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Decision 90-11-057 November 21, 1990

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ORIGINAL

In the Matter of the Application of Southwest Gas Corporation for Rate of Return and Required Return on Equity, and for Authority to Revise its Rates Effective January 1, 1991 Consistent Therewith. (U 905 G) For authorization to establish its cost of capital for 1990.	Application 90-05-009 (Filed May 8, 1990)
And Related Matters.	Application 90-05-011 Application 90-05-013 Application 90-05-014 Application 90-05-015 Application 90-05-016 Application 90-05-029

(See Appendix A for appearances.)

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OPINION

I. Summary of Decision

In this decision we establish the 1991 ratemaking cost of capital for Southwest Gas Company (Southwest), Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), San Diego Gas and Electric Company (SDG&E), Sierra Pacific Power Company (SPPC), Southern California Edison Company (Edison), and Pacific Power and Light Company (PP&L). The rates of return on rate base authorized by this decision will be reflected in the utilities' attrition filings and in Edison's 1991 Energy Cost Adjustment Clause (ECAC) proceeding. PP&L seeks no change in its authorized rates as a result of this decision.

After thorough consideration of the record in this proceeding, we conclude the authorized returns on equity and overall returns on rate base for the energy utilities for 1991 should be:

Utility	Common Equity	Rate of Return
Southwest	13.05%	11.73%
PG&E	12.90	10.98
SoCalGas	13.00	10.79
SDG&E	12.90	10.91
SPPC	13.00	10.39
Edison	12.85	10.71
PP&L	13.00	10.72

II. Procedural Background

This is the second Cost of Capital proceeding for the energy utilities under the procedure established in Decision (D.) 89-01-040. That decision modified the Rate Case Plan by removing our consideration of the costs of capital from general

rate cases (GRC) and set out a schedule for application, hearing, and decision beginning in May each year and ending with a Commission decision by year end.

Under the modified Rate Case Plan, Southwest filed Application (A.) 90-05-009 on May 8, 1990; PG&E filed A.90-05-011 on May 8, 1990; SoCalGas filed A.90-05-013 on May 8, 1990; SDG&E filed A.90-05-014 on May 8, 1990; SPPC filed A.90-05-015 on May 10 1990; Edison filed A.90-05-016 on May 8, 1990; and PP&L filed A.90-05-029 on May 16, 1990. The applications were consolidated for hearing, and hearings were held on August 22, 23, 27, and 29, and September 28, 1990 before Administrative Law Judge (ALJ) Wilson. The matter was submitted upon conclusion of the hearing on September 28, 1990, subject to the filing of a late-filed exhibit by the Division of Ratepayer Advocates (DRA) on October 5, 1990.

Testimony and evidence were submitted by each of the energy utilities and by the Federal Executive Agencies (FEA), the City of Los Angeles (LA) and DRA. Seven other interested parties, including Toward Utility Rate Normalization, filed appearances but did not otherwise participate in the hearings.

In its application, Edison requests a waiver of Rules 23(b) and (c) of the Commission's Rules of Practice and Procedure. These rules provide that applications for rate increases must include, among other things, a statement of presently effective rates and a statement of the effect of any proposal in excess of 1% by appropriate rate classification. In D.89-08-036, Edison's 1991 GRC was deferred and its operational attrition filing schedule was modified. D.89-08-036 provided that revenue allocation issues associated with Edison's 1991 attrition proceeding will be addressed in Edison's next ECAC proceeding. Edison requests that revenue allocation issues resulting from this proceeding be addressed in Edison's next ECAC as well.

Consistent with our intent in D.89-08-036, we grant the requested waiver of Rules 23(b) and (c), but we will require that Edison provide in that proceeding a separate disaggregated statement of the effects of this decision by appropriate rate classification.

III. Generic Issues

In recent years, we have determined the cost of capital in four steps. First, we establish the appropriate ratemaking capital structure for the utility. In so doing, we seek a reasonable balance between the cost advantages of a more leveraged capital structure and the need to keep the costs of equity within reason. At the same time, we are mindful of the impact of the ratio of debt and equity on the bond ratings established for utilities by the various bond rating agencies. In last year's cost of capital case, we considered the question of whether an optimal capital structure should be adopted. We declined to adopt an optimal debt-equity ratio, concluding that regulatory oversight should be continued on a case by case basis.

Second, we establish the component costs of long-term debt, preferred stock and common equity. The costs of debt and preferred stock are usually straightforward. The cost of equity, however, is far more difficult to ascertain. Our objective is to provide for a return on equity which will be sufficient to attract invested capital but not so high as to result in an unnecessary burden on ratepayers. We necessarily consider the expectations of potential investors in terms of the investment risk they perceive in utility investments, and the commensurate returns they will demand in the investment marketplace. Our determination of the return on equity requires careful analysis of interest rates and investment risks, and is aided by the use of financial models.

Third, we calculate the weighted cost of capital. A weighted cost of capital is simply the product of the capital structure and the cost factor for each component.

Fourth, we add the weighted costs together to determine the rate of return on rate base. This is the percentage figure which when multiplied by the utility's rate base yields the amount to be collected in rates which will cover the utility's costs of capital.

A. Financial Models

The utilities, DRA, and FEA supported their return on equity recommendations with analyses which employed the use of financial models. Over past several years three different financial models have been regularly used. These include the Discounted Cash Flow (DCF), Risk Premium (RP), and the Capital Asset Pricing Model (CAPM). In general, these models are thought to indicate the level of return on investment which is required in order to attract investors.

Our consideration of these models has always been accompanied with considerable reservation. In past cost of capital decisions, we have noted the many limitations of these models, and we have come to regard them as useful only insofar as they may help establish a range of reasonable return on equity values. We have regularly observed that these models cannot be blindly relied upon to establish a particular value for the return on equity. Any consideration of model results must be tempered by judgement. (See D.88-12-094 and D.89-11-068.)

In reviewing the results of the various model trials this year we see a familiar pattern of relatively low results from the DCF and results some 100-200 basis points higher from the RP and CAPM. As we remarked in D.88-12-094, "the results [of the models] are dependent on subjective [data] inputs". It is this "input sensitivity" that causes the parties to subject each other's models to detailed criticism. The City of LA opposes the use of any

financial models and bases its recommendation for SoCalGas on comparable earnings by a sample of similar utilities.

In past years we have not given detailed guidance as to what the limits to input subjectivity should be. We have been generally permissive, tacitly recognizing that the inputs as well as the results require judgement. But one result of this permissiveness is the wide range between the highest and lowest model results. This year the range of model returns on equity spanned from a low of 9.48% for PG&E's DCF range using comparable utility data to a high of 15.57% from DRA's CAPM analysis for SoCalGas. All told, over 100 specific point estimates or range end points were offered. As we said in a related context in 1989, "A common equity range of [such] magnitude provides little guidance to the Commission in arriving at a reasonable return on common equity." (D.88-12-094 at p. 14.)

A further criticism of the use of models comes from our observation that each was developed and intended to be used for purposes other than ratemaking. They cannot reflect the interests of ratepayers in avoiding having to pay more in rates than is actually warranted.

With these concerns in mind we will give some weight to the model analysis, but we think it would not be worthwhile to attempt to resolve every criticism of every model run. Furthermore, the inputs to the RM and CAPM models involve forecasted interest rates, such as those of Data Resource Inc. (DRI). We consider interest rate forecasts in detail in the following pages, but we note here that the utilities' model analyses were prepared in April of this year and DRI's October forecast was 45 basis points lower. This clearly implies that if these models were revised based on the most recent forecasts, they would produce results much lower than those presented by the parties. We observe that the overall average of all the model results is reasonably close to 13%, noting the exception of

PP&L.[1] All of the remaining 1990 returns on equity fall within 15 basis points of the 13% average. We further observe that the overall average of the model runs is biased in favor of the RP and CAPM models which produce results consistently higher than the DCF. Both the RP and CAPM rely on the theory that investors require a risk premium for investing in stock. This bias would be corrected by first averaging the results of the RP and CAPM and then averaging the DCF with the mean of the two risk premium models.

Due to the inherent limitation of the models, no particular model analysis convinces us that an increase or decrease in the returns on equity is warranted. Having applied our judgement to the financial models, we conclude the results, overall, suggest that the presently authorized rates return on equity will continue to be reasonable in 1991.

B. Interest Rates

Interest rates play a pivotal role in determining the cost of capital. Because we establish the cost of capital on a forecast basis each year, we must anticipate future interests rates. These future rates affect the cost of debt and are inputs into the financial models the parties use to determine a reasonable range for the returns on equity. In last year's cost of capital proceeding, there was considerable debate on the validity of various interest rate forecasts and on the appropriate methodology for equating forecast AA utility bond rates to other bond ratings.

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1 After the close of the hearing, the ALJ requested the Commission's Advisory and Compliance Division (CACD) to compile a table showing the result of each model analysis presented in the proceeding. CACD calculated the average model result for each utility. We do not rely on averaging to reach our conclusions on the appropirate returns on equity, but merely observe that the approach coincidentally corresponds with our conclusion that risks and economic conditions anticipated in 1991 do not require changes in the adopted returns on equity. A copy of the calculations by CACD is appended as Appendix B to this decision.

