Decision 93640 OCT 20 1981

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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern California Edison Company for Authority to Modify its Energy Cost Adjustment Billing Factors and to Make Certain Other Rate Changes in Accordance with Decision 92496.	Application 60321 (Filed March 2, 1981)

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Freda Abbott, Attorney at Law, and Julian Ajello, for the Commission staff.

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O P I N I O N

I. INTRODUCTION

By Application (A.)60321 filed March 2, 1981, Southern California Edison Company (Edison) requests authority to modify rates to result in a net revenue increase of $126.7 million on an annualized basis. Prior to the hearing Edison revised its request to $98.4 million, based on more recent information.

A duly noticed public hearing was held before Administrative Law Judge (ALJ) Patrick J. Power on May 18, 19, 20, 21, and 22, 1981 in Los Angeles. Edison offered the testimony of six witnesses in the presentation of its direct case: Lynn Ellen Myers, associate rate structure engineer; M. Douglas Whyte, manager of electric system planning; Gary L. Schoonyan, supervising production engineer; Paul D. Myers, manager of fuel contracts; Larry D. Chubb, valuation supervisor for the Rate Base-Depreciation Division of the Valuation Department; and David C. Kavanaugh, senior economist. The Commission staff offered the testimony of three witnesses: Thomas R. Pulsifer, Public Utility (PU) financial examiner III; Richard Finnstrom, senior utilities engineer; and Ishwar Chander Garg, associate utilities engineer. The San Bernardino Valley Municipal Water District (SBVMWD) offered the testimony of three witnesses: G. Louis Fletcher, general manager and chief engineer; William G. Hiltgen, manager and secretary of the San Bernardino Valley Water Conservation District; and Stephen Stockton, operations manager and engineer. Edison offered Jerry G. Haynes, manager of nuclear operations, to respond to questions asked by Toward Utility Rate Normalization (TURN). Edison offered the testimony of Larry E. Williams, supervising power contracts engineer, in rebuttal to the showing by SBVMWD, and offered witnesses Chubb, Schoonyan, and Lawrence J. Hedrick, supervisor of regulatory costs, in rebuttal to the staff showing. The matter was submitted upon the receipt of 32 exhibits and concurrent briefs, to be filed June 15, 1981.

Briefs were filed by Edison, staff, SBVMWD, California Manufacturers Association (CMA), San Diego Gas & Electric Company (SDG&E), and TURN. TURN also filed a "Motion to Bifurcate" this proceeding. Edison filed a reply to TURN's motion of July 14, 1981.

II. BACKGROUND

By Decision (D.)92496 dated December 5, 1980, this Commission instituted certain revised Energy Cost Adjustment Clause (ECAC) procedures. Edison is required to file for revisions in its Energy Cost Adjustment Billing Factor (ECABF) three times annually, based on revision dates of January 1, May 1, and September 1. In connection with the May 1 revision date the reasonableness of Edison's recorded costs for the prior calendar year are examined and an Annual Energy Rate (AER) is determined.

Under the procedures adopted in D.92496, the ECABF is intended to recover 98% of includable net energy expense. The remaining 2% is recovered in the AER, which also recovers the revenue requirement associated with the rate base treatment of fuel oil in inventory, and certain other energy-related costs. Incremental carrying costs associated with changes in the price of oil as it is reflected in inventory are recovered in the ECABF. Expenses recovered through the ECABF are recorded in a balancing account in which the applicable revenues and expenses are compared monthly and the accumulated difference is reflected in subsequent rate adjustments. There is no balancing account associated with the AER.

III. SUMMARY

By this decision Edison is authorized to make changes in its base rates and ECAC billing factors and to include an AER factor. The net effect of these changes is to increase rates by about $83 million annually.

The adopted rate design is based on the rate design principles adopted in Edison's last general rate case, D.92549. The rate increase is spread to each customer class on a uniform cents per kilowatt hour (¢/kWh) basis. Within the domestic class the increase

is spread between lifeline and nonlifeline to preserve the differential adopted in the general rate case. The adopted increase in the average domestic lifeline, nonlifeline, and total rate is 2.3%.

This is Edison's first annual reasonableness review proceeding under the revised procedures adopted in D.92496. Thus, certain transitional issues must be resolved, in addition to more typical ECAC issues.

One of the revisions implemented by D.92496 removes the fuel oil inventory component of rate base from base rates, providing for recovery through the AER. This process requires calculation of an appropriate adjustment to base rates.

Edison's last general rate case decision included several features that relate to this matter. Ordering Paragraph 25 in D.92549 directs Edison to refund any base rate revenues for 1981 exceeding the adopted base rate level. This decision directs Edison to provide a recalculation.

In D.92549 the Commission adopted step rates to reflect an attrition allowance provided to Edison to recognize the attrition in rate of return that would otherwise occur in the second year following the decision. Staff argues that the attrition allowance should be reduced to reflect the changed treatment of fuel oil in inventory. We do not adopt the staff's recommendation.

Prior to the first date of hearing Edison provided a revised, updated showing reflecting more recent information. Staff objected to the admissibility of such evidence. We find that there was sufficient opportunity to test the reliability of the more recent data.

The parties disagree regarding the appropriate volume of fuel oil to be included in rate base for the test year. We find that Edison's proposed test year level is more directly the result of unforeseen factors than corporate planning, and allow only a portion of such oil in rate base. The remaining oil is treated as underlifted, rather than stored.

Edison argues that ad valorem taxes should be recognized as a carrying cost of fuel oil inventory. We find that only direct financing costs are intended for AER recovery.

Edison proposes to remove all facilities charges and underlift payments prospectively from ECAC recovery and to continue to recover facilities charges included in inventory on May 1, 1981 through ECAC. Staff offers a different accounting treatment. Edison's method is adopted.

In regard to calculation of the 2% provision, Edison's estimates of sales and energy mix are found to be based on more recent information and are adopted. Edison's estimated price of fuel oil is found to be overstated, based on market conditions and inventory levels. Edison's estimate of natural gas prices is adopted.

Edison contends that the 2% provision should not apply to the Mono Power Company fuel service charge. We find that its position is not consistent with the intent of D.92496.

Edison proposes that the AER be revised whenever the Commission adopts a change in its authorized rate of return. Staff argues that revisions should be no more frequent than annual. We find that this problem is resolved either directly by a specific rate change, or indirectly, by an attrition allowance. We provide for the direct solution.

In regard to ECAC, the average fuel and purchased power expense is determined based on the estimated cost of energy for the test period, based on prices estimated as of the first day of the test period. Edison's estimates of sales and resource mix are adopted, for the same reasons that its estimates were adopted for the AER calculation. Edison's price estimates are adopted.

The average balancing rate is calculated based on the forecast balancing account balance amortized over an appropriate period. Edison and staff agree regarding the balancing account balance.

CMA objects to the recovery of $31.7 million of incremental carrying costs of fuel oil held in inventory, under D.92496. We find that this issue is disposed of by D.92869.

The Fuel Collection Balance Adjustment is recalculated to be amortized over the remainder of 1981.

SBVMWD made a showing related to energy savings that could be realized if Edison participated in a water exchange and diversion program. Edison is found imprudent for failing to accomplish these savings.

TURN argued that Edison's operations at its San Onofre Nuclear Generating Station Unit 1 may have been unreasonable. TURN moves for a bifurcated proceeding and deferred recovery of replacement fuel costs. The motion is denied. Edison is directed to proceed with an incentive procedure applicable to San Onofre analogous to its coal plant procedure.

IV. ANNUAL ENERGY RATE

A. Introduction

The purpose of the AER is to recover in rates the estimated costs forecast for the 12-month period beginning May 1, 1981 associated with the following:

1. Fuel oil inventory in rate base;
2. The estimated expense for facilities charges and underlift payments;
3. Gains and losses on the sale of fuel oil; and
4. 2% of the energy costs included in ECAC.

The AER is intended to remain in effect for the 12-month period or until such time as it is superseded by the next such AER.

B. Adjustment to Base Rates

One of the revisions implemented by D.92496 removes the fuel oil inventory component of rate base from base rates, providing for recovery through the AER. Initially, this requires an adjustment to base rates to reflect the change. Edison offered its calculation of the appropriate adjustment. Staff witness Pulsifer demonstrated that Edison incorrectly calculated the net-to-gross multiplier. Edison accepted the corrected calculation. Table 1 sets out the adopted adjustment, based on Edison's recalculation and excluding ad valorem taxes as discussed below.

TABLE 1

Average Adjustment To Base Rates

	$M	$M
Fuel Oil Inventory Component of Adopted Rate Base		$401,800
CPUC Jurisdictional Fuel Oil Inventory Component of Adopted Rate Base		371,344
Revenue Requirement		
Ad Valorem Taxes	$ -	
Return and Income Taxes	68,832	
Total Revenue Requirement		68,832
Franchise Fees and Uncollectible Expense at 1.009%		696
Net Revenue Requirement		69,528
Sales (M^2kWh)		
Authorized Sales	53,815.1	
Adjustment for Discounts	747.5	
Total Adjusted Sales		53,067.6
Average Adjustment to Base Rates ¢/kWh		0.131

C. Adjustment to Base Rate Revenue Limit

Ordering Paragraph 25 in D.92549 directs Edison to refund any base rate revenues for 1981 exceeding the adopted base rate level. Edison proposes to adjust the adopted base rate revenue level for the six major customer groups to reflect the shift of the revenue requirement associated with fuel oil in inventory from base rates. Edison proposed an adjustment based on the assumption the transfer would occur on May 1st. Staff agrees that a portion of the AER should be considered as base rates for purposes of the revenue limit when the matter of refunds is considered. We find that an adjustment is appropriate. However, the amount of the adjustment is a function of the date of the shift. Edison should recalculate the amount based on the effective date of the rate change and provide the information in its next ECAC filing.

D. Adjustment to Attrition Allowance

In D.92549 the Commission adopted step rates to reflect an attrition allowance provided to Edison to recognize the attrition in rate of return that would otherwise occur in the second year following the decision. Staff witness Garg recommends that the attrition allowance be reduced to account for the shift of fuel oil inventory from the general rate case rate base to the AER.

