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Decision 95-07-055 July 24, 1995

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation on the Commission's own motion into present and alternative methods of financing nuclear facility decommissioning costs.	OII 86 (Petitions for Modification filed May 18 (PG&B), May 21 (Edison), and August 18 (SDG&E), all 1993)

ORIGINAL

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INDEX

OPINION

Pacific Gas and Electric Company (PG&E), Southern California Edison Company (Edison), and San Diego Gas & Electric Company (SDG&E) seek to modify Decision (D.) 87-05-062 (Decision) relating to the establishment and operation of nuclear decommissioning trust funds. The Division of Ratepayer Advocates (DRA), which originally protested the petitions, obtained modifications to the utilities' original plan and now supports the modified proposal. There are no other protests.

Background

On October 24, 1992, the National Energy Policy Act of 1992 was signed into law. Among other things, this legislation modified certain rules applicable to qualified nuclear decommissioning trust funds. Specifically, this legislation reduced the Federal tax rate applicable to such funds from the current rate of 34% to 22% in 1994 and to 20% in 1996. In addition the legislation eliminated the so-called "Black Lung" investment restrictions applicable to qualified nuclear decommissioning trust funds, effective January 1, 1993. Prior to this date the funds of the qualified trusts were permitted to be invested only in municipal bonds, treasury securities, or time or demand deposits in a bank or insured credit union. (See I.R.C. Sec. 501(c)(21)(ii) as made applicable to the qualified trust by I.R.C. § 468A(e)(4)(C).)

The PG&E, Edison, and SDG&E qualified trust agreements, executed pursuant to the Decision and implementing Resolution E-3048, cross-reference the statutory provisions (now repealed) which limited the investment options available to the funds. In addition, in approving those agreements for the California utilities the Commission noted the limited investment options available to the funds. (See D.87-03-062, 24 CPUC 2d 302, 319, Conclusion of Law 5.) Nonqualified trust funds are permitted to invest 60% of their funds in equity securities. With the repeal of the investment restrictions embodied in the tax law, petitioners believe that it is appropriate that the Commission modify the Decision and decide what restrictions, if any, to apply to these funds.

Finally, petitioners assert that the requirement included in the Decision that the Commission approve all investment manager agreements has become cumbersome. They request the Commission to facilitate trust administration by allowing their Nuclear Facilities Decommissioning Master Trust Committees (Committee) to execute investment manager agreements without Commission approval.

In D.93-10-076 (Interim Opinion) we modified D.87-05-062 to authorize petitioners to

> "invest (a) up to 30% of the fair market value of their qualified nuclear decommissioning trust funds in publicly traded U.S. and non-U.S. equity securities; and (b) up to 100% of the fair market value of the trust funds in investment grade fixed-income securities (rated BBB or higher by Standard and Poors, or equivalent ratings by other rating agencies) including government, agency, municipal, corporate, mortgage-backed, asset-backed, non-dollar, and cash equivalent securities. This authorization does not include derivative securities such as financial futures and options." (D.93-10-076, mimeo. p. 8.)

Subsequently, in D.94-11-028, we further modified D.87-05-062 and D.93-10-076 to authorize petitioners

> "to invest (a) up to 50% of the fair market value of their qualified nuclear decommissioning trust funds in publicly traded U.S. and non-U.S. equity securities, limited as set forth in D.93-10-076 and further limited in regard to non-U.S. equity securities to 40% of the 50%.
>
> "This authorization does not include derivative securities of any kind." (D.94-11-028, mimeo. pp. 2-3.)

Public hearing on the balance of petitioners' requests was held on October 6, 1994. At that time the petitioners, supported by DRA, filed a Joint Recommendation (Exhibit 13) settling all issues raised by them. The Joint Recommendation was subject to cross-examination by the presiding Commissioner and the presiding administrative law judge. The matter was submitted upon the filing of a Joint Brief by petitioners and DRA.

<u>The Joint Recommendation</u>

- The parties recommend that the maximum allowable equity percentage should be 70%, with no restriction on the amount of U.S. or international equities within the allowable range. The utilities should be required to state and identify in their respective annual reports to the Commission the separate percentage and dollar amount invested in U.S. and international equities.

- The parties recommend that up to 100% of the fair market values of the trusts be authorized to be invested in investment grade fixed income securities (rated BBB- or higher by Standard & Poor's or an equivalent rating by other rating agencies) including, but not limited to, government, agency, municipal, corporate, mortgage-backed, asset-backed, nondollar, and cash equivalent securities.

- The parties recommend that the utilities should not be authorized, at this time, to invest trust funds in alternative investments, including noninvestment grade fixed income securities, real estate, venture capital, and private equity and debt placements. This agreement does not preclude utilities from seeking approval of these investments in the future.

- The parties recommend that the following derivatives applications be authorized for use in the trusts:

1. Use of currency forward, futures and options contracts to hedge the exposure of the portfolio to foreign currency movements.

2. Use of exchange-traded equity futures and options, both on indexes and individual securities, for purposes of managing asset allocation, cash flows, tax exposure, and index fund tracking error.

3. Use of exchange traded fixed-income futures and options for purposes of managing the interest rate risk exposure of a fixed-income portfolio.

