periods indicated:

Effective Date	Major Additions Adjustment Billing Factor (¢/kWh)

7. Major Additions Adjustment Account. The Company shall maintain a Major Additions Adjustment Account (Balancing Account). Entries to be made to this account at the end of each month will be determined from the following calculations:

a. Depreciation expense as recorded during the month.

b. Plus: Ad valorem taxes as recorded during the month.

c. Plus: Taxes based on income, including appropriate tax adjustments, all as recorded during the month.

d. Plus: Return, which shall be one-twelfth of the rate of return authorized by the Commission for each Specified Major Addition multiplied by the average depreciated rate base, as recorded during the month.

e. Less: The allocation of the sum of "a" through "d" to resale sales in direct proportion to the ratio of generation for resale sales to total system sales.

f. Less: The amount of revenue billed during the month under the MAABF, reduced to provide for Franchise Fees and Uncollectible Accounts.

If the above calculation produces a positive amount (undercollection), such amount will be debited to the Balancing Account in conjunction with the specific Major Addition as approved by the Commission. If the calculation produces a negative amount (overcollection), such amount will be credited to the balancing account. Interest will accrue monthly to the Balancing Account by applying the Interest Rate to the average of the beginning and ending balance.

8. Calculation of the Average Noninvestment-Related Expense Rate. Individual rates to reflect certain fixed costs associated with each Specified Major Addition shall be calculated as authorized

by the Commission. The Average Noninvestment-Related Expense Rate for the San Onofre Nuclear Generating Station Unit 2 shall be determined from the following calculations:

a. The authorized annual revenue of $38,200,000.

b. The amount in "a" sahll be allocated to the sales subject to the MAAC estimated to be sold during the Forecast Period in direct proportion to the ratio of generation for such sales to total system sales.

c. The amount in "b" above, increased to provide for Franchise Fees and Uncollectible Accounts, shall be divided by the sales subject to the MAAC estimated to be sold during the Forecast Period. The result shall be the Average Noninvestment-Related Expense Rate, expressed in cents per kilowatt-hour, as set forth in Paragraph 3g

9. <u>Annual Major Additions Rate (AMAR)</u>. The AMAR shall be the sum of the Average Noninvestment-Related Expense Rates for each Specified Major Addition. Such AMAR, expressed in cents per kilowatt-hour, shall be applied on a uniform cents-per-kilowatt-hour basis to all sales subject to the MAAC. The application of the AMAR to sales shall be as set forth on the applicable rate schedule.

The AMAR listed below have been, or are, in effect for the periods indicated:

Effective Date	Annual Major Additions Rate (¢/kwh)

(END OF APPENDIX D)

APPENDIX E

RATES

Description	Revenue Increase ($Million)	Sales (MillionkWh)	Rate (¢/kWh)
SoCal/Edison			
Total	206.9	-	-
Noninvestment	38.2	54,137	0.071
Balance	168.7	54,137	0.311
SDG&E			
Total	61.7	-	-
Noninvestment	10.7	9,841	0.109
Balance	51.0	9,841	0.518

(END OF APPENDIX E)

COMMISSIONER LEONARD M. GRIMES, JR., Concurring:

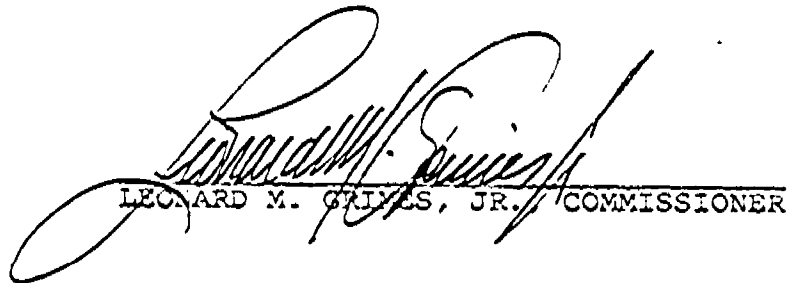
I concur with the decision today on an alternative ratemaking treatment for San Onofre Nuclear Generating Station Unit 2. Our decision to adopt a target capacity factor mechanism for this unit, and to evaluate other alternative ratemaking treatments in Phase 1B of this proceeding, represents a continuum of our policy towards risk-sharing among utility ratepayers and shareholders. We believe that this policy will provide long-run benefits to all parties in the form of more efficient use of resources, lowest possible cost of power to the end-user, and a more diversified resource base.