The amount of the attrition allowance adopted in D.92549 is $91.9 million. Of the total, $34.3 million is attributed to rate base. Garg proposes that the attrition allowance be reduced by $27.9 million, or over 80% of the rate base component. Edison objects to the proposed reduction.

Staff argues that the Commission calculated the attrition allowance based on the difference between the adopted 1981 rate base and Edison's estimated 1980 rate base. It contends:

> "Since the Commission adopted Edison's 1980 estimate including fuel stock and, further, adopted Edison's estimated 1981 fuel stock..., it is apparent that the Commission itself

> projected that the incremental change in the value of fuel stock in inventory between 1981 and 1982 will be equal to the change that Edison estimated would occur between 1980 and 1981."

Staff proposes that the adjustment be made at the time of the rate change.

Edison argues that the Commission did not adopt a specific amount for fuel oil inventory or any other component of rate base in setting the attrition allowance. Therefore, it contends that staff's method has no basis in fact. Edison states:

> "Decision No. 92549 did not find that the 1980-81 differential for fuel oil inventory was a reasonable representation for change in fuel oil inventory in the 1981-82 time period. The Commission simply used the total differential in rate base between the Edison 1980 rate base estimate and the Commission adopted rate base estimate for 1981 and used this to determine the rate base component of the attrition allowance for 1982."

Edison argues that no adjustment should be made.

Edison argues that staff has ignored projections of the reasonable level of rate base for 1982. It offered evidence that the actual difference between 1981 and 1982 rate base will substantially exceed the amount adopted for calculating the attrition allowance. Thus, it contends that even the original provision is inadequate. A reduction in the allowance without an updated estimate of the change in rate base is alleged to diminish what would be otherwise perceived as important progress in California regulation.

We conclude that no adjustment is required. There is no basis for staff's assumption that we intended that over 80% of the attrition in rate base would be the result of increases in the cost of fuel oil.

As stated by staff, the rate base adopted for test year 1981 is $187 million greater than estimated for 1980, and the corresponding

increase in fuel oil inventory is $155 million of the total; and we did adopt $187 million as the increase in rate base to use for the attrition allowance. However, there is no necessary connection between the attrition allowance and the fuel oil inventory. We did not mean to suggest that because fuel oil inventory had increased by $155 million from 1980 to 1981, it would increase again by $155 million in 1982. The volatility of fuel oil prices is a major reason we adopted this revised procedure, but we cannot in good faith find that we anticipated that prices would increase dramatically over the following year.

In addition to the factual problem, we also face a policy issue. Staff's proposal appears consistent with offset ratemaking principles - adjust the rates to "offset" a change in a specific element of expense or revenue, without consideration of changes in other elements. However, offset procedures are not favored and we prefer to limit their use to more compelling circumstances.

E. Calculation of the Annual Energy Rate

1. In General

As stated above, there is no balancing account associated with the AER. This feature introduces certain evidentiary and procedural issues, in addition to the factual issues regarding the actual reasonable values.

The evidentiary problem is raised by staff, which objects to the introduction of updated information by Edison. Staff refers to Finding 22 in D.92496 which provides:

> "Updated recorded information can and should be used whenever possible, subject to later audit."

and asks that the finding be declared inapplicable to AER costs.

Staff indicates that it was disadvantaged by Edison's updated showing, even though the overall effect is a reduced revenue requirement. It recites some of the differences between the original and revised showing and states:

> "Some of the foregoing differences were discussed in Exhibit No. 5 and reviewed during testimony. However, many were not approved, nor have the differences been subject to an independent evaluation by the staff. Despite obvious time constraints, it cannot be assumed that Edison's revised estimates would not have been selected for independent evaluation by the staff simply because the original lower estimates were accepted. Thus, the company's proposed revisions are seriously in conflict with the staff's evaluation of fuel and purchased power costs. Moreover, Edison has not explained the disparity between its changes in sales and operations, and the changes in estimated energy requirements."

Staff contends that the "later audit" provision is meaningless in this context so that updated information should not be admitted.

We consider staff's problem to be more illusory than real. There was adequate opportunity for staff counsel to cross-examine Edison's witnesses regarding the differences between its original and revised showings to test the reliability of its more recent data. From time to time the staff itself may offer "updated" information in such cases. We are not inclined to adopt such a restrictive evidentiary policy that might leave us to rely on known unreliable evidence. The evidence was distributed prior to the first day of hearing, tested by cross-examination, received subject to rebuttal, and finally is the subject of written argument.

The procedural issue relates to the phasing in of the AER in this and subsequent applications. We will take up this issue after we calculate the AER.

2. Edison's Proposal

a. In General

Edison proposes that the AER be set at an average energy rate of .516¢/kWh, based on a revenue requirement of $276.5 million.

The derivation of its proposed rate is shown in Table 2. Staff and other parties take exception to various components of Edison's proposal.

TABLE 2

Edison's Proposed Annual Energy Rate

		$M
Revenue Requirement Associated with Fuel Oil Inventory		$132,689
Facilities Charges and Underlift Payments		92,431
2% of Net ECAC Fuel and Purchased Power Expense		48,665
Gain or Losses on Sale of Fuel Oil		0
Total Gross Revenue Requirement		273,785
Adjustment for Franchise Fees and Uncollectible Accounts Expense at 1.009%		2,762
Total Revenue Requirement		276,547
Forecast Sales M²kWh		
Total Sales Subject to ECAC	$53,679	
Adjustment for Discounts	125	
Forecast Adjusted Sales		53,554
Annual Energy Rate - ¢/kWh		0.516

b. Fuel Oil Inventory

i. Volumes

The major issue in regard to the fuel oil inventory component of the AER is the appropriate volume of fuel oil to be adopted as the basis of the calculation. Edison argues that 14.5 million barrels is the reasonable level for the test year. Staff supports 11 million barrels for ratemaking purposes. CMA proposes that about 13.1 million barrels be adopted for this purpose.

Edison's updated estimate of the weighted average net number of barrels of fuel oil in inventory during the 12-month forecast period beginning May 1, 1981 is 14.521 million barrels at an estimated adjusted average price of $41.23 per barrel. In support of its estimates Edison offers the following criteria:

"(a) A minimum 90-day-forward supply under average year conditions;

"(b) A level of inventory on September 30 that is adequate to protect against six months of adverse winter-related impacts on gas supply, hydro-electric/surplus purchased power, availability, and load;

"(c) The loss of a major coal or nuclear generating unit for up to 90 days;

"(d) An interruption in supply caused by refinery operating problems or loss of crude oil feedstock; and

"(e) Economic considerations related to future fuel oil prices and inventory carrying costs."

Edison further explains that these criteria are constrained by storage capacity, fuel oil distribution logistics within Edison's system, and contract delivery schedules.[1] Additionally, the projected level of inventory takes into account the existing inventory level.

Staff's proposal is based on the test year level adopted in D.92549, Edison's most recent general rate case. Edison contends that the 11-million-barrel figure was based on the 90-day-forward supply requirement, under average year conditions, assuming that minimum quantities of gas would be available. It argues that conditions have changed.

Although considerable gas is now projected on an average-year basis, Edison contends that it must consider its exposure to loss of supply at any time. Therefore, it argues that it cannot rely on the 90-day oil supply criteria. It considers the other criteria more significant, and ultimately controlling.

1/ Edison intends to purchase fuel oil at minimum contract levels.

Edison argues that its proposal is consistent with the policies underlying the changed ratemaking treatment of fuel oil in inventory adopted in D.92496. It contends that the Commission intended that fuel oil procurement policies reflect the status of the fuel oil in the resource mix and provide flexibility for managing supplies to reflect changes in the availability of other resources. It asserts that its projections best reflect these factors.

Staff considers Edison's criteria to be an extreme set of assumptions. It states that the 90-day burn is more reasonable and points out that, based on current conditions, 11 million barrels is a liberal allowance. Staff argues that Edison can manage its inventory "well within the 11.0 million barrel allowance" if certain measures are taken.

Staff argues that its position is consistent with D.92496. It contends:

> "...the Commission stated that management control over inventory volumes is the major consideration supporting base rate recovery of associated costs, whereas ECAC recovery for changes in value is appropriate to eliminate risks in the former procedure which offered no corresponding opportunity. Thus, an opportunity for the utilities' stockholders through management's control of inventory levels is inherent in the procedure retained by Decision No. 92496. However, if the company is allowed a net inventory of 14.5 million barrels, or even 14.0 million barrels, any corresponding risk to the stockholders or management associated with management's control of inventory volumes appears to be essentially eliminated."

Staff calculates the fuel oil inventory component as about $76.5 million.

CMA also argues that Edison has overestimated the revenue requirement related to the fuel oil inventory component of the AER. It argues that:

> "While Edison bravely attempted to maintain that its figure represents the optimal level of inventory for the forecast period, it is clear that the figure is almost entirely a function of the beginning of forecast period volume in inventory, the estimated burn and the perceived limitations of Edison's supply contracts."

In particular, the criteria fail to indicate why the beginning level is so high.

CMA points out that as of May 1, 1981, Edison had about 14 million barrels in storage, when its operational requirements would dictate only 5 million - an excess of 9 million barrels. During the forecast period Edison plans to purchase about 24 million barrels and burn slightly more, yielding an ending inventory of about 14 million barrels which CMA again suggests will be excessive.

CMA suggests that Edison's estimate be reduced by 10% as a more reasonable average inventory level for the forecast period. CMA too claims to be consistent with D.92496:

> "The Commission made very clear in Decision No. 92496 that while it wished to afford protection to the utilities with regard to the enormous increases in the cost of oil, it was not prepared to allow adjustments based on changes in inventory levels at this time. This is

> because the utilities need to have incentives to manage their fuel oil inventory in the most cost efficient manner possible consistent with system reliability. Thus, the Commission contemplated adoption of a reasonable level of storage for AER development and refused to adopt presently a mechanism for floating inventory levels. . . . Further, it is clear that if and when it adopts a floating mechanism, the Commission contemplates a sharing of the costs between the utility and the ratepayers.
>
> "Secondly, it appears as though it will cost ratepayers roughly $8 per year for each barrel held in storage ($40 x .20). While paying this amount is certainly reasonable as to those barrels necessary for system reliability, it is an excessive cost for storage which is not necessary. Edison correctly notes that in order to reduce inventory levels, it may have to incur underlift charges of $6 per barrel. CMA believes that the ratepayer would be better off to pay the underlift charges."