We directed the utilities and CACD to conduct a workshop prior to the commencement of the 1991 proceeding to settle these issues. CACD held the workshop on April 12, 1990. The workshop participants agreed to the following terms:

> "To use the Data Resources, Inc./McGraw-Hill (DRI) Control AA utility bond forecast adjusted to the utility's specific bond rating for the cost of debt and preferred stock over the rate period.
>
> "To use the weighted average of the most recent 36 months of Moody's recorded Aa-A data ending with the first quarter of the filing year, rounded to the nearest five basis points for utilities which do not have an Aa bond rating. Utilities with split ratings would use half of the spread.
>
> "To use the latest DRI update (October) update to finalize the embedded costs of debt.
>
> "To not adopt a standard forecast for use in the development of the cost of equity, but to use DRI with one scenario in models which use and interest rate forecast."

At the Prehearing Conference on June 21, 1990, the ALJ adopted the workshop report and the agreement among the parties.

The agreement to use the DRI forecast greatly simplifies our determination of the cost of debt and improves, somewhat, the use of the various economic models by including a common assumption for comparison purposes. While we retain the concerns which were voiced last year as to the level of accuracy of the forecast, the April 12 agreement is adequate for our use this year.

The positions of the utilities and DRA vary as to the outlook for interest rates in 1991 vary. The utilities paint a grim picture citing conditions in the world capital markets involving Japan and post-unification Germany which will tend to drive interest rates upward. These factors are said to have the potential of dampening the effects of economic recession on

interest rates. Based partly on their assessments of the economic outlook for 1991, Edison, PG&E, SDG&E, and SoCalGas request increases in the range of 85 to 100 basis points.

DRA, on the other hand, argues that the economy is in a slow growth phase and that interest rates are not apt to rise significantly in the short term. Interest rate forecasts have fluctuated somewhat recently. In November 1989, when the current cost of capital was adopted, the DRI AA utility bond forecast was 8.64%. In April 1990, when this year's applications were prepared, the forecast for 1991 was 10.63%, indicating an increase of some 200 basis points. The forecast dropped to 10.50% in July and fell to 9.82% in August. The most recent forecast for the October update was 10.18%. In contrast, actual bond rates have declined since late 1987 from over 11% to 9.38% in November 1989. (Exhibit 9, Table 1-1.) Edison's witness Fohrer testified at the hearing in August that actual utility bond rates were at the 10.3% level.[2]

Based on its analysis, DRA concludes that the cost of capital for 1991 will be slightly higher than in 1990. DRA believes that a slight increase in returns on equity over its recommendations last year is warranted. However, DRA's 1990 recommendations were far below the returns we adopted. Thus while DRA perceives an increase in the costs of capital, it proposes

2 In comments on the ALJ proposed decision, Edison, PG&E, SDG&E, and SoCalGas argue that the increase in the October 1990 DRI bond forecast rate over the November 1989 forecast justifies an increase in its 1991 return on equity. We will not automatically adjust returns on equity whenever DRI revises its monthly forecast. We stated in D.88-07-023 (Finding of Fact 23) that it has been shown that DRI forecast have varied from actual interests rates by an average of +/-1.81%.

reductions of 165 basis point for PP&L, and 60 to 70 basis points for the other utilities.

Several utilities allude to the potential impact of the Iraqi invasion of Kuwait on interest rates. The utilities compare the invasion to the energy crises in the early 1970s and 1980s. DRA takes a more hopeful view that the matter will be resolved quickly and will not increase the utilities' costs of capital in 1991. While we have no crystal ball through which to see the future, we share DRA's optimism. The present conflict is not a cartel embargo nor a political revolution, but the action of a single state against another. It is also an action to which most of the world's nations have expressed disapproval, and given the differences between economic conditions then and now, we do not believe the invasion warrants an increase in the rates of return.

Taking all these factors into account, we agree with DRA as to the economic outlook for 1991. We anticipate that economic conditions will be largely a continuation of the conditions in 1990, and we find that the current rates of return on equity should not be increased on the basis of interest rates alone. We have long held to the principle that the costs of equity move in the same direction as interest rates, although they do not move proportionately nor in lockstep. We have noted as well that actual interest rates may vary by more than 100 basis points in a matter of months. While we agree that interest rates may be slightly higher in 1991, they will not increase sufficiently to warrant an increase in returns on equity in order to attract capital or to avoid a lowering of utility bond ratings, nor do we conclude the October DRI forecast bond interest rate of 10.18% will necessarily prevail throughout 1991. On the other hand, each utility will receive a modest increase in its overall rate of return reflecting the October DRI control forecast for AA utility bond debt.

C. Evaluation of Risks

In keeping with our traditional cost of capital practice and with the requirements of Bluefield Water Works and Improvement Co. v. West Virginia Public Service Commission (1923), 262 US 679, and Federal Power Commission v. Hope Natural Gas Co. (1944) 320 US 591, we must evaluate the risks which will most likely bear upon the operations of the utilities in 1991. Our objective is to determine the appropriate rate of return on equity for each energy utility in order that investors will be compensated for the risks of investing in the energy utilities.

Each of the utilities presented testimony and argument describing the various types of risks to be faced in 1991 and based their recommendation for a rate of return on their assessments of those risks and on the results of financial models. These risks may be categorized as financial, business, and regulatory risks.

Financial risk is tied to the capital structure of a utility. In general, the lower the proportion of a utility's total capitalization consisting of common equity, the higher the financial risk. We have recognized that when a utility's capital structure consists of excessive debt, shareholders are subject to the risk of their expected returns being subordinated to the claims of bondholders. It follows that a higher debt ratio may require a commensurately higher return on equity to compensate for that increased risk.

In this year's cost of capital proceeding, none of the utilities' capital structures is contested. Southwest and Edison propose no changes in their capital structures. Those changes which are proposed are both small and reasonable. Accordingly, we shall adopt the capital structure for each utility as proposed, and we need not consider the financial risk which stems from debt/equity ratios further as a separate risk issue.

Business risks consist of those risks stemming from competition. Over the past several years in the gas sector, we

have moved to take advantage of the inherent efficiencies of competition to offset some of the inherent inefficiencies of cost-based ratemaking. The utilities argue that from the investor's point of view, these steps may have increased the risk that hoped-for returns will not materialize due to competition. PG&E, SoCalGas, and SDG&E all cite these risks in support of their requests for increased returns on equity.

With respect to the business risk outlook for 1991, two factors are of particular note. With OIR 90-02-008, we initiated a midcourse review of our gas procurement policies which may result in changes aimed at increasing competition. In April of this year, we completely eliminated the Negotiated Revenue Adjustment Account (NRSA) which served as a "safety net" to temporarily shield shareholders from the initial impacts of our restructuring of the gas industry. 1991 will be the first full year of operations without the protection of the NRSA.

Our evaluation of these risks with a view toward 1991 leads us to conclude that these risks do not in themselves justify any adjustment of returns on equity. As to the elimination of the NRSA, we considered that impact in last year's cost of capital proceeding. Although the loss of NRSA may extend over a longer period in 1991 than it did in 1990, we believe that this will be offset by improvements in utility operations gained by an additional year of experience with the new industry structure.

In the 1990 Cost of Capital proceeding we found that gas utilities can be expected to develop new strategies to mitigate the risks associated with the elimination of the NRSA. (D.89-11-068.) In this proceeding, SoCalGas' witness Todaro testified that SoCalGas had taken several steps to limit the risks associated with the loss of NRSA, including the negotiation of long-term contracts with UEGs and with enhanced oil recovery customers, active participation in air quality regulation in its service area, participation in OIR 90-02-008 and the undertaking of efficiency

and productivity improvements in order to remain competitive in the market place. The NRSA was intended as a temporary shield to allow the gas utilities to put such steps into place, and it appears from Todaro's testimony, SoCalGas has responded appropriately.

PG&E's witness Jenkins-Stark testified that PG&E was subject to a pre-tax loss of $34.4 million in 1989 but would have been subject to a loss of $56.5 without the protection of NRSA. On cross examination by FEA, he acknowledged that the "loss" was a shortfall below projected revenues.

PG&E, SDG&E, and SoCalGas argue that OIR 90-02-008 could result in increased risks to the gas utilities. SoCalGas's witness Todaro testified that the settlement proposed by the parties in that proceeding (excepting DRA) provided for the elimination of utility gas procurement services. According to Todaro, this would result in the utility being at greater risk for the recovery of its transportation margin. On cross examination, Todaro acknowledged that the Commission's annual cost allocation proceeding (ACAP) proceeding would take into account any sales erosion by adjusting sales forecasts. Todaro concluded that the existence of the OIR created an air of uncertainty for investors. At the hearing on August 28, 1990, SoCalGas requested that the ALJ take official notice of the filing of a proposed settlement to that case. The ALJ accepted the request subject to the limitation that the settlement was a proposal only and did not at that time reflect Commission policy.

Subsequently, in D.90-09-089 issued on September 25, 1990, the Commission adopted a decision which contained some of the terms of the proposed settlement. D.90-09-089 does not materially increase the investment risk of gas utilities. In relevant part, the decision establishes a balancing account whereby 75% of the risks of failure to reach forecasted throughput are passed to ratepayers. Non-core customers may choose to subscribe to core service for a minimum period of two years and

the ACAP will become a biennial proceeding. Non-core procurement service by gas utilities is abolished. Some of these factors may increase risk, and some, such as the balancing account, will decrease risks. For the present, we conclude that the elements of the decision effectively cancel out and do not result a net increase in gas industry risks.

Business risks on the electric side come primarily from the likelihood that some customers will generate their own electrical power apart from the utilities' generation resources. We have taken numerous steps, such as providing for special contracts to enable the electric utilities to reduce the likelihood of uneconomic bypass and our continued progress toward our ratemaking policy of Equal Percentage of Marginal Cost Pricing, and we are not persuaded that the risks of bypass anticipated in 1991 will be significantly greater than in 1990. It follows that these risks do not warrant any change in the current returns on equity.