Over the last few years, the Commission has applied a variety of risk-sharing ratemaking mechanisms across a broad range of energy technologies. Decision 93363 adopted a plant performance incentive procedure for Edison's Mohave and Four Corners coal plants, which serves to share the risk and associated costs or benefits of plant performance among ratepayers and shareholders. I might add that the effects of this incentive to date has been positive on SCE's cash flow.

In Decision 82-10-049, avoided cost ratemaking treatment was adopted for Edison's Heber geothermal plant in order to allocate the potential risk of this plant being more (or benefits of it being less) expensive than available alternatives. In Decision 82-01-103, the Commission ordered utilities to file Standard Offers to qualifying, small power producers, which would include fixed avoided costs payments. This decision recognizes the appropriateness of risk-sharing between ratepayers and small power producers, where there exist certain financial and economic uncertainties. More recently, in Decision 83-08-048, we increased the portion of each utility's fuel costs from the ECAC balancing account mechanism, whereby ratepayers would no longer be a full risk for all fuel price variations.

Our decision today recognizes the ongoing need of this Commission to develop and implement, where appropriate, innovative risk-sharing alternatives to traditional cost-of-service ratemaking.

We have and will continue to exercise caution in monitoring these changes, however, caution cannot be just talk, but movement, albeit in small incremental steps. Today's action is a step that is also an "affirmation of faith" that the company's thirteen year old discussion with the concurrance of this Commission, is and will continue a benefit to California and the electric utility ratepayers. It is also a recognition that this plant's cost (as with every other one like it in the country) impacts ratepayers a great deal more than anyone could foresee.



LEONARD M. GRIMES, JR., COMMISSIONER

San Francisco, California
September 7, 1983

A.82-02-40
D.83-09-007

VICTOR CALVO, Commissioner, dissenting in part:

I dissent from that portion of the decision which authorizes an interim annual revenue requirement of $206 million which is offset in full by the projected annual fuel cost reduction for SONGS 2. Edison initially had requested, and the Administrative Law Judge (ALJ) had authorized, a revenue increase of $340 million, which I believe is a more realistic revenue requirement for several reasons.

First, by authorizing a smaller revenue requirement for SONGS 2 today, we are simply delaying the collection of at least twice that amount on an annual basis at some point in the near future. Meanwhile, interest at the utility's authorized rate of return will accrue on the deferred amount which will only serve to further increase the burden ultimately borne by the ratepayer.

Second, if the Commission were to authorize a larger revenue increase for SONGS 2 today, it could offset this increase by the overcollections which had accrued in Edison's ECAC balancing account. While the accrual of overcollections was never designed to function specifically as a cushion to soften the impact of the revenue increase due to SONGS 2, the fact is that it can so function. It is unlikely that a similar cushion will exist at some later point in time when the deferred revenue requirement for SONGS 2 is ultimately recovered from the ratepayer.

Thirdly, it is important to realize that revenue increases due to SONGS 2 are simply the first in a line of increases due to large plant additions that will be before us. SONGS 3 and Palo Verde are fast on the heels of SONGS 2 and will lead to large revenue increases as well. Deferral of the SONGS 2 revenue increase will simply compound the upward effect on rates due to these other plant additions.

All of these reasons compel me to conclude that the Commission should be taking all reasonable measures to ease the rate shocks which will be facing the Edison ratepayer in the next year or so. In my view, authorization of a larger revenue requirement for SONGS 2 at this time would be a small but important measure in that direction.