CMA calculates the fuel oil inventory component of the AER is $92.6 million.

As these three positions indicate, parties disagree regarding our intention with respect to the appropriate ratemaking treatment of fuel oil in inventory.

In D.92496 we recognized that there are conditions that affect actual inventory levels that had not been adequately reflected in rates. Specifically, we noted that the unforeseen availability of lower cost energy or fuel would affect fuel oil requirements, with resulting costs depending on the way the utility managed the excess fuel oil. Prior to ECAC the utility benefited from the lower cost energy and bore the costs of fuel oil management. ECAC passes through the benefit of the cheaper energy to the ratepayer. The ratepayer should share in the costs associated with excess fuel oil. In D.92496 we directed PG&E to proceed by way of an independent consultant to a procedural refinement that would accomplish this sharing.

We initiated the formal procedure with PG&E because it has the greatest potential savings in fuel oil requirements on account of its hydro facilities. However, evidence in this record indicates that unforeseen conditions have occurred that materially affect Edison's fuel oil requirements, requiring ratemaking recognition prior to the adoption of a formal procedure.

Therefore, we reject staff's proposed calculation. The last general rate case inventory volume does not reflect the effects on fuel oil needs related to a "warm" winter and generally higher volumes of natural gas available.

Actually, there are two independent factors involved, both related to natural gas. The warm winter reduces space heating requirements and therefore high priority needs. The unused gas finds its way through the priority system down to the lowest priority customer, the electric generator. This is a short-term effect.

The higher volumes of available gas reduce the average year fuel oil requirements over the long term. Over the long term this reduction might result in reduced fuel oil inventory levels. However, in the short term there are probable costs associated with reductions in fuel oil purchases, whether the excess oil is stored, underlifted, or sold.

CMA correctly perceives that we intend to share costs between the utility and ratepayers. However, it mistakenly focuses on the remaining oil, rather than the entire volume displaced by lower cost resources.

The approximately 3-1/2 million barrels that Edison proposes to store must be measured against its success at reducing fuel purchases. In December 1979 the projected fuel oil burn in 1980 was 55 million barrels. In February 1980 the projected burn was 42 million barrels. Recorded 1980 burn was 30 million barrels. 1980 purchases were 35 million barrels. These conditions set the stage for the high volume of inventory shown at the beginning of the test period, calculated by CMA as 9 million barrels higher than indicated by operational requirements.

However, we are not persuaded by Edison's contention that its proposal represents the optimal test year storage level. We agree that there is not necessarily a linear relationship between reductions in fuel oil requirements and reductions in inventory level, but there is no reasonable operating condition described that would support maintaining inventory at such high levels. We agree that the simple method of calculating inventory based on 3-months' burn is probably superficial and the general uncertainty regarding long-term fuel supplies supports some margin of safety. Still, we consider Edison's proposed test year level to be more directly the result of unforeseen factors, not corporate planning. Therefore, we decline to adopt Edison's recommendation.

Rather, we find that 11 million barrels represents a reasonable level of inventory for the test year rate base calculation, taking into account the long-term natural gas availability. This volume includes a substantial premium over the 3-months' burn. We will defer refinements of the criteria until after the formal procedure is considered in the PG&E case.

We do not mean to suggest that Edison should not be compensated for reasonable costs associated with the remaining 3.5 million barrels. However, including the entire 14.5 million in rate base for this year would sanction its continuing inclusion in the future. CMA points out that underlifting is probably cheaper than one year of storage. Long-term inclusion would raise the question whether the gas was prudently burned, as the cost of the gas plus the storage costs for the displaced oil would exceed the cost of the oil if it had been burned in the first place.

Therefore, we will treat the 3.5 million barrels as reasonably underlifted, rather than stored or sold. At $6 per barrel, underlifting is cheaper than storage. There is no reliable evidence regarding probable consequences of selling the oil, except that it would most likely be sold at a loss. The adopted ratemaking treatment does not limit Edison's choices.

Edison's proposed price of $41.23 is based on the most recent recorded data and is adopted for purposes of this calculation. The AER revenue requirement associated with this item is shown in Table 3.

TABLE 3

Calculation of Fuel Oil Inventory Adjustment Component of the Annual Energy Rate

	$M	$M
Adopted Value of Fuel Oil Inventory		$453,530
PUC Jurisdictional Value of Fuel Oil Inventory		420,264
Revenue Requirement		
Ad Valorem Taxes	$ -	
Return and Income Taxes	77,900	
Total Revenue Requirement		77,900

ii. Ad Valorem Taxes

As stated above, Edison proposes to include the ad valorem tax component associated with fuel oil in inventory in calculating the reduction from base rates, as well as in calculating the AER. Staff and CMA object to this proposal.

Edison argues that ad valorem taxes are of the sort normally recognized as a "carrying cost." Since this Commission provided for recovery of fuel oil inventory carrying costs in D.92496, Edison contends that we intended to change the ratemaking treatment of ad valorem taxes.

> "The term 'carrying costs' usually has associated with it fixed cost items like return, depreciation, taxes on income, ad valorem taxes and insurance. Although Decision No. 92496 was not explicit as to what carrying costs the Commission had in mind, the inclusion of ad valorem taxes would clearly fall within the objective of the Commission's revised base rate (AER) treatment to be accorded fuel oil inventory."

Since ad valorem taxes vary as the dollar value of fuel oil inventory varies, Edison asserts that compelling logic supports such recognition in the AER.

Staff argues that there is no indication in D.92496 that ad valorem taxes are intended to be treated as an inventory carrying cost. Staff recommends that all ad valorem taxes should be evaluated in one proceeding - a general rate case. It further contends

that the attrition allowance adopted in D.92549 specifically includes a provision for increases in ad valorem taxes, so that some adjustment would be necessary. CMA agrees with the staff.

While we recognize that the term "carrying costs" may be ambiguous, we consider D.92496 plain enough for resolution of this issue. In regard to the AER calculation we stated that: "The carrying costs are determined by the rate of return last found reasonable by the Commission." In regard to the ECAC calculation of changes in value from the base rate calculation we indicated that we would "apply the same interest rate that is applied to the balancing account as the reasonable carrying cost, instead of the rate of return." From these statements we meant to indicate that only direct financing costs are included in this calculation. Staff's adjustment is adopted.

3. Facilities Charges and Underlift Payments

Edison proposes to remove all facilities charges and underlift payments incurred prospectively from May 1, 1981 from recovery through ECAC and to continue to recover those facilities charges included in inventory on May 1, 1981 through the ECAC balancing account until expensed on a first-in first-out (FIFO) basis (or April 30, 1982, whichever is shorter). This approach is alleged to have several advantages.

"(a) it is fair to both the ratepayer and the utility,

"(b) it has a gradual effect upon the Company's resale fuel cost adjustment clause (such clause is revised monthly based upon the previous month's recorded fuel and purchased power expenses calculated pursuant to the procedure set forth in Section 35.14 of the Federal Power Act) and,

"(c) it is easy for both the Company and the staff to administer."

Edison asserts this procedure is consistent with the intent of D.92496 and is consistent with the treatment of other fuel-oil-related charges not recovered through ECAC.

The staff accountant recommends that facilities charges should be excluded from ECAC on a direct basis, but should continue to be charged to the fuel inventory account and be recovered as fuel oil is burned from inventory with the related expense being recovered in ECAC. His reasoning is stated as follows:

"Facilities charges represent a legitimate invoice cost of fuel oil purchases and, as such, are an appropriate cost of inventory. Expensing of these charges as the related fuel oil is burned from inventory provides a more systematic method of matching of expenses and revenues than immediate expensing as incurred. Facility charges are similar in nature to capacity charges paid for purchased power which are recoverable through the ECAC procedure. Both types of costs represent fixed payments made to suppliers to cover their capital costs associated with providing service. Since capacity charges are recoverable through ECAC, it would be consistent to allow facilities charges through ECAC."

Specific adjustments are proposed to implement this recommendation.

Prior to D.92496 facilities charges were recovered through ECAC. Our decision to instead provide for recovery through the AER is based on the nature of a facility charge:

"Under its contract with Chevron U.S.A., Inc., a portion of the purchased price

> for oil is a Facility Charge which compensates Chevron for the fixed operating costs and capital charges related to Chevron maintaining the capability to be able to supply boiler and turbine fuel oil at a delivery rate of up to 44 million barrels per year upon demand."

Such a provision has been previously found reasonable by this Commission because it provides Edison flexibility to cover its range of fuel oil requirements. This flexibility is necessary because of the extremely limited spot market for very low sulfur fuel oil.

The facilities charge is a cost of maintaining flexibility to manage oil requirements in response to changes in resource mix and demand. In this respect it is similar to underlift payments, storage costs, or sales of fuel oil. Because of the degree of managerial judgment that underlies these choices we determined in D.92496 that each of these "costs" should be recovered in the AER.

We do not agree that "expensing these charges as the related fuel oil is burned from inventory provides a more systematic method of matching of expenses and revenues." Because of the fixed nature of the charge the matching method tends to overstate the cost of oil on a per barrel basis in periods of low demand.

The facilities charge is a constant charge that should be recovered on a uniform basis. There is no reason to time its recovery to coincide with periods of greater oil burn.

Regarding underlift payments, we earlier provided for recovery of payments based on underlifting 3,521,000 barrels of low sulfur fuel oil at a cost of $6 per barrel. Edison proposes to include underlift charges associated with reductions of its turbine fuel deliveries of about 177,000 barrels per month. The charge is estimated at $2 per barrel or $354,000 per month. There is no opposition to inclusion of this cost in the AER.

4. 2% Provision

a. Introduction

By D.92496 we provided that 2% of the otherwise ECAC recoverable costs would be included in the AER as an incentive to the utility management because of the absence of a balancing account. The calculation of the 2% requires a forecasted resource mix and estimated fuel prices for the entire test year, not just the four-month period covered by each ECAC revision. Edison calculates $48,665,000 as the AER portion. Staff recommends recovery of $46,666,000.

b. Sales Estimate

Edison and staff have different sales estimates for both ECAC and AER purposes. For the 12-month AER calculation their respective estimates are as follows:

	Sales (M^2kWh)
Edison Original:	59,010
Edison Update:	58,225
Staff:	58,841

Staff objected to the admission of Edison's updated estimate, as stated above.