Another source of business, or competitive risk in the electric industry is "competition" from qualifying facilities (QFs). Edison, SDG&E and PG&E say that QFs displace electric generating plant which would have otherwise gone into rate base, a fact which investors perceive as constraining returns. These parties also say that power purchase contracts expose them to risks of non performance against which they have no recourse except contract litigation.

PG&E says that it depends upon QF power for as much as 19% of its total electric sales (13,000 GWH in 1989). By year end 1991 PG&E anticipates that QF generation will reach 20,000 GWH and QF payments will exceed $1.5 billion. PG&E claims this risk is quantifiably greater for 1991 than it was in 1990 due to an increase in QF power purchases. We acknowledge that the growth in QF produced electric generation has been substantial in the past decade. However, we have taken that factor into account in our past cost of capital decisions. We have also considered QFs in

other proceedings which involve forecast electric sales. We do not believe that a quantitative increase in QF generation from one year to the next necessarily requires an increase in the return on equity. We might however consider the relative dependence on QF sources as one relevant factor in assessing the <u>relative</u> riskiness of the electric utilities on a complete showing of the QF dependence of all of the utilities. The record in this proceeding lacks such a showing.[3]

Regulatory risk is another category of risk which the utilities believe must be considered. Regulatory risk for the purposes of establishing the cost of capital has two components. The first is the impact of regulatory program changes which investors may view as influencing their investment decisions. The second is the exclusion by the Commission of imprudent expenses or rate base items from rates charged to ratepayers.

In recent years, risks due to regulatory program changes have tended to concentrate in the area of increasing competition, particularly in the gas industry. Some of these program changes were considered earlier in the discussion of business risks to the extent they pertain largely to the effects of increased competition. For 1991, several other regulatory program changes require our particular consideration.

SoCalGas, SDG&E, and PG&E all raise the argument that they are at increased risk for take-or-pay interstate gas pipeline costs. In D.90-01-015 and D.90-04-021, we allowed these utilities to choose between two options for the recovery of take-or-pay costs

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3 In its comments on the ALJ's proposed decision Edison states that Exhibit 16, an excerpt from "Credit Comment", May 11, 1990 shows that Edison is more QF dependent (13% of total capacity) than PG&E (8%), SDG&E (1%), and Pacific Corp. (7%). We do not rely on Exhibit 16 because it is based on 1988 data and does not necessarily reflect conditions anticipated on 1991.

from interstate pipelines as a result of Federal Energy Regulatory Commission orders. Under the first option, the gas utilities could recover a maximum of 75% of the direct billed take-or-pay costs in fixed charges and forego recovery of the remaining amount. The second option provided an opportunity to recover the full costs in volumetric rates, but subject to a one-way balancing account as to core customers.

All three utilities chose the volumetric option. We believe their election reduced these risks to a level at which no increase in returns on equity are warranted. Furthermore, as we noted in D.90-01-015, we have already provided the utilities with an explicit return for the risk associated with take-or-pay exposure in the 1990 cost of capital proceeding.

We suspended the Annual Energy Rate on August 8, 1990 in response to the oil price impacts of the invasion of Kuwait by Iraq. That regulatory mechanism was a device to apportion fuel cost increases between ratepayers and shareholders in order to encourage the utilities to minimize fuel costs. The Middle East problem, however, is not one with which utility management is equipped to deal, and so we removed that apportionment. The immediate effect of this should be a reduction in the risk to investors. The utilities argue that our action also called for comments on alternative incentive mechanism which could have the opposite effect on investors. Edison claims that it anticipated the removal of the AER when it prepared its requested return on equity in May of this year.

The AER has had a history of intermittent application. We believe investors view it as subject to change, and as our most recent action demonstrates, we have used it wisely. Furthermore, we believe that investors generally approve of our efforts to increase efficiency where shareholders as well as ratepayers may benefit as the result. If the removal of the AER has any certain

near term effect, it would be to reduce the risks perceived by investors.

PG&E, SDG&E, and Edison submit that as electric utilities they are exposed to regulatory program risk due to required purchases of QF produced energy. The competitive impact of QF power sales was noted in our discussion of business risks, but these parties also claim that such power purchases subject them to "resource uncertainty" as well. Resource uncertainty involves the possibility that energy projected to be available from QFs in future years will not materialize. In such a case, it may be necessary for electric utilities to respond to future supply needs on an ad hoc basis rather than with the benefits of careful long-term planning.

We believe this risk is overstated. The Commission continues to improve the resource planning process which will assist the utilities in accurately anticipating future electric energy supply and demand. In addition, improvements in the QF bidding process and in the negotiating of QF power purchases afford significant opportunities to reduce these risks. We would much prefer to follow a course of program improvements rather than to pass unnecessary costs to consumers through inflated returns on equity.

The second area of regulatory risk is regulatory disallowance of expenses or rate base additions which have been found to be imprudent. We do not share the view of utilities that regulatory disallowances should be followed by offsetting increases in the return on equity. To do so would simply undo the disallowances and require ratepayers to bear the burden of costs imprudently incurred.

DRA presented testimony citing an analysis by Merrill Lynch of the regulatory climates in which comparable electric and gas companies operate. Merrill Lynch rates California higher in

terms of the quality of its regulatory climate than the average ratings of both electric and gas comparables.

Edison and SDG&E cited specific regulatory disallowances of a justification for their requested increases in return on equity. Edison cites our disallowance of contract payments to its QF subsidiary, KRCC, while SDG&E revives the disallowance of portions of its Southwest Power Link (SWPL) project which occurred in 1987 and 1988. We have already considered the SWPL disallowances in the 1988 cost of capital proceeding. PG&E cited the ongoing review of the administration of QF contracts as causing an increase in risks over time. We reject all these arguments for the reason that they have already been taken into account in establishing past returns on equity or that they are the result of disallowances which should not be offset by increases in the return on equity. We conclude that the regulatory risks to be faced by the energy utilities in 1991 do not warrant neither increase nor decrease in the current approved returns on equity.

D. Recommended Capital Structures, Embedded Costs of Debt, and Preferred Stock

For 1991, the only contested issues are the appropriate rates of return on equity for each utility. Southwest and Edison are proposing no changes in the adopted capital structures for 1990. PG&E, SDG&E, and SoCalGas propose very minor adjustments which DRA considers reasonable. PP&L and SPPC propose reductions in long-term debt. DRA believes the proposed changes are reasonable, and that the proposals of PP&L and SPPC will bring the capital structures of these utilities more into line with the others. SDG&E proposes a minor increase in its long-term debt ratio with no change in common equity. DRA accepts the proposed capital structure for SDG&E but does not specifically conclude that it is reasonable.

There was also no substantial disagreement among the parties as to the utilities' proposed embedded costs of debt and

preferred stock. DRA reviewed each utility's financing plan and considers them reasonable.

By the agreement reached in the April 14, 1990 workshop, the utilities and DRA adopted the October DRI control forecast for AA utility bonds for use in determining the cost of debt issues for 1991. That agreement also provided a method for adjusting the DRI forecast to reflect utility debt ratings other than AA. The adjustments as shown in the following table:

Utility	Bond Rating	Increment
Southwest	BBB	0.60%
PG&E	A1/A	0.25
SoCal	A1/A+	0.25
SDG&E	Aa3/A+	0.15
Sierra	A2/A-	0.25
Edison	Aa2/AA	0.00
PP&L	A3/A-	0.25

The City of Los Angeles' witness Kroman alone objects to the adjustments and the use of the DRI forecast for the costs of debt. Kroman points out that SoCalGas debt issues in early 1990 were actually lower than contemporaneously issued AA utility bonds. Kroman also criticizes the accuracy of the DRI forecasts.

DRA's recommended cost of debt for PP&L differs from the utility because PP&L did not use the "Modified PG&E 2" to account for the tax savings attributable to refunding high cost debt issues. This method was adopted in D.89-11-068 in which PP&L did not participate. We will adopt DRA's debt figures because they are based on the methodology used by the other energy utilities.

We will adopt the cost of debt, the adjustment methodology, and the recommendations of DRA and the utilities as shown in late-filed Exhibit 19. We recognize, as witness Kroman points out, that actual interest rates do vary and Kroman's testimony causes us some concern. In future cost of capital cases, we may investigate the differential between the established costs of debt and the cost of debt actually issued. For the present, we

believe that the record in this proceeding consisting only of SoCalGas debt issues in early 1990 is insufficient to warrant the rejection of the April workshop consensus. Furthermore, we are concerned with establishing the costs of debt for a future period that must remain static for the entire term. Our task is to determine the "reasonable" cost of debt rather than an actual cost based on an arbitrary selection of a past figure. A forward-looking approach is always subject to critical comparison with actual results, but we believe the use of the DRI forecast is warranted because it does attempt to anticipate conditions expected to prevail during the 1991 rate period.

Only SoCalGas and SPPL anticipate new issues of preferred stock in 1991. As none of the recommended costs of preferred stock is contested, we will adopt them.

E. Insulation of the Cost of Capital for Diversified Utilities

Ordering Paragraph 14 in D.89-11-068 required the diversified energy utilities to show in their next cost of capital proceeding, how their utility operations are insulated from the effects of their non-utility enterprises. Each utility included in its application or filed testimony a brief description of how this separation is achieved for the cost of capital proceeding.

Southwest is diversified both jurisdictionally and by virtue of its acquisition in 1986 of PriMerit Bank. Southwest excludes all debt of the bank and its non-California operations from its cost of debt calculations. Southwest used financial data for comparable firms in its financial model analysis.