VICTOR CALVO, Commissioner

September 7, 1983
San Francisco, California

A.82-02-40
A.82-03-63
D.83-09-007

PRISCILLA C. GREW, Commissioner, Dissenting in part:

I concur with the decision except on the majority's discussion of commercial operating criteria. The criteria established by the Commission in Decision 82-09-111 for determining the onset of commercial operation of SONGS 2 were intended to provide assurance that plant construction would be complete before ratepayers were required to begin paying Edison and SDG&E a continuous rate of return on plant investment. In the period prior to commercial operation, the Commission provided that the utilities would earn avoided cost for all electricity generated by the plant as it was turned on and off and achieved various levels of operation during testing and finishing.

Edison had proposed that the Commission adopt August 15, 1982 as the commercial operating date since on that date Edison expected SONGS 2 to have completed all its 20% power tests and to have begun the 50% test power stage. Edison later proposed adoption of November 8, 1982, when testing at the 50% level was expected to be complete.

The Commission staff argued, however, that the plant should be considered to be in a testing phase during the entire power ascension schedule, and that synchronization of the plant and initial deliveries of power to the utility grid should not be considered by the Commission to be the onset of commercial operation.

Staff initially proposed that the onset of commercial operation be recognized when power generation was resumed after completion of a turbine bearing inspection following the steam system warranty run (Exhibit 15, p.5-KPC). When Edison's attorney asked staff "would you still make the recommendation if the company did not shut the unit down and conduct a turbine and bearing inspection at the end of the warranty run," (Transcript Vol. 5 p. 636), staff indicated it would revise its position to move the commercial operating date earlier to the time the steam supply system warranty requirements were completed.

At the oral argument, Edison stated that the completion of the 200-hour warranty run at the 100% power level was too rigid a criterion, and requested that the Commission adopt operation at the 80% power level for 100 hours as the criterion.

ALJ Tomita's ruling on the Commercial Operating Date, later ratified by the Commission in a Minute Order on July 27, 1982 and by Decision 82-09-111, states:

> "the 200-hour warranty tests are required by both Edison and its vendors to assure that the facility is in a <u>finished state</u>".(Emphasis added) (A.82-02-40, A.82-03-63, Administrative Law Judge's Ruling on Rescheduling Hearings, June 14, 1982, mimeo, at 12)

The warranty contract between Edison and Combustion Engineering assures a "finished state" because Paragraph 19.2.2.1 of the contract (Exhibit 16) requires Combustion Engineering to "correct either by adjustment, modification, repair or replacement, at its option and expense, all defects in design, workmanship and materials" prior to plant acceptance by Edison. Acceptance under the contract is to occur upon the successful completion of a monitored, continuous 200-hour thermal output warranty run, to be conducted, according to the contract, at a time "agreed upon by the Company and Combustion." The run is to be performed "in accordance with the standards set forth in ASME Power Test Code 32.1 or equivalent standards" and "all major parameters necessary to determine the actual thermal output shall be measured during the Acceptance Tests."

My concern about the majority's decision today is that it will create a time gap between the onset of commercial operation, as defined by the Commission, and Edison's later acceptance of the finished unit under the contract warranty provision. We could thus conceivably have a situation in which the plant would have to be taken out of operation while Combustion Engineering performs modifications which might be necessary prior to Edison's warranty acceptance. In such a circumstance, the plant would be officially in commercial operation, earning a continuous full return from ratepayers, yet be shut down for finishing prior to acceptance from the vendor under the warranty contract.

The majority today inserted language suggesting that commercial operating criteria for SONGS Unit 3 and other nuclear units might

be further relaxed in future proceedings (mimeo, page 65.) In my opinion, the criteria we adopted for SONGS 2 in Decision 82-09-111 were sound, even though they have been vigorously opposed by Edison throughout these proceedings. Furthermore, in D.82-09-111, this Commission provided Edison an opportunity to return to the Commission to request an exception to meeting such criteria if Nuclear Regulatory Commission requirements "or other technical restraints" would make Edison "unable to meet any of these criteria." (D.82-09-111, mimeo, Page 3) Edison did not choose to do this. I have yet to see evidence on the record that would warrant changing the criteria adopted for SONGS 2. I reserve judgment with regard to appropriate commercial operating criteria for SONGS 3 and other nuclear units until relevant facts pertaining to those plants are developed on an evidentiary record.

PRISCILLA C. GREW, Commissioner

September 7, 1983
San Francisco, California