Staff's forecast was derived from the sales estimate adopted in Edison's last general rate case, D.92549. Edison's updated estimate is a downward revision from the original, based on recorded sales lower than anticipated. Specific factors contributing to the lower sales have been identified by Edison. Its estimate reasonably reflects current data and is adopted.

c. Energy Mix

Staff adopted the energy mix projected in Edison's original filing, except for the fuel oil burn. (Staff's burn estimate was lower, reflecting its lower sales forecast.) In its updated forecast of energy mix Edison projected a higher oil burn despite the lower sales estimate. The respective forecasts are as follows:

Energy Mix (M^2kWh)

	Original	Updated
Oil	14,809	14,984
Gas	25,459	25,930
Coal	8,600	8,584
Nuclear	1,812	1,390
SCE Hydro	3,523	4,153
Purchased Power	13,096	11,898
Total	67,299	66,939

Staff objected to the admission of Edison's updated estimate, as stated above.

The major difference in energy mix projections is in the purchased power category. As explained by Edison, there was a shift in purchased power patterns:

> "In essence, 1,072 million kWh of purchased power originally forecasted to be purchased during June through August, 1981 were actually purchased in the February through April, 1981 period due to earlier than anticipated hydroelectric runoff in the Pacific Northwest. This hydro source energy would not, therefore, be available in the June through August, 1981 period."

The additional purchases in the earlier period are reflected in the reduced ECAC balancing account balance used by staff and conceded by Edison.

Staff had the opportunity to cross-examine Edison regarding this information. There is no suggestion that Edison's methodology is unreasonable, or inconsistent with the procedure underlying its original estimates adopted by the staff. Since there is no balancing account associated with the AER, it is important that

we be informed regarding the most current reliable data. The data has been tested and we are satisfied that it is reliable. Edison's mix is adopted.

d. Energy Prices

Edison and staff forecast different oil and gas prices for the AER test period. In the case of oil, Edison's updated forecasted price is less than staff's.

Edison's lower price is based on the following:

> "A worldwide decrease in the demand for petroleum products and an excess of crude oil production has resulted in a 'softening' of the prices and premiums charged by OPEC. Because of this situation, the projections of Sand's Light, Sumatran Light, and Low Sulfur Waxy Residue prices presented in the original Forecast of Operations report have been revised downward. . . . The portions of the fuel oil price not directly related to crude oil cost were escalated at a rate consistent with past experience and future projections of inflation and have remained unchanged from the original Forecast of Operations report."

Based on a projected burn of 24.4 million barrels at a cost of about $1.06 billion, the average cost is about $43.50 per barrel.

The "soft" oil market has been widely reported and persists at the time of this decision. Although there obviously is always the possibility of sudden sharp increases in oil prices, this condition is mitigated by Edison's FIFO inventory treatment and the high volumes in storage. Therefore, we consider Edison's forecast unduly high. Instead, we will base the calculation on Edison's projected August average inventory price of $42.37 per barrel.

With regard to natural gas prices, Edison and staff used different prices at the outset, but each increased prices by 12% on scheduled revision dates for supplying gas utilities. Because the gas rates are set by reference to alternate fuel prices and, as discussed above, the fuel oil market remains soft, we find these escalation assumptions highly speculative. However, the FIFO condition that shields the effect of sudden increases in oil prices does not exist for natural gas prices. Further, we note that this Commission has approved for Southern California Gas Co. the inclusion of high priced gas in its offset procedure. Also, because of our ratesetting jurisdiction, Edison has no opportunity to bargain for gas prices. Adoption of a relatively low rate in this proceeding might unduly constrain our discretion in future gas offset proceedings. Under all of these circumstances we find Edison's estimated price reasonable and adopt it for purposes of the AER calculation.

e. Mono Power Company

Even though the Mono Power Company fuel service charge is recovered in ECAC, Edison proposes that it be excluded from the 2% portion of the AER. Staff witness Pulsifer disagrees.

Edison contends that the 2% provision should apply only to expenses directly associated with the production of energy to meet customer needs. Since the fuel service charge does not vary with the amount of fuel burned, Edison asserts that it should be recovered entirely through ECAC.

Staff witness Pulsifer contends that the fuel service charge should be subject to the 2% provision along with all other ECAC expenses. He asserts that this treatment is consistent with the intent of the Commission to provide an incentive to manage costs efficiently. The effect of his proposal is an increase in the AER of $124,000.

There is no basis for Edison's position. We did not intend to carve out exceptions to the 2% provision and are not persuaded by Edison's argument. Although the charge does not vary with

the amount of fuel burned, Edison has not suggested that it is uncontrollable by management, resulting in the incentive feature being ineffective.

f. Summary of Adopted Calculations

The adopted revenue requirement related to the 2% provision is shown in Table 4. As stated above, the calculation is based on Edison's proposed sales and energy mix, an adjusted oil price, Edison's proposed gas, coal, nuclear and purchased power costs, and staff's Mono Power adjustment. The resulting revenue requirement is included in the AER.

TABLE 4

Adopted 2% Calculation

	Forecast Period Costs M$
Oil	$1,033,828
Gas	1,147,614
Coal	73,143
Nuclear	13,866
Purchased Power	364,661
Subtotal	2,633,112
Less: Revenue from Off-System Sales	18,505
Less: Revenue from Sales to CDWR	4,839
Plus: Mono Power Company charge	124
Total Fuel and Purchased Power Costs	2,609,892

	Forecast Period Generation M*kWh	Cost $M	Sales M*kWh
Total System Excluding Catalina	63,108	$2,609,892	$58,211
Less: Resale (included above)	4,629	192,607	4,532
Total Subject to 2%		2,417,285	53,679

2% provision $48,346

5. Summary of AER Calculation

The adopted AER is calculated based on the foregoing discussion. The revenue requirement associated with fuel oil inventory is based on 11 million barrels in inventory. Additional volumes are treated as underlifted and shown in addition to the facilities charges and underlift payments proposed by Edison. The 2% of ECAC expenses is developed in Table 4. Edison's sales estimate is adopted. The results are displayed in Table 5.

TABLE 5

Adopted Annual Energy Rate Calculation

		$M
Revenue Requirement Associated with Fuel Oil Inventory		$ 77,900
Facilities Charges and Underlift Payments		113,557
2% of Net ECAC Fuel and Purchased Power Expense		48,346
Gains or Losses on Sale of Fuel Oil		0
Total Revenue Requirement		239,803
Adjustment for Franchise Fees and Uncollectible Accounts Expense at 1.009%		2,420
Total Revenue Requirement		242,223
Forecast Sales M^2kWh		
Total Sales Subject to ECAC	$53,679	
Adjustment for Discounts	125	
Forecast Adjusted Sales		53,554
Annual Energy Rate - ¢/kWh		0.452

6. Supplier Refunds

In Edison's proposed draft of its revised preliminary statement it has included refunds from energy suppliers as being subject to the 2% provision. Thus, of any supplier refunds received by Edison only 98% would flow through to ratepayers. The staff accountant asserts that this is unreasonable because Edison would have recovered 100% of the related costs, through ECAC and the AER. He recommends that the entire amount of supplier refunds be recorded in the balancing account. His reasoning is sound. We adopt his recommendation.

7. Procedural Matters

Edison proposes that the AER be revised whenever the Commission adopts a change in its authorized rate of return or authorizes any other adjustments to the extent such adjustments "affect the revenue requirement associated with the costs of fuel oil in inventory". SDG&E supports Edison. Staff witness Pulsifer disagrees.

Edison argues that ratemaking assumes that all rate base items are financed from general corporate funds, whether recovered through base rates generally or through the AER. If the revenue requirement associated with the cost of capital is determined in a general rate case on a calendar year basis, Edison would be denied the opportunity to recover fully its revenue requirement if the higher return requirement is only recognized with respect to the fuel oil inventory from May 1st forward.

SDG&E agrees with Edison. It points out that each utility has a different reasonableness review revision date. If the rate of return is adjusted only on these revision dates, then certain utilities would have newly authorized rates of return applied to fuel oil in inventory at a much earlier date than others. It argues that there is no basis for the Commission to treat utilities differently in this regard.

Staff witness Pulsifer recommends that revisions occur no more frequently than annually. He argues that this limitation is intended by the Commission and that any detriment to a particular utility is a function of a random element related to the more general scheduling process.

We agree that utilities are exposed to erosion of their opportunity to earn their authorized rates of return if timely adjustments are not allowed. This condition is not tolerated as "random" because it has always the same effect on the same utilities, so long as rates of return are increasing.

Our choice is whether to resolve this problem directly by providing for a specific rate change, or indirectly by an attrition allowance in a general rate case. We consider the specific rate change to be fair to the utilities and ratepayers and more credible to investors. Therefore, Edison should be authorized to revise the AER concurrently with the effective date of rates adopted in a general rate case.

V. ECAC ISSUES

A. Introduction

Under adopted procedures Edison's ECAC billing factors are revised 3 times annually. The average ECAC rate is derived from the sum of the average balancing rate and the average fuel and purchased power rate. The average ECAC rate is adjusted to derive the billing factors for each class of customer.

B. Energy Expense

The average energy expense is determined based on the estimated cost of energy for the test period, based on prices estimated as of the first day of the test period. The test period is the 4-month period beginning May 1, 1981.

As discussed with regard to the AER, Edison and staff have different estimates of sales and resource mix. Staff adopted Edison's original estimates of gas, coal, nuclear and purchased power volumes,

proposing a lower oil burn to reflect lower estimated sales. Edison's updated showing reflects lower sales but a higher oil burn, resulting primarily from reduced availability of purchased power. For the reasons discussed above, Edison's updated estimates are adopted for the purpose of the ECAC calculation.

In regard to price, staff adopted Edison's original price estimates for oil, coal, nuclear and purchased power, differing only with regard to natural gas. In its updated showing Edison reduced its prices for oil and gas, and raised its estimated prices for coal, nuclear, and purchased power. Edison's price estimates are the basis for its reduced request. They are adopted to avoid rate relief greater than requested by the applicant, as would occur if higher natural gas rates were reflected.