PG&E excludes the operation of its Diablo Canyon Nuclear Power Plant and PG&E Enterprises from its cost of capital filing as required by Paragraph 12 of the Diablo Canyon Implementing Agreement. PG&E also made use of financial data for comparable utilities in its financial model analysis.

SoCalGas issues debt separately from its parent Pacific Enterprises, Inc. It maintains separate bond agency ratings and has a stand alone dividend policy. SoCalGas likewise makes use of financial data from comparable utilities in its financial model analyses.

Edison maintains a separate capital structure from its parent holding company, SCE Corp. SCE Corp.'s debt is made non-recourse to Edison's assets. Edison's financial model analysis included financial data for comparable electric utilities to take account of the potential effects of SCE Corp.'s diversification as well as the SDG&E merger.

SDG&E owns a subsidiary company under the name of Pacific Diversified Capital (PDC). PDC accounts for about 2% of SDG&E's total revenue and makes up about 4% of the utility's total assets. PDC is excluded from SDG&E's cost of capital filing and SDG&E provides no credit support for PDC. SDG&E considers financial data for comparable utilities in its financial analyses in order to avoid the effects of the impending merger with Edison.

SPPC is a subsidiary of its parent holding company Sierra Pacific Resources. SPPC maintains its own credit ratings separate from its parent by Duff and Phelps, Standard and Poors and Moody.

Pacific Power uses a hypothetical capital structure which meets the bond agency rating benchmarks established for an A rating. As with SPPC and the other utilities, Pacific Power uses financial data for comparable utilities in its financial model analysis.

IV. Southwest Gas Corporation

A. Background

Southwest requests a return on equity of 13.25% and an overall rate of return of 11.75%. The proposal would result in an increase in revenue requirements of about $80,600 or 0.16%.

Only DRA and Southwest presented evidence and testimony relating to Southwest's application. A summary of the presently authorized rate of return together with the proposals of Southwest and DRA for 1991 are presented below.

Authorized - 1990

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	50.00%	10.56%	5.28%
Preferred Stock	5.00	9.57	0.48
Common Equity	45.00	13.05	5.87
Total	100.00%		11.63%

Southwest Requested - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	50.00%	10.75%	5.38%
Preferred Stock	5.00	9.57	0.48
Common Equity	45.00	13.25	5.96
Total	100.00%		11.82%

DRA Recommended - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	50.00%	10.75%	5.38%
Preferred Stock	5.00	9.57	0.48
Common Equity	45.00	12.35	5.56
Total	100.00%		11.42

* Updated October 5, 1990

B. Return on Common Equity

The only contested issue in Southwest's application is the return on common equity. Southwest proposes a return of 13.25%. This is less than the 14% return which Southwest requested for 1990 but an increase over the 13.05% which was approved.

Southwest argues that its proposed return on equity for 1991 is reasonable in light of its low bond ratings of Baa-3 (Moody's) and BBB (Standard and Poors). Southwest also conducted an analysis using three financial models to establish a range of 11.56% to 14.53%. The data input used by Southwest was derived from 13 companies selected from among 37 comparable gas distribution systems to avoid the influence of Southwest's diversified non-utility holdings. Southwest concedes that its business and financial risks are not different from 1990, with the exception of a slight increase in interest rates.

DRA proposes a return on equity of 12.35 based its analysis of the financial models and Southwest's relative risk. DRA used its own group of comparable gas companies to prepare its DCF, RP, and CAPM analyses for Southwest. DRA believes that its model runs for 12 comparable gas distributors should be used as reference mark for Southwest since the market price of its stock is influenced by non-utility holdings. The model results from DRA's comparison group show a spread from a low of 11.51% for its DCF analysis to a high 14.69% from its RP analysis. This range corresponds to the range developed by Southwest.

Southwest is not directly subject to the risks of the Commission's new gas policies, but DRA believes that Southwest's relatively low bond rating, BBB, Baa-3 and small size should be taken into consideration.

We believe there is no basis for an increase in Southwest's current authorized return on equity of 13.05. Southwest is not subject to any noticeable change in its riskiness,

and as of the close of the hearing in this matter, its bond rating and comparative revenues had not changed from 1990.

V. Southern California Gas Company

A. Background

SoCalGas seeks a return on equity of 14% and an overall rate of return on investment of 11.33% for 1991. Based on the requested return on equity and SoCalGas proposed capital structure, SoCalGas seeks an increase in rates of $23,143,000. The table below shows a comparison of last year's authorized cost of capital and the recommendations of SoCalGas, DRA, the City of Los Angeles, and FEA.

Authorized - 1990

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	45.00%	9.22%	4.15%
Preferred Stock	9.70	7.31	0.71
Common Equity	45.30	13.00	5.89
Total	100.00%		10.75%

SoCalGas Requested - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.40%	9.58%	4.25%
Preferred Stock	9.80	5.99	0.59
Common Equity	45.80	14.00	6.41
Total	100.00%		11.25%

* Updated October 5, 1990

DRA Recommended - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.40%	9.58%	4.25%
Preferred Stock	9.80	5.99	0.59
Common Equity	45.80	12.35	5.66
Total	100.00%		10.50%

City of LA Recommended - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.40%	9.36%	4.16
Preferred Stock	9.80	6.53	0.64
Common Equity	45.80	12.50	5.72
Total	100.00%		10.52%

* Updated October 5, 1990

FEA Recommended - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.40%	9.48%	4.21
Preferred Stock	9.84	6.53	0.64
Common Equity	45.75	13.00	5.95
Total	100.00%		10.80%

SoCalGas offered the testimony of Ralph Todaro, Vice President and Controller. The City of Los Angeles and FEA submitted testimony and cross-examined Todaro. SoCalGas did not cross-examine the witness for the City of Los Angeles.

B. Return on Common Equity

SoCalGas bases its request for a return on equity of 14% on its assessment of the risks it faces and upon various financial models.

DRA claims that SoCalGas overstates its risk. DRA believes that the most of the risks SoCalGas cites are already reflected in the present authorized return on equity of 13%. DRA bases its recommendation of 12.35% on the results of its financial model analysis of comparable utilities and on SoCalGas' gas industry risks.

LA recommends a return on equity of 12.50%. LA does not directly rely on financial models but rather challenges the validity of both the models themselves and of SoCalGas' specific use of them. LA bases its recommended return on equity on its observation that comparable utilities earn returns of about 12.50%, on its observation that short-term interest rates are declining, on its belief that 14% is not necessary to preserve SoCalGas' current A+ and Aa bond ratings and that SoCalGas' risk situation does not justify a higher allowed return on equity.

The FEA recommends a return on equity of 13% based on its use of a DCF model and risk premium analysis based on comparable utility data. FEA's risk analysis, which does not discuss specific facts related to SoCalGas but considers risk indicators available from market data, concludes that SoCalGas' risks are comparable to other gas distribution companies.

SoCalGas argues that its risk for 1991 is so much higher than last year that it requires an increase of 100 basis points over the 1990 authorized return on equity of 13%. We note at the outset that SoCalGas made an identical request for 14% last year.

It would seem to us that if SoCalGas earnestly believed that its risks are greater for 1991, its request would have been for a higher return on equity than it sought for 1990.

SoCalGas witness Todaro testified that a 14% return on equity "is needed to maintain our present credit rating and enable us to attract capital at a reasonable rate". (Exhibit 4, p. 5.) Todaro states that the pre-tax "Rating Agency Method" should be used when evaluating the ratio of earnings to fixed charges rather than the after tax average ratio used by this Commission. Todaro demonstrates that even with a full 100 basis point increase in the return on equity, the pretax coverage ratio would increase only slightly from 3.35 in 1990 to 3.41 times in 1991.

LA provides alternative analyses to demonstrate that a return on equity of 12.50% would generate a pretax coverage ratio of 3.39 times. LA also points out that SoCalGas' return on equity has not been as high as 14% since 1986 and no impact on SoCalGas' bond rating occurred. The witness Todaro responded in the negative to the ALJ's question as to whether it would be reasonable to believe at this time that SoCalGas's bond rating might be changed. We believe that we should give no weight to the SoCalGas' testimony on the subject of the interest coverage ratio.

We evaluated the business financial and regulatory risks cited by SoCalGas in Section III. We conclude that SoCalGas' risk situation has not changed so as to warrant an increase over the current 13% return on equity. SoCalGas has offered no convincing evidence that its bond rating may be lowered in the event that does not receive its requested return on equity of 14%. A return on equity of 13% is consistent with the recommendations of FEA and LA. In as much as DRA has not argued that SoCalGas' risks have decreased, there is no basis for decreasing the 1990 return on equity.

VI. San Diego Gas and Electric Company

A. Background

SDG&E requests a return on equity of 13.75% and an overall rate of return of 11.40% for 1990. SDG&E's request is made based on analysis of the company as a "stand alone" utility and without regard to any financial impacts of the proposed SDG&E-Edison merger. If adopted, SDG&E's request would produce an increase in its revenue requirement of $18 million for electric service, 2.4 million for gas service, and $2,000 for steam, or $20,389,000 overall.