TABLE 6

Average Fuel and Purchased Power Rate

	Forecast Period Quantities	Estimated Price	Forecast Period Cost M$
Oil	22,801 M^3Btu	6.6605 $\$M^2$Btu	$151,866
Gas	117,818 M^3Btu	3.5527 $\$M^2$Btu	418,572
Coal	33,279 M^3Btu	0.7592 $\$M^2$Btu	25,265
Nuclear	525 M^2Btu	9.9619 $MkWh	4,810
Geothermal	0 M^2Btu	0 $MkWh	0
Purchased Power			145,411
Subtotal			745,924
Less: Revenue from Off-System Sales			16,983
Less: Revenue from Sales to CDWR			1,540
Plus: Mono Power Company Fuel Service Charge			1,345
Total Fuel and Purchased Power Costs			728,746

	Forecast Period			
	Generation M^2kWh	Cost M$	Sales M^2kWh	Rate ¢/kWh
Total System Excluding Catalina	22,084	$728,746	19,439	
Less: Resale (included above)	1,575	51,877	1,542	
Total Subject to ECABF		676,869	17,897	
Less: 2% for AER		13,537		
Plus: Costs Associated With Changes in Price of Fuel Oil in Inventory		474		
Subtotal		$663,806		
Plus 1.009% for F&U Expense		6,697		
Average Fuel and Purchased Power Rate		670,503	17,857*	3.755

* Adjusted by 42M^2kWh for discounts

C. Average Balancing Rate

The average balancing rate is calculated based on the forecast balancing account balance amortized over an appropriate period. In its original showing Edison forecast an overcollection of about $6.6 million as of May 1st. In its updated showing it forecast an overcollection of $35.7 million, the same balance used by staff witness Pulsifer in his calculations.

Edison proposes three adjustments to the balancing account, as follows:

1. An adjustment of $31,704,000 reflecting the operation of the fuel inventory adjustment for the period covered by the base rates made effective by D.89711, pursuant to D.92496;
2. An adjustment of $1,097,000 reflecting the operation of the fuel oil inventory adjustment for the period January 1, 1981 through April 30, 1981; and
3. The updated balance of $587,000 in the Tax Change Adjustment Account on May 1, 1981 (an overcollection).

Only the first of these adjustments is opposed by any party.

CMA contends that the current recovery of $31.7 million of incremental carrying costs of fuel oil held in inventory for the period January 1, 1979 through December 30, 1980 is unreasonable and unlawful. It argues:

> "Making this fundamental change in the method of calculating the ECAC revenue requirement retroactive to the last general rate case amounts to changing the rules after the fact. The rates approved by the Commission as just and reasonable in the test year 1979 general rate case included provision for return on an estimated value of fuel oil held in inventory. Each of the ECAC cases decided in the interim established just and reasonable rates which did not include an allowance

> for return on any increase in the value of fuel oil held in inventory. By approving Edison's request for recovery of return associated with increased inventory value for that historical period, the Commission would retroactively increase the rates and charges for that period."

CMA further argues that the change is arbitrary, as it applies different time periods to each utility and that in Edison's case, the results would be materially different if decision dates were changed.

This exact issue was before this Commission in an application for rehearing of D.92496 filed by TURN. CMA was a party to OII 56 and did not seek rehearing. TURN's application was the subject of D.92869, dated April 7, 1981.

This issue is disposed of by D.92869 in which we rejected TURN's contention that such recovery constitutes impermissible retroactive ratemaking. We stated:

> "Although, until now we have not permitted ECAC balancing account treatment of the carrying costs of fuel oil in inventory, that decision was never a final one. Indeed, when we set up the ECAC procedures to replace the earlier fca tariffs we specified that '... all ECAs in the future shall be on an interim basis unless otherwise ordered. . . .' (Ord. Para. 4 of Decision No. 85731, 79 CPUC 758, 775; affirmed, So. Calif. Edison Co. v Public Util. Comm. 2d C 3d 813, appeal den.)
>
> "Furthermore, in a number of subsequent ECAC decisions, we pointed out that the balancing account balances of the utilities having ECAC tariffs would be subject to further review pending the conclusion of OII No. 56 (see, for example, Decision No. 91545 in San Diego Gas and Electric Company's

Application No. 59409, Decision No. 91805 in Southern California Edison Company's Application No. 59499, Decisions Nos. 91721 and 92249 as to Pacific Gas and Electric Company and Decision No. 92069 as to Sierra Pacific Power Company)."

We find CMA's position is not timely asserted and is without merit.

Several other parties raise issues that might affect the recorded balancing account balance. These issues are discussed below and are resolved in a manner that does not affect the rates adopted in this decision. The adopted average balancing rate is shown in Table 7.

TABLE 7

	Under (Over) Collection	Sales M-kWh	Rate ¢/kWh
Estimated ECAC Balance as of May 1, 1981	$ (35,673)		
Carrying Costs on Inventory per D.89711	31,704		
Carrying Costs on Inventory per D.92496	1,097		
Tax Cost Adjustment Clause	(587)		
Subtotal	(3,459)		
Plus: 1.009% for F&U Expense	(35)		
Average Balancing Rate	(3,494)	17,857	(0.020)

(Red Figure)

D. ECAC Revenue Effect

The average ECABF is the sum of the average energy rate and the average balancing rate, derived as follows:

Average Energy Rate	3.755¢/kWh
Average Balancing Rate	(0.020)
Average ECABF	3.735¢/kWh

(Red Figure)

The revenue effect of this calculation is derived by determining the difference between the adopted average rate and the present average rate, multiplied by adopted sales.

The present average rate is 3.901¢/kWh. Thus, the adopted average rate yields a reduction of 0.166¢/kWh, or an annualized reduction of about $89 million.

E. Fuel Collection Balance Adjustment

The Fuel Collection Balance Adjustment (FCBA) was implemented by Advice Letter 477-E and made effective January 1, 1979. The FCBA was implemented under D.85731 and D.86085, dated April 27, 1976 and July 7, 1976, respectively, in C.9886 and Resolutions E-1595 and E-1604, dated September 14, 1976 and October 13, 1976, respectively. In accordance with these orders the FCBA has been amortized over a 3-year period. Edison proposes to amortize the updated FCBA amount of $45.8 million remaining as of April 30, 1981, over the forecast sales for the remainder of 1981 by a Fuel Collection Balance Adjustment Billing Factor of 0.132¢/kWh, increased from 0.121¢/kWh. This proposal is unopposed and is adopted.

F. Water Diversion

As indicated above, SBVMWD appeared in this proceeding and offered the testimony of three witnesses. Its showing related to the energy savings to be realized from the East Valley Water Exchange Plan and the recovery of spill water from the afterbay of Edison's Mill Creek 2-3 power plant.

SBVMWD presently does substantial pumping in the course of providing its service. Studies have confirmed that significant reductions in pumping and capital can be attained by diverting water away from two Edison hydro facilities to replace the water that must otherwise be pumped. The diversion would also reduce Edison's generation ability. The relative dimensions are indicated by witness Stockton:

> "...the cooperative water project had a capital cost to our water district of about $6.6 million for the pumping alternative and a capital cost of about $4.4 million for the diversion alternative.
>
> "In addition to those capital costs, there are some energy savings that go along with that same study.
>
> "Our studies indicated that to deliver supplemental water to the proposed areas, namely Yucaipa and the eastern part of Redlands, Crafton-Mentone area, to pump state project water would take 23 million kilowatt hours a year of energy with its associated costs.
>
> "The diversion alternative, diverting water from Mill Creek No. 1 and Santa Ana No. 3 would have a loss of energy of approximately 10 million kilowatt hours per year.
>
> "And our proposal, therefore, is that when our system is up and running there would be a net saving to the Edison Company and to our customers of 13 million kilowatt hours a year and approximately $2 million in capital savings."

Edison does not disagree with these calculated benefits.

In addition to the exchange, SBVMWD witnesses described energy savings that would result if Edison would allow water not used for generation at its Mill Creek 1 facility to be diverted. As stated by Stockton:

> "There are certain times of the year when this water that is produced on the Mill Creek drainage system is beyond the capacity of Edison's Mill Creek No. 1 hydro facility to deliver, and at that time there are certain large quantities of water that are spilled and when we see that, it means that its not going through the No. 1 hydro generation plant, its not capacity and there is more water available than can be delivered through their facilities."

He estimated that about 2,000 acre-feet of water was wasted during the previous year and that the existing facilities were capable of taking nearly 900 acre-feet of the wasted water to the Yucaipa area by gravity with no increase in power losses to Edison. Edison does not dispute this calculation.

In spite of the real and substantial savings that would be realized by the exchange and diversion, the parties have been unable to reach agreement after 10 years of negotiations. SBVMWD argues that Edison has been imprudent and asks for this Commission's help in obtaining Edison's participation.

SBVMWD has offered to pay Edison for its lost generation at Edison's avoided cost - its cost of replacement energy. SBVMWD also agrees that its diversion would be interruptible in times of critical need by Edison.

Edison finds this compensation inadequate. It demands replacement in kind for the lost generation, looking to several small hydro facilities that SBVMWD might later develop as the most likely source. It states:

> "The reason for replacement in kind of lost generation is that Edison has a basic responsibility to produce power at the lowest possible cost to its ratepayers;

> part of its goals to achieve that responsibility is the active promotion of conservation, the maintenance of renewable resources, and the reduction of oil requirements for the Edison system to meet its obligations."

As discussed below, Edison actually demands replacement in kind at the rate of 1.7 kWh for every kWh of lost generation.

Edison argues that this ECAC proceeding is not the appropriate forum to consider this matter:

> "This ECAC proceeding is concerned ...with fuel prices and plant operations which affect fuel prices. The mere fact that a group alleges that certain energy savings could be achieved if a certain contract were negotiated does not establish a significant relationship to an ECAC proceeding. The same claim could be made for many other types of contractual arrangements (i.e., cogeneration, etc.). To permit ECAC proceedings to be bogged down would substantially undermine the principal objectives of the ECAC procedure."

It suggests that we recognize that this matter is best resolved by continued negotiations.

We agree with Edison that this issue should not be considered in ECAC. While the issue bears some relation to fuel costs, only directly related matters should be considered because of the need to expedite these proceedings. We will therefore treat this as a separate matter, but preserve the record in this case for any further proceedings on the subject.