A comparison of SDG&E's proposal is shown in comparison with the present authorization and with the recommendations of DRA and FEA in the table below:

Authorized - 1990

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.25%	9.08%	4.02%
Preferred Stock	6.25	7.18	0.45
Common Equity	49.50	12.90	6.39
Total	100.00%		10.86%

SDG&E Requested - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.60%	9.20%	4.10%
Preferred Stock	5.90	7.17	0.42
Common Equity	49.50	13.75	6.81
Total	100.00%		11.33%

DRA Recommended - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.60%	9.20%	4.10%
Preferred Stock	5.90	7.17	0.42
Common Equity	49.50	12.30	6.09
Total	100.00%		10.61%

FEA Recommended - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.60%	9.36%	4.17%
Preferred Stock	5.90	7.17	0.42
Common Equity	49.50	12.75	6.31
Total	100.00%		10.91%

* Updated October 5, 1990

B. Return on Common Equity

SDG&E's return on common equity for 1991 is the only matter at issue. SDG&E argues that it faces increased levels of regulatory risk since last year's cost of capital decision. SDG&E claims that it is subject to the risk of uncertainty in its resource planning. It claims that purchased power cannot be expected to provide for all of the utility's demand growth in 1990's resulting in increased need to attract investor capital. SDG&E points to risks associated with the potential loss of two large contracts with QFs as examples of its resource uncertainty.

SDG&E also cites regulatory risk stemming from our disallowance of certain costs associated with the Southwest Power Link project, take or pay risks resulting from SDG&E's 1990 ACAP decision (D.90-01-015) and the uncertainties caused by our gas procurement proceeding, OIR 90-02-008.

SDG&E further cites the uncertainty of changes in inflation and interest rates and the divergence of several current interest rate forecasts. SDG&E believes its financial risk due to its more highly leveraged capital structure is about the same as last year's.

All of the risks described by SDG&E are either insufficient to warrant any increase in the return on equity or have already been reflected in the authorized rate. The risk due to the full elimination of the NRSA has been discussed in section III of this decision and for the reasons stated there, does not support an increase in the return on equity. In its brief filed September 14, 1990, SDG&E concluded that its "business and financial risks..., overall, are much the same as they were last year" when SDG&E's current return on equity was established at 12.90. SDG&E focuses on the testimony of witness Krumvieda on the likelihood of increasing interest rates caused by global economic factors. We considered this argument in the discussion of interest

rates in Section III above and do not believe that it warrants an increase in the return on equity for 1991.

DRA and FEA conclude that SDG&E is comparable to other utilities as to riskiness. DRA recommends a return on equity 5 basis points above the midpoint of the range of reasonable rates of return it developed from various financial models. FEA considers SDG&E to be the second least risky California utility following Edison.

The several financial models used by SDG&E, DRA, and FEA produce a range from 9.62% to 14.9%. All three parties chose to rely on financial data for comparable utility corporations to avoid the effects of the proposed merger on the model results.

For the reasons discussed in Section III above, none of the various models or applications of the models appears to lend notable support for a particular return on equity. We note that SDG&E's request for 1990 in A.89-05-023 was for an identical 13.75% return based on financial model results that produced about the same range as this year's effort. DRA's recommendation is 60 basis points lower than the 1990 authorized rate even though DRA has not argued any facts to indicate that SDG&E is less risky than last year.

We conclude that no change is warranted for 1990. We adopt 12.90% as the reasonable return on equity for 1991.

VII. Pacific Gas and Electric Company

A. Background

PG&E requests a return on equity of 13.75% and an overall rate of return of 11.38%. PG&E estimates that, based on its proposed return on equity, its revenue requirement would increase by $75,108,000 ($58,801,000 for the electric side and $16,307,000 for gas). Pursuant to the Diablo Canyon Settlement Agreement and D.88-12-083, the impacts of that settlement are excluded from PG&E's cost of capital application.

The table below displays PG&E's authorized rate of return for 1990, its request for 1991 and the recommendations of DRA and FEA.

Authorized - 1990

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	47.00%	9.32%	4.38%
Preferred Stock	6.25	8.79	0.55
Common Equity	46.75	12.90	6.03
Total	100.00%		10.96%

PG&E Requested - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	47.25%	9.35%	4.42%
Preferred Stock	6.00	8.76	0.53
Common Equity	46.75	13.75	6.43
Total	100.00%		11.38%

DRA Recommended - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	47.25%	9.35%	4.42%
Preferred Stock	6.00	8.76	0.53
Common Equity	46.75	12.30	5.75
Total	100.00%		10.70%

* Updated October 5, 1990

FEA Recommended 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	47.25%	9.53%	4.50%
Preferred Stock	6.00	8.76	0.53
Common Equity	46.75	13.00	6.08
Total	100.00%		11.11%

B. Return on Common Equity

PG&E's request for an 85 basis point increase in its return on equity is premised on the argument that its risks in 1991 will increase in several areas. PG&E argues that interest rates have increased through 1989 and the first quarter of 1990 and are likely to continue that trend. PG&E recommends that the Commission should consider whether power purchase contracts should be considered a component of long-term debt in future proceedings to reflect the particular risks arising from prices and contract performance. PG&E cites an increase in business risks from "the momentum towards market-directed regulation" in both the electric and gas utility sectors. With reference to the gas sector in particular, PG&E cites the procurement proceeding OIR 90-02-008, the elimination of NRSA, and the method of recovery of take or pay gas costs. On the electric side, PG&E claims risk due to loss of sales to self generation. PG&E points to new technologies which make self generation increasingly feasible. PG&E also cites generation by QFs as creating resource planning risk and observes that fuel switching may contribute to loss of sales.

We considered the effects of competition and regulatory risks in Section III and need not repeat that discussion here. PG&E offered nothing to persuade us that new energy technologies or fuel switching in 1991 will be so different from 1990 that its return on equity should be increased. We note that FEA considers PG&E to be the most risky California energy utility based on market indicators which are generally available to investors. We would not, however, be persuaded to give that fact substantial weight unless it was shown how those indicators are influenced by risks attributable to the Diablo Canyon Nuclear Powerplant.

PG&E, DRA, and FEA provided the results of several runs of the financial models ranging from a low of 9.48% for PG&E's DCF range to a high of 14.59% for DRA's CAPM. Each of parties relied on comparative electric companies in order to screen the effects of

the Diablo Canyon Settlement on company specific market generated data. In general, the results show the usual pattern of lower results from the DCF model (in the range of 11-12%) and higher results for the RP and CAPM models (13-14.4%).

PG&E's DCF analysis indicates a range of 9.48% to 13.21% but PG&E discounts its comparable group analysis because some utilities in the group yielded model results which were lower than debt interest rates. PG&E prefers to rely on the higher results of its CAPM and RP models and compares these with Value Line's long term earned returns forecast for 1992-94.

We give little weight to Value Line's forecasted earned returns. The methodology used by Value Line was not presented in this proceeding and it spans a time period beyond 1991. Both PG&E's CAPM and RP models would produce lower returns on equity if October 1990 DRI forecast were used.

PG&E's existing authorized return on equity of 12.90% lies above the range indicated by the parties' DCF analysis and the midpoint of PG&E's DCF range. This value is also below the ranges indicated by the RP and CAPM analysis. The financial model analysis alone, therefore gives no indication that 12.90% would be unreasonable for 1991. Our analysis of the business, financial, and regulatory risks indicates that PG&E's risk posture will not be substantially different in 1991 than it was for 1990 when we considered those same risks in establishing the current authorized rate of return. We find no basis for increasing or decreasing PG&E's return on equity for 1991.

VIII. Southern California Edison Company

A. Background

Edison seeks an increase in authorized return on equity and overall rate of return from the 1990 level of 12.85% and 10.70%, respectively to 13.75% and 11.13% for 1991. If approved, Edison's request would result in an increase in rates of $86.3 million. The table below summarizes Edison's request in comparison with the current 1990 cost of capital and the recommendations of DRA and the FEA.

Authorized - 1990

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	9.01%	4.32%
Preferred Stock	6.00	7.75	0.47
Common Equity	46.00	12.85	5.91
Total	100.00%		10.70%

Edison Requested - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	9.03%	4.33%
Preferred Stock	6.00	7.76	0.47
Common Equity	46.00	13.75	6.33
Total	100.00%		11.13%

DRA Recommended - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	9.03%	4.33%
Preferred Stock	6.00	7.76	0.47
Common Equity	46.00	12.25	5.64
Total	100.00%		10.44%

* Updated October 5, 1990

FEA Recommended - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	9.14%	4.39%
Preferred Stock	6.00	7.74	0.46
Common Equity	46.00	12.50	5.75
Total	100.00%		10.60%

B. <u>Return on Common Equity</u>

Edison also argues that its risks are greater than those that existed when we established its 1990 return on equity. Edison claims that it is at risk for its increasing reliance on power purchase contracts with QFs and for disallowances of some power purchase costs. Edison laments that QF contracts undergo continuing review of contract administration as opposed to the once-only review of additions to utility rate base.

Edison also cites competition and bypass, nuclear generation risk, environmental and air quality risks and rising health costs as factors requiring a higher rate of return. Edison claims it is subject to financial risk from inflation and interest increases and because its debt-equity ratio is higher than that of other California utilities.

None of the risk factors Edison cites support an increase in its return on equity. We have already evaluated most of the risks Edison cites in Section III. Edison has presented no convincing argument that the other risks it faces are substantially greater than those we considered in adopting the 1990 return on equity of 12.85%.

Edison's attempt to persuade us that its higher debt-equity ratio justifies an increase falls short because it is identical to last year's capital structure. FEA points out that Edison's bond rating is the highest among the California energy utilities and asserts that Edison is the least risky utility as indicated by market measures commonly available to investors.

Edison, DRA, and FEA prepared financial model analysis which show a combined range from a low of FEA's DCF calculation of 11.0% to a high of 14.82% produced from DRA's CAPM analysis. The parties also prepared model runs using input data for a group of comparable utilities to screen the effects of diversification and merger. These model runs suggest that Edison's current return on equity is substantially higher than the DCF method would indicate,

and lower than the comparable utility risk premium and CAPM results. The specific recommendations of DRA and FEA would require a reduction in Edison's present return on equity of 60 and 35 basis points. Neither party, however, offered evidence lending to show that Edison is less risky than it was in 1990.

Edison's comparable utility model analysis consisted of its DCF (range midpoint 11.39%), its RP for a portfolio of AA utility stocks (13.42%), and its CAPM (range midpoint 14.17%) (Exhibit 2, p. 16). Both the RP and CAPM models rely on a risk premium theory and when averaged, yield a return of 13.79%. When averaged with Edison's comparable firm DCF midpoint, the result is 12.59% (13.79% + 11.39% ÷ 2 = 12.59%). DRA's comparable model average is 12.71% (13.63% + 11.80% ÷ 2 = 12.71%). These averaged results are reasonably close to Edison's current authorized return of 12.85%.

Given the parties' failure to demonstrate that Edison's overall risks have changed from last year, we conclude that there is no cause to modify Edison's authorized return on equity.

IX. Sierra Pacific Power Company

A. Background

SPPC seeks an increase in its overall rate of return from 10.34% to 10.61% and an increase in its return on common equity form 13.00% to 13.50%. If approved, SPPC's revenue requirement would increase by about $317,000. The table below summarizes the existing cost of capital for SPPC along with the recommendations of SPPC and DRA for 1991.

Authorized - 1990

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	51.06%	8.47%	4.32%
Preferred Stock	6.55	7.74	0.51
Common Equity	42.39	13.00	5.51
Total	100.00%		10.34

SPPC Requested - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	49.11%	8.49%	4.17%
Preferred Stock	7.73	7.95	0.61
Common Equity	43.16	13.50	5.83
Total	100.00%		10.61%

DRA Recommended - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	49.11%	8.49%	4.17%
Preferred Stock	7.73	7.99	0.62
Common Equity	43.16	12.30	5.31
Total	100.00%		10.10%

B. Return on Common Equity

SPPC is a very small electric utility and, as such, is not as subject to those significant business and regulatory risks which may impinge on the operations of the larger companies.

SPPC relies primarily on financial model analyses to support its request for an increase in its return on equity of 50 basis points. Both DRA and SPPC give weight to the DCF technique. Both DRA and SPPC relied on input data from comparable utilities.

SPPC criticizes DRA's cost of comparable utilities, arguing that SPPC is vastly smaller than those companies in DRA's set and has a lower bond rating than all but four. These differences result in DRA deriving a dividend yield of 8.33% to 8.37%, and an estimated growth rate of 2.0 to 2.5% in contrast to the figures offered by SPPC of 7.38% for its dividend yield and a growth rate of between 4.5 and 5.0%. SPPC's figures were derived from data on utilities which SPPC believes are more comparable.

We believe that SPPC's comparable group of utilities more accurately reflects SPPC bond rating and size than the comparable group selected by DRA. It follows that we cannot accept DRA's recommendation for a 75 basis point reduction. We note, however, that the recommended decrease in SPPC's debt ratio from 51.06% to 49.11% may well reduce SPPC's financial risk as perceived by investors. We also believe that SPPC's DCF analysis, even if superior to DRA's, is not sufficient alone to warrant an increase in the return on equity. We conclude that the present authorized rate of return on equity, having been found reasonable for 1990 is also reasonable for 1991 in that no evidence has been presented which is sufficient to warrant an increase in the adopted return on equity.

SPPC also requests that we modify the DCF Model and the Risk Premium Model to cover the costs of stock issuance and to avoid dilution of existing shares. A similar request was put forth by SPPC in last year's cost of capital proceeding. We rejected

that request stating that there may be a theoretical basis for it, but that there was not a substantial basis in the record of that case to grant the request (D.89-11-068, mimeo. p. 79.) The same is true this year and once again we will reject the requested adjustment. We note that SPPC's proposed 8% adjustment would require an increase in return on equity of about 100 basis points. We will not consider such an increase until or unless are presented with an adequate record. The parties to future cost of capital cases are at liberty to propose the development of such a record either in the workshop format or by briefing in a future cost of capital proceeding.

X. Pacific Power and Light Company

A. Background

This is the first cost of capital case in which PP&L has participated since 1986. PP&L filed its application in this proceeding for the purpose of updating its cost of capital but will not seek to have the results incorporated in its rates.

DRA and PP&L have entered into a settlement agreement in PP&L's pending GRC (A.90-01-055; Exhibit 27). By the terms of that agreement, PP&L will reduce rates by $2 million and will forego an attrition filing in 1992. In D.90-03-078, we eliminated the Electric Revenue Adjustment Mechanism for PP&L, and pursuant to the GRC settlement, PP&L will refund a portion of the over collection in that account during 1992 and 1993, and fund its attrition from the remaining portion of that account. The table below shows PP&L's request in comparison with the current authorized cost of capital and the recommendation of DRA.

Authorized - 1986

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	53.00%	8.55%	4.53%
Preferred Stock	8.00	8.35	0.67
Common Equity	39.00	13.90	5.42
Total	100.00%		10.62

PP&L Requested - 1991 *

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	8.92%	4.28%
Preferred Stock	6.00	7.63	0.46
Common Equity	46.00	13.20-13.70	6.07- 6.30
Total	100.00%		10.81-11.04%

* Updated October 5, 1990

DRA Recommended - 1991

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	8.92%	4.28%
Preferred Stock	6.00	7.63	0.46
Common Equity	46.00	12.25	5.64
Total	100.00%		10.38%

B. Return on Common Equity

The only contested issue in PP&L's 1991 cost of capital application is the appropriate return on equity. PP&L seeks a decrease from the level last established in 1986 at 13.90% to a point within the range of 13.20% to 13.70%.

PP&L argues that its requested return on equity is justified by its investment riskiness. PP&L has a bond rating of A and does not make use of any balancing account in either its sales or fuel cost forecasts.

PP&L also supports its request by the use of the various financial models. PP&L employs financial data from comparable utilities in order to reflect the fact that PP&L is owned by Pacificorp and that PP&L stock is not publicly traded. Only 57% of Pacificorp's revenues are derived from electric utility operations.

For its DCF analysis, PP&L chose a set of seven comparable utilities screened for similarity to PP&L as a stand alone electric utility. The average result for PP&L's group was 13.2%. (Exhibit 11, page 22.) PP&L's Risk Premium analysis yielded a result of 14.9%, which PP&L suggests is too high. PP&L's CAPM resulted in a suggested return on equity of 13.2%.

DRA performed a similar analysis and produced a DCF range of 11.53 to 12.07%, a RP result of 12.42 to 13.62 and a CAPM result of 13.86 to 14.59. PP&L vigorously criticizes DRA's choice of "comparable" utilities for its DCF model because it does not include an adjustment factor for less than AA bond rated utilities, and because it includes model results that are below current bond yields. PP&L also attacks DRA's failure to adjust for bond ratings below "AA" in its RP analysis.

Whatever the shortcomings of DRA's financial model analysis, DRA does not appear to have relied primarily, or even substantially on its Risk Premium and CAPM analysis in developing its recommended 12.25 return on equity. While PP&L's set of comparable utilities may be somewhat more representative of PP&L

than DRA's set this advantage is lessened by the fact that DRA considered 20 comparable companies while PP&L selected only 7. PP&L uses the group average DCF result and its CAPM to establish the low end of recommended return on equity of 13.20 to 13.70. In evaluating PP&L's model evidence we observe that the average DCF result of PP&L's small set of comparable utilities is influenced by the inclusion of the FPL Group DCF result of 17.63% and that of Carolina Light and Power at 9.13%. Both were also included in DRA's comparable group but these high and low values tend to skew PP&L's average of seven more than they skew DRA's average of twenty. Based on the data presented in PP&L's Exhibit 11, Table 5, if the highest and lowest DCF results are eliminated , the DCF average for the group would be 13.13% with a range of only 4.44%. We also observe that PP&L CAPM result would be much lower if the adjusted October DRI forecast AA utility bond interest rate of 10.43% were used instead of the adjusted April forecast of 10.88%.

Taking into account the parties' financial model analysis and the investment riskiness of PP&L we conclude that PP&L's 1991 return on equity should be 13.00. This value is consistent with those we adopt for the other energy utilities.

XI. Proposed Decision

The proposed decision of the ALJ was filed with the Commission and served on the parties on October 17, 1990 in accord with Public Utilities (PU) Code § 311(d). Comments on the proposed decision were filed by DRA, PG&E, SDG&E, SoCalGas, and Edison in accord with Article 19 of the Commission's Rules on November 6, 1990. Reply comments were received only from SoCalGas and PP&L. We have carefully considered the ALJ's proposed decision and the comments of the parties and have modified the proposed decision where appropriate.

Findings of Fact

1. This is the second cost of capital proceeding under D.89-01-040 which modified the General Rate Case Plan and established a schedule for subsequent cost of Capital Proceedings.

2. D.89-11-068 directed CACD to convene a workshop of the parties to review the role of interest rate forecasts and to establish a consistent method of incorporating actual and forecasted interest rates in cost of capital proceedings.

3. On April 14, 1990, CACD convened the interest rate workshop. The parties agreed to use the October DRI control AA utility bond rating adjusted for each specific utility's bond rating to determine the costs of debt and preferred stock. The parties agreed on a method for adjusting specific bond ratings. The parties also agreed to use DRI forecasts in at least one scenario when models requiring an interest rate forecast are used.