SBBMWD has clearly shown that if it can divert water from Edison's Mill Creek No. 1 and Santa Ana No. 3 hydro facilities, it can avoid purchasing 23 million kWh annually from Edison which it would otherwise need to pump water obtained elsewhere. The water diverted from Edison has an equivalent value of 10 million kWh annually, which SBVMWD has agreed to purchase at Edison's avoided cost. Thus, the annual savings to SBVMWD would be the difference between its purchase of 23 million kWh at Edison's retail rate and its payment for 10 million kWh at Edison's avoided cost. SBVMWD would also save capital costs associated with pumping. Edison in turn, would not only be reimbursed for the 10 million kWh lost in generation, but would avoid having to generate 23 million kWh annually. Edison would thus conserve the difference between 23 million kWh and 10 million kWh, or 13 million kWh a year.

Both parties agree that substantial public benefit will accrue from this water diversion. Terms of trade are possible that would benefit both and conserve substantial amounts of electricity. In spite of these benefits, the negotiations on this have been protracted, extending 10 years. Given the history, we are concerned that negotiations may be prolonged indefinitely.

In view of the pressing public interest, we cannot let the private interest of either party thwart an agreement on the diversion. If parties have not reached an agreement within 60 days, this Commission will examine all its powers to force a resolution of this issue. We request both parties to present their position before this Commission. At that time, we will determine what action to take. We suggest both parties carefully reexamine their position in the interest of resolving this matter quickly.

> "The way we generated the 1.7 factor as a starting point for negotiating this principle of how much you share is that we said, okay, let the District take all of the benefit of the reduced capital requirement of 2.3 million and Edison and the District would each share one-half in the net energy savings on an annual basis."

This is an application of the "share the benefits" doctrine that was rejected by this Commission by D.91109 in OII 26, in favor of an avoided cost payment approach. This kind of protracted negotiation that leads nowhere is exactly the result that we sought to avoid in D.91109. If Edison had perceived that this matter was relevant to ECAC, it might have recognized the analogy to cogeneration. Since we have found that the terms offered by SBVMWD are materially more advantageous to the ratepayer than avoided cost principles require, we find that Edison has been imprudent in not achieving these energy savings.

However, there is insufficient evidence in the record to accurately calculate the impact of this imprudence in the record period. Therefore, we provide for no adjustment to the balancing account in this decision. Instead, we direct staff to review this matter and provide a recommendation regarding the reasonable amount of the adjustment in Edison's next ECAC proceeding.

G. San Onofre

At TURN's request Edison offered the testimony of Jerry G. Haynes, manager of nuclear operations, to respond to questions regarding operations at San Onofre Nuclear Generation Station Unit 1 (SONGS 1). TURN argues:

> "Substantial evidence exists showing that Edison's operation of SONGS 1 may have been unreasonable. The Commission has a duty to investigate

> the issue. TURN respectively moves for a bifurcation of this proceeding, deferment of replacement fuel costs, and an investigation by an independent consultant, not chosen by Edison, of the reasonableness of operation of SONGS 1."

Edison responds that there is no evidence that its operation of SONGS 1 has been unreasonable, no evidence supporting the claim that replacement fuel costs should be deferred, and no basis for bifurcation.

SONGS 1 was shut down on April 8, 1980 because of a primary-to-secondary leak which was increasing, but less than the Technical Specification limit. During the shutdown which occurred two days before a scheduled maintenance and refueling outage, steam generator inspections were performed and five leaking tubes in Steam Generator C and one or two unconfirmed leaking tubes in Steam Generator B were discovered.

The results of initial steam generator diagnostics, including eddy current inspections and tube-pulling and metallographic examinations, were submitted to the Nuclear Regulatory Commission (NRC) by letter dated June 24, 1980. The results indicated the following:

1. Significant intergranular attack (IGA) appeared to be occurring at the top of the tubesheet in the hot legs (inlet side) of the steam generators. Attack was initiated from the secondary side of the tubes.
2. The circumferential nature of the IGA is such that within the eddy current inspection data base gathered using the conventional bobbin coil, there are complex eddy current signals for which interpretation is inconclusive

in detecting and assessing steam generator tube indications in excess of the plugging limit.

As discussed in the June 24, 1980 letter, the acquisition of additional data to better understand the complex eddy current signals at the top of the tubesheet was initiated as follows:

1. Reinspect representative sample of tubes with multi-frequency, surface coil type probe.
2. Remove additional tube samples representing different complex eddy current signals observed at the top of the tubesheet, and
3. Investigate and apply means to test individual tubes to confirm that tubes would leak before break for this mode of tube degradation at the top of the tubesheet.

The assessment of the additional required data was presented to the NRC staff on July 1 and July 10, 1980. On July 22, 1980 the NRC was advised that development and implementation of a steam generator tube repair program had been undertaken to repair the steam generator tube bundle to nominal operating conditions. The objective was to span the tube indications at the top of the tubesheet with a leak-tight sleeve inserted inside the tube. The design, process, and testing information related to the use of leak-tight sleeves was discussed with the NRC staff and was submitted to the NRC in a report entitled, "Steam Generator Repair Report, San Onofre Nuclear Generating Station, Unit 1, September, 1980." In addition, an independent third party review, comprised of non-Westinghouse technical personnel, of the proposed repair process was conducted on October 23 and 24, 1980.

On November 28, 1980 the NRC issued a report entitled, "Interim Assessment by the U.S. Nuclear Regulatory Commission's Office of Nuclear Reactor Regulation Related to Sleeving of San Onofre Unit 1

Steam Generator Tubes, Docket No. 50-206." This report concluded that the use of leak-tight sleeves was an acceptable approach to steam generator tube repair and that the insertion of leak-tight sleeves could proceed into production.

On February 3, 1981 the NRC staff was advised of certain difficulties being encountered at Edison in effecting the leak-tight sleeve. The NRC staff was also provided certain preliminary information with respect to the potential use of a leak limiting sleeve. On February 25, 1981 more detailed design, process, and testing information related to such leak-limiting sleeves was presented to the NRC staff. The staff indicated that it had no objections to the initiation of production installation of leak-limiting sleeves in the steam generators. Certain design, process, and testing information related to the use of leak-limiting sleeves was subsequently submitted to the NRC on March 5, 1981 in the report entitled, "Technical Evaluation Report for Hybrid Sleeve, San Onofre Nuclear Generating Station, Unit 1, March, 1981."

The resulting outage is of an anticipated duration of 14 months. The estimated cost of the repairs is $67 million. After its return to service, the plant will operate at reduced temperature, resulting in 85 to 90% power operation.

TURN charges that Edison has been imprudent in its operation of SONGS 1 and in its choice of repair alternatives. It argues that the IGA is the result of the chemical environment maintained in the secondary water system and that Edison has negligently operated SONGS 1 for years in the caustic corrosion range, well above its own limits. It contends that Edison's practice of adding free caustic (sodium hydroxide) to the bulk water has contributed to the problem. It claims that Edison could have detected the IGA several years earlier, before the attack was so severe.

TURN criticizes Edison's choice of the resleeving repair option. It argues that replacement of the steam generators would have cost $80 to $94 million, would have been of substantially less duration, and would not have resulted in decreased power operation requiring continuous replacement fuel costs.

Edison contends that TURN has misconstrued and misinterpreted the evidence. It disputes TURN's contention that eddy current signatures prove that IGA has occurred constantly since 1973. It supports its use of sodium hydroxide as based on the recommendations of the steam generator manufacturer and studies conducted by the manufacturer, on Edison's operating experience, and on industry studies conducted by Electric Power Research Institute (EPRI). It disagrees with TURN's contention that it has operated SONGS 1 for years in the caustic corrosion range.

Edison argues that TURN's contention that operation at a bulk sodium-to-phosphate ratio (Marcy-Halstead ratio) above the upper limit causes caustic-induced IGA amounts to sheer speculation. It contends that TURN has failed to distinguish between bulk water chemistry and localized conditions. It asserts that the IGA was not associated with free caustic in the bulk liquid. Rather, IGA is believed to result from free caustic directly above the inlet side tubesheet.

Edison also disputes TURN's criticism of its repair choice. It notes that the cost estimates used by TURN were not definitive cost estimates and were used only for cost comparison purposes. It argues that TURN has ignored the lead time necessary for procurement of new steam generators. It contends that TURN has unreasonably calculated replacement fuel costs.

Staff offered no evidence or argument in regard to this issue.

We are not persuaded by TURN's contention that Edison's operation of SONGS 1 has been imprudent. We find that TURN has consistently misconstrued the evidence in order to construct its arguments.

TURN states: "...Edison operated SONGS 1 for years in the caustic corrosion range, well above its self-set limit of safe operation." The reference to support this statement is to the following section of its brief.

In the next section of its brief TURN states that:

> "In 1978 SONGS 1 was operated at a Na/PO_4 ratio (Marcy-Halstead ratio) in excess of the 2.8 limit 14% of the operating period. In 1979 SONGS 1 was operated in excess of the limit 16% of the operating period. This represents two months out of an operating year. In 1980 SONGS 1 was operated in excess of the limit 71% of the operating period, with the Na/PO_4 ratio averaging 3.0 during the entire first quarter of the year."

As stated above, the outage occurred April 8, 1980.

Operation above the limit for 14% of one annual period, 16% of another, and 71% of a 3-month period does not amount to operation "for years."

Nor does the term, "well-above," appear accurate, implying that for other times operation may have been only "above" the upper limit. The percentages recited by TURN include all operation above the limit.

This is not to diminish the significance of above standard operations, but apparently the ratio is not readily maintained, as implied by TURN. The problems of maintaining the Marcy-Halstead ratio are described as follows:

> "During May and June, 1978, when San Onofre was being used to load

follow, the Marcy-Halstead ratio was observed to fluctuate widely. The greatest variations during those operations were high ratio results, exceeding a Marcy-Halstead ratio of 3.0 for significant time periods. The inability to stabilize the chemistry has been attributed to the effects of hideout return on the bulk water chemistry while in transient operation.