4. All parties, except the City of Los Angeles, concur that the cost of long-term debt should be updated to reflect DRI's October 1990 control forecast for AA utility bonds.

5. The capital structures as proposed by each of the applicants in this proceeding are the same as or differ only slightly from those adopted for 1990.

6. The financial model analyses prepared by the parties produced results which range from a low of 9.48% to a high of 15.57%. No particular model result will support an increase or decrease in returns on equity for 1991.

7. The DCF, RP, and CAPM models cannot be relied upon exclusively to develop a particular return on equity, but are useful in developing a range of reasonable values.

8. Financial models cannot reflect the interests of ratepayers in paying rates that are not in excess of the lowest return that will furnish adequate capital to a utility.

9. The DRI control forecast for AA utility bonds for 1991 was 10.63% in April 1990 and 10.18% in October 1990.

10. The October 1990 DRI bond forecast 1991 is 154 basis points higher than the forecast of November 1989 of 8.64% for 1990.

11. Actual AA utility bond rates have decreased from over 11% in late 1987 to 9.38% in November 1989. The actual rate in August 1990 was approximately 10.3%.

12. The most probable economic forecast for the overall economy in 1991 is one that envisions a continuation of the conditions which existed in 1990 with only a slight increase in the cost of debt.

13. Business risks are risks which stem from competition. These risks have not substantially increased over the levels at which they existed in 1990.

14. The Commission's decision in D.90-02-008 did not increase competitive risks substantially.

15. The elimination of the Negotiated Rate Adjustment Account in April 1990 was considered in the 1990 cost of capital proceeding. The full elimination of NRSA for 1991 does not warrant an increase in returns on equity.

16. The gas utilities have developed strategies and tactics to reduce the risks of competition arising from the restructuring of the gas industry.

17. Regulatory risks include uncertainties induced by large scale changes in an established regulatory program and regulatory disallowances. There are no regulatory risks to which the energy utilities are subject which will require an increase or decrease in returns on equity for 1991.

18. Regulatory disallowances of imprudent expenditures or additions to utility plant do not justify increases in the return on equity.

19. The suspension of the AER for all electric utilities on August 8, 1990 tends to reduce regulatory risk in 1991.

20. The invasion of Kuwait by Iraq is not similar to oil supply interruptions in the 1970s and 1980s, and does not warrant an increase in the rate of return for energy utilities.

21. Take-or-pay gas costs resulting from our decisions in the ACAP proceedings for SoCalGas, SDG&E, and PG&E do not materially increase regulatory risk sufficient to warrant an increase in the return's on equity for SoCalGas and SDG&E.

22. Diversified utilities separate non-utility operations from utility costs of capital by a variety of methods including: maintaining separate capital structures, issuing non-utility debt which is non-recourse to utility assets, and the use of comparable utility financial data in their financial model analysis.

23. Our evaluation of the parties financial model analysis for PP&L indicates that a return on equity of 13.00% is reasonable and is consistent with PP&L's bond rating, overall size, and investment riskiness.

24. PP&L does not request any change in the revenue requirement for 1991 as a result of this proceeding.

Conclusions of Law

1. Southwest's proposed 1991 capital structure should be adopted.

2. Southwest should be authorized a 10.75% cost of long-term debt and a 9.57% cost of preferred stock for 1991.

3. A 13.05% return on common equity, which results in an overall 11.73% return on rate base, should be adopted as just and reasonable for Southwest in 1991, based upon all of the evidence considered in this proceeding.

4. PG&E's proposed 1991 capital structure should be adopted.

5. PG&E should be authorized a 9.35% cost of long-term debt and a 8.76% cost of preferred stock for 1991.

6. A 12.90% return on common equity, which results in an overall 10.98% return on rate base, should be adopted as just and

reasonable for PG&E in 1991, based upon all of the evidence considered in this proceeding.

7. SoCalGas' proposed 1991 capital structure should be adopted.

8. SoCalGas should be authorized a 9.58% cost of long-term debt and a 5.99% cost of preferred stock for 1991.

9. A 13.00% return on common equity, which results in an overall 10.79% return on rate base, should be adopted as just and reasonable for SoCalGas in 1990, based upon all of the evidence considered in this proceeding.

10. SPPC's proposed 1991 capital structure should be adopted.

11. SPPC should be authorized a 8.49% cost of long-term debt and a 7.95% cost of preferred stock for 1991.

12. A 13.00% return on common equity, which results in an overall 10.39% return on rate base, should be adopted as just and reasonable for SPPC in 1991, based upon all of the evidence considered in this proceeding.

13. SDG&E's proposed capital structure should be adopted for 1991.

14. SDG&E should be authorized a 9.20% cost of long-term debt and a 7.17% cost of preferred stock for 1991.

15. A 12.90% return on common equity, which results in an overall 10.91% return on rate base, should be adopted as just and reasonable for SDG&E in 1991, based upon all of the evidence considered in this proceeding.

16. Edison's proposed 1991 capital structure should be adopted.

17. Edison should be authorized a 9.03% cost of long-term debt and a 7.76% cost of preferred stock for 1991.

18. A 12.85% return on common equity, which results in an overall 10.71% return on rate base, should be adopted as just and reasonable for Edison in 1991, based upon all of the evidence considered in this proceeding.

19. PP&L's proposed 1991 Capital Structure should be adopted.

20. PP&L should be authorized an 8.92% cost of long-term debt and 7.63% cost of preferred stock for 1991.

21. A 13.00% return on common equity, which results in an overall 10.71% return on rate base, should be adopted as just and reasonable for PP&L, based on all of the evidence considered in this proceeding.

O R D E R

IT IS ORDERED that:

1. Southwest Gas Company's (Southwest) adopted cost of capital for its 1991 attrition year is as follows:

Southwest's Adopted 1991 Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	50.00%	10.75%	5.38%
Preferred Stock	5.00	9.57	0.48
Common Equity	45.00	13.05	5.87
Total	100.00%		11.73%

2. Southwest's adopted 1991 rate of return shown in Ordering Paragraph 1 shall be used in conjunction with its 1991 attrition year advice letter filing for the purpose of calculating revised rates for the 1991 attrition year.

3. Pacific Gas & Electric Company's (PG&E) adopted cost of capital for its 1991 attrition year is as follows:

PG&E's Adopted Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	47.25%	9.35%	4.42%
Preferred Stock	6.00	8.76	0.53
Common Equity	46.75	12.90	6.03
Total	100.00%		10.98%

4. PG&E's adopted 1991 attrition year rate of return, as shown in Ordering Paragraph 3, shall be used in conjunction with its pending 1991 attrition year advice letter filing for the purpose of calculating revised rates for the 1991 attrition year.

5. Southern California Gas Company (SoCalGas) adopted cost of capital for its 1991 attrition year is as follows:

SoCalGas' Adopted Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.40%	9.58%	4.25%
Preferred Stock	9.80	5.99	0.59
Common Equity	45.80	13.00	5.95
Total	100.00%		10.79%

6. SoCalGas' adopted 1991 rate of return, as shown in Ordering Paragraph 5, shall be used in conjunction with its 1991 attrition year advice letter filing and the most recently adopted cost allocation and rate design principles for the purpose of calculating revised rates for the 1991 attrition year.

7. San Diego Gas & Electric Company's (SDG&E) adopted cost of capital for its 1991 test year is as follows:

SDG&E's Adopted Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	44.60%	9.20%	4.10%
Preferred Stock	5.90	7.17	0.42
Common Equity	49.50	12.90	6.39
Total	100.00%		10.91%

8. SDG&E's adopted 1991 attrition year rate of return, as shown in Ordering Paragraph 7, shall be used in conjunction with its 1991 attrition year advice letter filing and the most recently adopted cost allocation and rate design principles for the purpose of calculating revised rates for the 1991 attrition year.

9. Sierra Pacific Power Company's (SPPC) adopted cost of capital for its 1991 attrition year is as follows:

SPPC's Adopted 1991 Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	49.11%	8.49%	4.17%
Preferred Stock	7.73	7.95	0.61
Common Equity	43.16	13.00	5.61
Total	100.00%		10.39%

10. SPPC's attrition year rate of return, as shown in Ordering Paragraph 9, shall be used in conjunction with its 1991 attrition year advice letter filing and the most recently adopted cost allocation and rate design principles for the purpose of calculating revised rates for the 1991 attrition year.

11. Southern California Edison Company's (Edison) adopted cost of capital for its 1991 attrition year is as follows:

Edison's Adopted 1991 Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	9.03%	4.33%
Preferred Stock	6.00	7.76	0.47
Common Equity	46.00	12.85	5.91
Total	100.00%		10.71%

12. Edison's adopted 1991 attrition year rate of return, as shown in Ordering Paragraph 11, shall be used in conjunction with its 1991 modified attrition year filing, as authorized in A.89-10-001 and A.90-03-048. Revised rates for the 1991 attrition year shall be calculated in connection with Edison's Energy Cost Adjustment Clause, A.90-06-001.

13. Edison's request for waiver of Rules of Practice and Procedure 23(b) and (c) is granted. Edison shall file for the record in its 1991 ECAC proceeding a separate and disaggregated statement showing the effect of this proceeding by appropriate rate classification.