"In late 1978 and through March, 1980, the Marcy-Halstead ratio demonstrated a continuous trend upward until an average Marcy-Halstead ratio of 3.0 was observed for the entire first quarter of 1980. The phosphate chemistry has been controlled during that operating period using the analytical Na/PO_4 ratio. The analytical ratio was not a stable indicator of Na/PO_4 ratio for the period under discussion and, thus, did not provide comparable indications of upward trending as did the Marcy-Halstead ratio. The analytical ratio did, on several occasions, spike to a ratio of 3.0 and greater. An unexplained occurrence with these data was that the Marcy-Halstead ratio consistently was higher than the analytical ratio. The opposite situation would be expected since the presence of any sodium contamination would increase the ratio, a fact which would be especially noticed at a sea water cooled plant."

We are not prepared to equate unsuccessful treatment with unreasonable operation.

A major difference between TURN and Edison is their disagreement over whether IGA is caused by operation with bulk water chemistry above the limit or whether it occurs during operation within normal limits. TURN states:

> "During all those years of excessive operation caustic induced IGA was accumulating irreversibly at SONGS I. Even Edison admits that 'The chemical environment leading to a caustic condition was consistent over an extended period back to the early 1970's.'"

This is misleading. TURN implies that Edison "admits" that "excessive operation" has occurred "over an extended period back to the early 1970's."

Edison's "admission" is important because it emphasizes the technical difference between TURN and Edison. We interpret the "admission" to mean that IGA has occurred despite a chemical environment that has been consistently within the limits of the Marcy-Halstead ratio.

TURN states that Edison's longstanding practice of adding free caustic to the secondary water is one of the causes of IGA. TURN contends that: "It has been known for years that addition of free caustic increases the potential for caustic corrosion." TURN claims: "No studies of any kind were done by Edison to determine the effect of the addition of free caustic to the secondary water." The implication is clear - Edison has imprudently added free caustic.

The evidence is otherwise. The actual dialogue between counsel for TURN and Edison witness Haynes is as follows:

"Q. Did Edison ever do any studies or conduct any research to determine the effect of the addition of free caustic to the secondary water before adding free caustic to the secondary water?

"A. We followed the manufacturer's recommendation and also our own experience where our experience indicates we should do something more conservative than the manufacturer recommended.

"In this case, that the chemical treatment of the steam generators from the time they initially went in service through the present time has been consistent with the recommendations of the manufacturer.

"They have done and had done at that point in time a number of laboratory experiments on the proper type of treatment and proper type of materials to use in the steam generators.

"In addition, the Electric Power Research Institute, which is a large group that is funded by the electric utility industry in the U.S., all of the electric utility industry, not any one segment of it, but all of it, has done tests in recent years, very recent years that have shown the potential for caustic stress corrosion and caustic intergranular attack.

"Q. But Edison never conducted any research studies of its own?

"A. Not directly.

"Q. It followed the...

"A. We followed the recommendations of the manufacturer, our own industry, and the industry practice.

> "We are not a research organization, and we have other people do our research."

TURN's implication is unfounded.

TURN claims that Edison could have detected the IGA years earlier. It alleges that the problem "should have been easily detectable by a tube inspection program which included tube removal" and asks, "why didn't Edison discover the caustic induced IGA through methods other than eddy current inspection?" This proposition is central to TURN's repair option analysis.

The evidence is that the problem of the IGA is very localized and extends only for fractions of an inch over the length of the tube in one particular location. It was previously unknown at San Onofre and has not occurred in any other facility in the United States or foreign countries. There are about 3,800 tubes in each steam generator in a very close lattice. Physical inspection of every inch of every tube is not possible. The degradation occurs at a location that is particularly difficult to observe. Eddy current inspection is the only practical way to inspect large quantities of tubes. Neither Edison, Westinghouse, nor the NRC have been able to quantitatively identify the extent of the IGA by eddy current inspections.

Edison inspects the tubes every 16 to 18 months during refueling and "frequently" examines them in between refuelings. In addition to eddy current inspections, Edison has done visual inspection by cutting holes in the steam generating shell for visual access. It has done borescopic examination and television examination. Even at the point of returning the plant to service, Edison is uncertain how many tubes have IGA, and is using "a very

conservative repair technique." We cannot find Edison's practices in this regard unreasonable.

TURN's argument regarding repair options presumes the fact that its inspection argument prevails. It postulates that the degradation would have been discovered in progress and the replacement steam generators ordered while the plant remained in service. "Thus, the two-to-three year lead time for delivery of new steam generators need not have resulted in any additional outage had new generators been ordered promptly." Since we have rejected TURN's repair argument, we find that replacement of the steam generators would have resulted in a much more prolonged outage than resleeving.

Nor are we persuaded by TURN's comparison of the $67 million cost of resleeving to the estimated $80 to $94 million cost of replacement. Edison compared its choices on more reasonable lead times based on figures that were expressly not considered definitive cost estimates.

> "They were based on essentially zero engineering, no proposals were let to determine if the costs were accurate or not, but we consider that they were adequate for a cost comparison, and based on those numbers, could determine which alternative would be attractive if we did decide to replace steam generators."

The replacement option costs appear particularly uncertain because of unknowns such as:

> "The containment building, which is where the steam generator is housed, was not built with the intent of ever replacing the steam generator.
>
> "So you can either dismantle the steam generator inside the containment and take it out

> sort of piece by piece through the equipment hatch which is designed to take out large pieces of equipment but nothing as large as the steam generator, or you could cut a hole in. containment and then in another building that surrounds containment."

The only actual replacement known to the witness is at a unit known as Surry 2 in which the actual costs (in 1983 dollars) is $113 million and the outage of 592 days. Surry 2 has two steam generators, SONGS 1 has three.

In addition to the costs of repair and replacement fuel costs during the outage, TURN states that: " ... $17 million per year will result from continuing replacement fuel costs due to reduced temperature and power operation of SONGS 1 in an attempt to decrease the rate of caustic induced IGA." TURN claims: "Replacement of the steam generators would not have resulted in decreased power operation and accompanying replacement fuel costs." This claim is contrary to the evidence.

Here, at least, TURN recognizes that "Mr. Haynes does not agree." The witness indicated that reduced power:

> "...is a precautionary measure and its not directly a result of these alternatives for sleeving.
>
> "For example, if we had replaced the steam generators, we may still elect to operate at a reduced temperature which would have also resulted in reduced power."

There is no evidence to the contrary.

TURN's point is that since the sleeve material is not susceptible to IGA, the replacement steam generator tubes could have been made out of the same material to avoid the risk of IGA and to avoid having to reduce power.

But it is precisely because of the sleeve material that TURN's argument fails. Its resistance to IGA would appear to allow Edison to return to full power operation if IGA were the only factor in its decision to reduce power. As explained by the witness:

> "...if the tube continues to degrade, even if we made no changes, and it continued to degrade, and was finally penetrated, and the sleeve was then exposed to the same chemistry condition that caused the intergranular attack of the tube, the sleeve would not degrade.
>
> "That's one reason why we don't think we'll have to shut down again for intergranular attack...and that addresses the tubes that are sleeved.
>
> "Now there's more tubes that are not sleeved.
>
> "Those tubes are in an area of the steam generator...(where) they have not been attacked.
>
> "We don't expect they will be attacked.
>
> "We think they're outside the region that's susceptible to attack. The NRC agrees with that and they have looked at it very extensively. They have not required that we sleeve them.
>
> "We don't plan to sleeve them, although we have the capability to do that if the need arises."

Therefore, we reject TURN's claim that evidence presented in this proceeding shows reduced power operation is attributable to the resleeving option.

Based on the foregoing, TURN's motion to bifurcate the proceeding is denied and its recommendation that recovery of replacement fuel costs be deferred is not adopted. However, Edison's actions in regard to SONGS 1 are reasonably an issue in Edison's next general rate case, and we do not intend by this decision to prejudge the issues that will be raised in that proceeding. We anticipate that our staff will make its own evaluation of these matters and provide that information in the record. Anticipating that proceeding, we withhold any final judgment regarding the reasonableness of Edison's actions. Therefore, the recovery of the replacement fuel costs is subject to adjustment, calculated from the time of the outage, depending on the final decision in the next general rate case.

Furthermore, we consider SONGS a suitable facility for applying the same kind of performance standard incentive procedure that was adopted for Edison's coal plant operations by D.93363, dated July 22, 1981. Again, an independent consultant is necessarily retained. Edison is directed to submit to the Executive Director of this Commission the proposals for such a study from not less than three such consultants within 90 days of the date of this decision. All other parties are provided the opportunity to suggest no more than three consultants to the Executive Director within the same time frame as provided to Edison. The Executive Director will choose the consultant, to be paid by Edison, the cost to be recovered through ECAC. The study will be received in a subsequent Edison ECAC proceeding.

VI. RATE DESIGN

The overall revenue effect of these changes is derived as follows:

Base Rate Reduction	(0.131)
AER	0.452
ECABF Reduction	(0.166)

.155¢/kWh x 53,544 M²kWh = 83 million

(Red Figure)

There is relatively little controversy regarding the rate design to be applied.

In D.92549 in Edison's most recent general rate case we made the following finding:

> "23. Edison's customer groups' rate relationships should be maintained in subsequent ECAC proceedings by applying a uniform ¢kWh basis for each customer group."

In the text of the decision we elaborated on this point:

> "The resulting rate relationships are found to be reasonable and will be maintained in subsequent ECAC proceedings by pursuing a policy of applying uniform increases or decreases on a ¢/kWh basis among customer groups until the rate structure is again reviewed in a general rate proceeding. Within the residential class, we will continue to evaluate the appropriate relationship between lifeline and nonlifeline rates in ECAC increases or decreases."

No party has proposed to depart from this policy.

Thus, rate design for other than domestic revenue classes is uncontroverted. Each of the three factors is applied on a uniform ¢/kWh basis, yielding a reduction in base rates of .131¢/kWh, an AER of .452¢/kWh, and a reduction of the ECABF of .166¢/kWh, from 4.133¢/kWh to 3.967¢/kWh. Similarly, the average domestic rate is increased by .155¢/kWh, the remaining issue being the relationship between lifeline and nonlifeline rates.

Edison offers a proposed domestic rate adjustment that maintains the existing lifeline/nonlifeline total average rate relationship established in the general rate case. Staff agrees that Edison has followed the approach adopted in D.92549. However, it offers two alternatives for the domestic class.