14. Pacific Power and Light Company's (PP&L) adopted cost of capital for its 1991 attrition year is as follows:

PP&L's Adopted 1991 Cost of Capital

Component	Capital Ratio (a)	Cost Factor (b)	Weighted Cost (c)
Long-Term Debt	48.00%	8.92%	4.28%
Preferred Stock	6.00	7.63	0.46
Common Equity	46.00	13.00	5.98
Total	100.00%		10.72%

15. PP&L's adopted 1991 cost of capital, as shown in Ordering Paragraph 14, shall only be used in accordance with the Commission's decision in PP&L's pending General Rate Case A.90-01-055. In the event that the final decision in A.90-01-055 does not adopt Exhibit 27 in that proceeding, PP&L shall no later than January 31, 1992 file a separate application to revise its cost of capital for 1991 and shall comply with the Commission's procedures for public notice as provided in its Rules of Practice and Procedure and with the requirements of Public Utilities Code § 454.

16. The utilities shall incorporate the most recently adopted cost allocation and rate design principles in their filings implementing the adopted rates of return in rates.

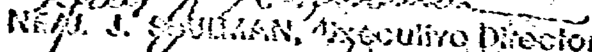
This order is effective today.

Dated November 21, 1990, at San Francisco, California.

G. MITCHELL WILK
President
STANLEY W. HULETT
JOHN B. OHANIAN
PATRICIA M. ECKERT
Commissioners

Commissioner Frederick R. Duda, being necessarily absent, did not participate.

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



NEAL J. SHULMAN, Executive Director

Appendix A
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List of Appearances

Applicants: Robert M. Johnson, Attorney at Law, for Southwest Gas Corporation; Kermit R. Kubitz and Roger J. Peters, Attorneys at Law, for Pacific Gas & Electric Company; Steven D. Patrick and David B. Follett, Attorneys at Law, for Southern California Gas Company; David R. Clark, Attorney at Law, for San Diego Gas & Electric Company; David M. Norris, Attorney at Law, for Sierra Pacific Power Company; Frank J. Cooley, Attorney at Law, for Southern California Edison Company; Messrs. Stoel, Ives, Boley, Jones & Gray, by James C. Paine, Attorney at Law, and William J. Stow, for Pacific Power & Light Company.

Interested Parties: C. Hayden Ames, Attorney at Law, for Chickering & Gregory; Norman Furuta, Attorney at Law, and John B. Legler, by Jean Wilcox, for Federal Executive Agencies; Messrs. Orrick, Herrington & Sutcliffe, by Robert Gloistein, Attorney at Law, by Jerome Fitch, for Contel of California, Inc.; Preston Mike, Attorney at Law, and Manuel Kroman, for the City of Los Angeles; Donald H. Maynor, Attorney at Law, by Amy J. Kinney, for Northern California Power Agency; William Shaffran and William Pettingill, Attorneys at Law, for the City of San Diego; Bartle Wells Associates, by Reed V. Schmidt, for California City-County Street Light Association; Joel R. Singer, Attorney at Law, for Toward Utility Rate Normalization; Randolph L. Wu, Richard O. Baish, and Phillip D. Endom, Attorneys at Law, for El Paso Natural Gas Company.

Division of Ratepayer Advocates: Janice Grau, Attorney at Law, and Edwin Quan.

(End of Appendix A)

1991 ENERGY FINANCIAL ATTRITION PROCEEDING
SUMMARY OF ROE FILINGS

Company	DCF	Risk Premium	CAPM	Value Line Exp	Average
ELECTRICS					
PG&E	11.35	13.32	14.40	13.66	13.21
PP&L	13.20	13.70	13.23		13.38
Sierra	12.31	12.50			12.41
SDG&E	12.85	14.55	14.10		13.83
Edison	11.70	14.13	14.13		13.32
DRA	10.91	13.02	14.11		12.68
Feds	11.73	13.49			12.61
Average	12.01	13.53	13.86	13.66	13.04
GAS					
SoCal Gas	11.97	14.50	14.56		13.68
SoWest Gas	11.56	14.53	14.15		13.41
City of LA	10.67				10.67
DRA	11.96	13.62	14.68		13.42
Feds	12.48	12.95			12.72
Average	11.73	13.90	14.46		12.78
w/o CLA	11.99	13.90	14.46		13.31

APPENDIX B
Page 2

PACIFIC GAS & ELECTRIC

DCF Model (9.48 - 13.21)		11.35
Risk Premium		13.32
CAPM		14.40
Expected per Value Line		13.66
	Avg	13.21
REQUEST		13.75
FED. EXEC. AGENCIES RECOMM. (12.5 - 13.25)		13.00
DRA RECOMMENDATION		12.30
1990 AUTHORIZED		12.90

PACIFIC POWER AND LIGHT

DCF Model		13.20
Risk Premium		13.70
CAPM		13.23
	Avg	13.38
REQUEST (13.2-13.7)		13.45
DRA RECOMMENDATION		12.25
1986 AUTHORIZED		13.90

SIERRA PACIFIC POWER

DCF Model (12.05 - 12.56)		12.31
Risk Premium		12.50
	Avg	12.40
REQUEST		13.50
DRA RECOMMENDATION		12.30
1990 AUTHORIZED		13.00

SAN DIEGO GAS & ELECTRIC

DCF Model (12.3 - 13.4)		12.85
Risk Premium (14.2 - 14.9)		14.55
CAPM (13.8 - 14.4)		14.10
	Avg	13.83
REQUEST		13.75
FED. EXEC. AGENCIES RECOMM. (12.5 - 13.1)		12.75
DRA RECOMMENDATION		12.30
1990 AUTHORIZED		12.90

SOUTHERN CALIFORNIA EDISON

Company Specific		
DCF Model (11.28 - 12.76)		12.02
Risk Premium (13.42 - 14.84)		14.13
CAPM (13.47 - 14.72)		14.10
Comparable Firms		
DCF Model (11.36 - 11.41)		11.39
CAPM (14.11 - 14.23)		14.17
	Avg	13.16
REQUEST		13.75
FED. EXEC. AGENCIES RECOMM. (12.25 - 12.75)		12.50
DRA RECOMMENDATION		12.25
1990 AUTHORIZED		12.85

SOUTHERN CALIFORNIA GAS

DCF Model #1 (13.47 - 13.52)		13.50
DCF Model #2		10.44
Risk Premium #1 (15.17 - 15.40)		15.29
Risk Premium #2 (13.83 - 13.61)		13.72
CAPM		14.56
	Avg	13.50
REQUEST		14.00
FED. EXEC. AGENCIES RECOMM. (12.5 - 13.1)		13.00
CITY OF L.A. RECOMMENDATION		12.50
DRA RECOMMENDATION		12.35
1990 AUTHORIZED		13.00

SOUTHWEST GAS CORP.

DCF Model		11.56
Risk Premium		14.53
CAPM		14.15
	Avg	13.41
REQUEST		13.25
DRA RECOMMENDATION		12.35
1990 AUTHORIZED		13.05

CITY OF LOS ANGELES

DCF Model (10.29 - 11.05)		10.67

FEDERAL EXECUTIVE AGENCIES

SoCalGas/Pacific Enterprises		
DCF Model (12.0 - 13.1)		12.55
Gas Comparables		
DCF Model #1 (11.6 - 12.1)		11.85
DCF Model #2 (13.0 - 13.1)		13.05
Risk Premium #1 (13.3 - 13.8)		13.55
Risk Premium #2 (12.2 - 12.5)		12.35
	Avg	12.67
Pacific Gas & Electric		
DCF Model (12.0 - 13.1)		12.55
Electric Comparables		
DCF Model #1 (11.1 - 11.2)		11.15
DCF Model #2 (11.5 - 11.6)		11.55
DCF Model #3 (11.7 - 11.8)		11.75
Risk Premium #1 (14.0 - 14.3)		14.15
Risk Premium #2 (13.3 - 13.7)		13.50
	Avg	12.44
SoCal Edison		
DCF Model (11.0 - 12.1)		11.55
Electric Comparables		
DCF Model #1		11.40
DCF Model #2		11.50
DCF Model #3 (12.4 - 12.41)		12.41
Risk Premium #1 (14.1 - 14.70)		14.40
Risk Premium #2 (13.0 - 13.5)		13.25
	Avg	12.42
San Diego Gas & Electric		
DCF Model (9.7 - 10.9)		10.30
Electric Comparables		
DCF Model #1 (11.69 - 11.74)		11.72
DCF Model #2 (11.45 - 11.50)		11.48
DCF Model #3 (13.44 - 13.49)		13.47
Risk Premium #1 (12.6 - 13.5)		13.05
Risk Premium #2		12.70
	Avg	12.12

DIVISION OF RATEPAYER ADVOCATES

Electric Company Comparables		
DCF Model (11.53 - 12.07)		11.80
Risk Premium (12.42 - 13.62)		13.02
CAPM (13.86 - 14.59)		14.23
	Avg	13.02
SDG&E		
DCF Model (9.62 - 10.15)		9.89
CAPM (13.71 - 14.44)		14.08
	Avg	11.98
Sierra		
DCF Model (10.33 - 10.87)		10.60
CAPM (13.34 - 14.07)		13.71
	Avg	12.15
Edison		
DCF Model (11.06 - 11.59)		11.33
CAPM (14.09 - 14.82)		14.46
	Avg	12.89
PP&L		
DCF Model (10.68 - 11.21)		10.95
CAPM (13.71 - 14.44)		14.08
	Avg	12.51
Gas Company Comparables		
DCF Model (11.51 - 12.05)		11.78
Risk Premium (12.54 - 14.69)		13.62
CAPM (13.64 - 14.37)		14.01
	Avg	13.13
SoWest Gas		
DCF Model (12.31 - 12.85)		12.58
CAPM (14.46 - 15.19)		14.83
	Avg	13.70
SoCal Gas		
DCF Model (11.27 - 11.81)		11.54
CAPM (14.84 - 15.57)		15.21
	Avg	13.37

(END OF APPENDIX B)