In the first alternate the sum of the AER and the nonlifeline ECABF is kept 50% higher than the sum of the AER and lifeline ECABF. By this method the total average nonlifeline rate is about 25% higher than the total average lifeline rate. In the second alternate the total average nonlifeline rate is kept 35% higher than the total average lifeline rate. Edison's proposal maintains the existing 50% differential.

Staff's proposal must be understood in the context of revenue requirement. Even though its overall recommendation is a rate reduction, either of its alternates actually raises the lifeline rate. This result is apparently intended to provide relief for customers in the desert areas that have been complaining about high bills.

We prefer to maintain the relationships adopted in the last general rate case, at least for purposes of this moderate increase. Further, the problem of high bills for desert customers is one of the matters under consideration in OII 77. That proceeding is the proper vehicle for examining this problem.

The adopted rates are derived in Table 8. The present average rate is based on adopted domestic sales for the test period. The adopted average rate is derived by applying the average domestic increase to the present average rate (6.666 + .155 = 6.821). The adopted lifeline and nonlifeline average rates are calculated to preserve the ratio adopted in D.92549, as proposed by Edison. For ease of administration the AER and the reduction in base rates are applied on a uniform ¢/kWh basis and the ECABF is used to provide for the nonuniform rate change. The resulting domestic ECAC billing factors are as follows:

Lifeline: 2.218 - .194 = 2.024¢/kWh

Nonlifeline: 4.670 - .131 = 4.539¢/kWh

TABLE 8

Domestic	Present Average Rate ¢/kWh	Adjustment to Base Rates ¢/kWh	AER ¢/kWh	Change in ECABF ¢/kWh	Adopted Average Rate ¢/kWh	% Change
Lifeline	5.462	-.131	.452	-.194	5.589	2.3
Nonlifeline	8.144	-.131	.452	-.131	8.334	2.3
Total	6.666	-.131	.452	-.166	6.821	2.3

VII. CATALINA ISLAND

By D.93129 dated June 2, 1981, this Commission adopted major changes in the ratemaking treatment of Edison's Catalina Island (Catalina) electric service, by providing for integrated fuel cost accounting. A change in rates was expressly timed to coincide with this order.

There is no evidence in this record regarding Catalina fuel costs and the effect of such integration. However, such costs are minor relative to the entire Edison operation and are adequately recognized by balancing account treatment. Edison is authorized by this decision to implement the changes in base rates, AER, and ECAC billing factor applicable to Catalina as intended by D.91329.

Findings of Fact

1. By A.60321 Edison requests authority to make changes in its base rates and ECAC billing factors and to include an AER factor, increasing rates by $98.4 million annually.

2. An adjustment to base rates to reflect the changed ratemaking treatment of fuel oil in inventory is appropriate.

3. The amount of the adjustment is correctly calculated based on staff's net-to-gross multiplier, excluding ad valorem taxes.

4. An appropriate adjustment to the base rate revenue limit adopted in D.92549 should be calculated by Edison and tested in its next ECAC application.

5. There is no necessary connection between the attrition allowance adopted in D.92549 and the fuel oil inventory.

6. Edison's updated showing was distributed prior to the first day of hearing, tested by cross-examination, received subject to rebuttal, and is the subject of written argument.

7. Eleven million barrels of fuel oil in inventory is a reasonable level to be maintained for the test year, in light of burn requirements and contract conditions.

8. Edison is reasonably compensated for costs associated with underlifting an additional 3.5 million barrels of oil.

9. The reasonable cost of underlifting is estimated at $6 per barrel.

10. A price of $41.23 per barrel is reasonably applied to the fuel oil volumes to determine the rate factor.

11. Ad valorem taxes are not a direct financing cost.

12. The facilities charge is a constant charge that should be recovered on a uniform basis.

13. Edison's proposed accounting treatment of facilities charges reflects our intended ratemaking treatment.

14. Edison has reasonably forecast the underlifting of turbine fuel.

15. Edison's estimate of test year sales for the 2% calculation is based on the most recent, reliable information, and is adopted.

16. Edison's estimate of test year resources for the 2% calculation is based on the most recent, reliable information, and is adopted.

17. Edison's estimate of fuel prices, except for fuel oil, for the 2% provision is based on the most recent, reliable information, and is adopted.

18. Fuel oil market conditions and inventory levels suggest that Edison has overstated the price of fuel oil for the 2% provision.

19. Edison's estimated August average inventory price is reasonably applied for the 2% calculation.

20. The Mono Power Company fuel service charge is subject to management control and included in the 2% provision.

21. The adopted 2% calculation yields a revenue requirement of $48.3 million annually.

22. The entire amount of supplier refunds should be recorded in the ECAC balancing account.

23. The adopted AER is .452¢/kWh.

24. The AER should be revised whenever the Commission adopts a change in the authorized rate of return by way of a specific rate change.

25. Edison's ECAC estimates are based on more recent, reliable information and are adopted.

26. The resulting average fuel and purchased power rate is 3.755¢/kWh.

27. Edison's updated balancing account calculation is based on the most recent, reliable information and is adopted.

28. CMA's objection to Edison's recovery of recorded incremental carrying costs of fuel oil in inventory was addressed in D.92689 and was rejected.

29. The average balancing rate is .020¢/kWh.

30. The average ECABF for the test period is 3.735¢/kWh.

31. The remaining balance in the FCBA should be amortized over the rest of 1981 and the remainder accounted for in the ECAC balancing account.

32. The proposed SBVMWD water exchange and diversion would yield a net savings of 13 million kilowatt hours (kWh) annually and provide $2 million in capital savings.

33. SBVMWD has offered to pay Edison for lost generation at Edison's avoided cost.

34. Edison has demanded replacement in kind at the rate of 1.7 kWh for each kWh of lost generation.

35. A reasonable agreement between Edison and SBVMWD would benefit both parties and Edison's ratepayers, and therefore should be reached quickly.

36. SONGS 1 was shut down on April 8, 1980 for an outage of about 14 months.

37. Initial steam generator diagnostics indicated significant IGA at the top of the tubesheet in the hot legs (inlet side) of the steam generators.

38. The use of leak-tight sleeves was deemed an acceptable approach to steam generator tube repair.

39. The estimated cost of repairs is $67 million.

40. After return to service the plant will be operated at reduced temperature, resulting in 85 to 90% power operation.

41. Edison has successfully maintained secondary water treatment within limits for most of the duration of SONGS 1 operations.

42. The chemical environment leading to a caustic condition was consistent over an extended period back to the early 1970's.

43. The IGA has occurred despite the chemical environment that has been consistently within limits.

44. Edison's practice of adding free caustic was based on the manufacturer's recommendation, industry experience, and Edison experience.

45. IGA is very localized and extends for only fractions of an inch over the length of a tube in one particular location.

46. Edison has employed several different inspection techniques without detecting IGA, but eddy current inspection is the only practical way to inspect large quantities of tubes.

47. Neither Edison, Westinghouse, nor the NRC has been able to quantitatively identify the extent of IGA by eddy current inspections.

48. Replacement instead of resleeving would have resulted in a much more prolonged outage.

49. The actual cost of resleeving is not reliably compared to the estimated cost of replacement.

50. Reduced power operation might have occurred if the steam generator was replaced.

51. SONGS 1 is a suitable facility for applying the same kind of performance standard that was adopted for Edison's coal plant operations.

52. The net revenue effect of the change in base rates, AER, and ECABF is $83 million.

53. The rate changes are reasonably spread based on uniform ¢/kWh by customer class, in order to maintain the relationships adopted in Edison's most recent general rate case, D.92549.

54. Within the domestic class the rate changes are reasonably spread to preserve the lifeline and nonlifeline relationship adopted in Edison's most recent general rate case, D.92549.

55. This is the proceeding intended by the Commission to provide for changes in the fuel charge applicable to Catalina.

56. In view of the delay beyond the revision date, the effective date of this order should be today.

57. The increase in rates and charges authorized by this decision is just and reasonable; the present rates and charges, insofar as they differ from those prescribed by this decision, are for the future unjust and unreasonable.

Conclusions of Law

1. CMA's objection to Edison's recovery of recorded incremental carrying costs of fuel oil in inventory is not timely and is without merit.

2. The reasonableness of Edison's SONGS 1 operations should be examined by staff in conjunction with recovery of capital costs in Edison's next general rate case, and Edison's ECAC balancing account may be adjusted in a subsequent ECAC proceeding.

3. TURN's motion is denied.

4. The adopted rate design conforms to the criteria adopted in Edison's most recent general rate case, D.92549.

5. Edison should be authorized to change its rates as set forth in the following order; those rates are just and reasonable.

O R D E R

IT IS ORDERED that:

1. On or after the effective date of this order Southern California Edison Company (Edison) is authorized to file with this Commission, in conformity with the provisions of General Order 96-A, revised tariff schedules reflecting the following:

a. Base rates - reduced by .131¢/kWh to all customer classes.

b. Annual energy rate - .452¢/kWh for all customer classes.

c. Energy cost adjustment billing factor: lifeline 2.024¢/kWh, nonlifeline domestic 4.539¢/kWh, other than domestic 3.967¢/kWh.

d. Fuel collection balance adjustments- .132¢/kWh.

e. Appropriate changes in its Catalina Island tariffs reflecting these calculations and the intent of D.93129.

The revised tariff schedules shall be effective not less than 5 days after filing and shall apply only to service rendered on or after the effective date thereof.

2. Within 90 days of the effective date of this order, Edison shall submit to the Executive Director for his approval a

plan for selecting and hiring a consultant to perform a study and prepare a report proposing a performance incentive procedure applicable to San Onofre Nuclear Generating Station Unit 1. All other parties are provided the opportunity to suggest no more than three consultants to the Executive Director within the same time frame as provided to Edison.

3. If an agreement has not been reached between SBVMWD and Edison within 60 days, both parties shall submit to the Executive Director a report on their respective positions in the negotiations.

4. The balancing account is subject to further review and possible adjustment pending completion of analysis of the reasonableness of Edison's SONGS 1 operation in its general rate case.

This order is effective today.

Dated October 20, 1981, at San Francisco, California.

JOHN E. BRYSON
President
RICHARD D. GRAVELLE
LEONARD M. GRIMES, JR.
VICTOR CALVO
PRISCILLA C. GREW
Commissioners

I certify that this decision was approved by the above Commissioners today.