The parties also recommend that with the exception of currency forward contracts, the use of swaps and other over-the-counter derivatives should be prohibited. Moreover, leveraged and speculative uses are prohibited for all derivative investments. Use of derivatives to leverage the portfolio, that is, to increase the equity, fixed income, or currency exposure in excess of 100% of the underlying cash investments, including uncovered option positions, should be prohibited. Furthermore, the total exposure to derivatives should not exceed 25% of the trust market value.

o The parties recommend that greater than 50% of equity investments should be managed passively. Semi-passive equity strategies, which are not fully active or passive, may be considered one-half passive in determining the 50% limit. However, no more than 20% of the trusts' semi-passive equity investments may be used to determine whether the passive investment minimum percentage has been met. Once the 50% passive management requirement is fulfilled, the remaining equity portfolio may be invested in active or semi-passive management styles. In their annual reports to the Commission, the utilities should categorize equity investments as passive, active, or semi-passive. Fixed-income management should be considered separately from equities with no passive requirement.

- o The parties recommend that investment management contracts should not be placed out to bid and that the current requirement that the Commission approve and sign investment management contracts through the Commission's application process should be changed. Contracts, instead, should be filed for Commission approval through the Commission's advice letter process within ten days of a contract's execution. Under standard General Order 96-A advice letter procedure, the contract becomes effective only after the adoption of a resolution by the Commission.

- o Engineering cost studies would continue to be performed every three years through the current General Rate Case (GRC) process, or in lieu of GRC's will be performed as may be required by alternative performance-based regulatory mechanisms.

- o The parties recommend that investment manager agreements should contain, at a minimum, a declining fee block schedule with an incremental cap of:

  10 basis points for U.S. fixed-income managers,

  20 basis points for domestic equity managers,

  30 basis points for international managers of either bonds or equity,

  at a reasonable portfolio level. The parties also recommend that the Executive Director be authorized to sign amendments to the Trust Agreements effecting this change in fee caps.

- o The parties agree that all recommendations agreed to here represent limits to the flexibility allowed the Trust Committees for managing the trusts' assets, and do not replace or supersede the fiduciary responsibilities of the Trust Committees to manage, plan, and act responsibly within these limits.

Equity Investment

The most significant issue in this proceeding relates to the percentage of the fair market value of the decommissioning funds which may be invested in equities. The utilities and DRA jointly support the recommendation to allow up to 70% of the fund assets to be invested in equities.

Support for allowing a 70% equity investment allocation was based primarily on two factors:

1. Historical data shows that equity securities can be expected to outperform fixed income securities by a wide margin, particularly over a long time horizon.

2. Over a time frame of ten years or longer, placing a majority of the funds in equities actually reduces ratepayer risk, in the sense of being more likely to avoid a high-cost outcome to the ratepayers. In this respect, the risk of decommissioning escalation rates exceeding inflation is better managed by an investment strategy that includes a significant allocation to equities.

The percentage of pension funds invested in equities provides further support for the percentage proposed in the Joint Recommendation. Specifically, large pension funds have an average equity allocation of approximately 54%. For the trusts, there are special factors that support a somewhat higher allocation than the average pension fund, including the fact that decommissioning funds are subject to taxation and have no current payout requirements.

A. Historical Data

The utilities presented extensive testimony on the historical performance of equity and fixed-income securities. For the period from 1900 through 1993, the average return for stocks was 11.3% and the average return for bonds was 5.4%. As was pointed out by a witness, such return differentials are significant when the effect of compounding is considered:

> "For example, $100 invested in assets with an 11.3% return for 10 years will have an ending value of $292. The same $100 invested in assets earning a 5.3% return will be worth $168. The difference in ending wealth is $124; equities earn 75% more. Lengthen the time horizon to 20 years, assume the same returns, and the difference in ending wealth grows to $569 ($281 for the 5.3% return versus $850 for the 11.3% return), with equities earning 202% more."

The witness testified that stocks have outperformed bonds in 58 out of the past 93 years. Over ten-year periods this advantage for stocks becomes even more pronounced. Stocks have outperformed bonds in 71 out of 84 periods, or 85% of the time, over rolling ten-year time horizons. DRA's witness concurred.

The impact of the investment planning horizon on portfolio performance was also addressed by the witnesses. It was generally observed that equity returns are more volatile than the returns of fixed-income investments. However, this volatility decreases as the time horizon increases. In fact, as the time horizon increases to 20 years, the higher expected return of stocks effectively offsets the somewhat higher volatility.

DRA's witness agreed that performance could be substantially improved with equity investments. He noted that over a long time frame the volatility of a 65% equity allocation was roughly equivalent to the volatility of a portfolio entirely invested in government bonds. He concluded that higher returns can be achieved through investment in common stocks with no increase in risk compared to a portfolio entirely invested in government bonds.

B. Inflation Protection

The parties emphasized that a significant financial risk associated with the trusts is the risk of inflation and escalation rates exceeding inflation on the ultimate cost of decommissioning. To defray this impact, higher equity percentages in the trusts are essential, particularly when the estimated time for decommissioning is many years in the future. A witness testified that escalation rates for decommissioning costs are estimated to be roughly the cost of inflation plus 3%. Bonds have met or exceeded this target in only 24% of rolling 20-year historical time periods. However, stocks have equaled or exceeded this target 76% of the time.

The inability of bonds to hedge inflation adequately significantly increases the risk for ratepayers associated with a heavily weighted fixed-income portfolio. Inflation is one of the significant risks that could add to the cost of decommissioning and to ratepayer costs. However, debt historically has performed very poorly in a rising inflation environment. Thus, there is real danger of a significant debt portfolio having exactly the opposite reaction to rising inflation than you want.

An example of the problem with using debt securities to fund future decommissioning costs was illustrated by testimony concerning the possibility of investing in long-term zero coupon treasury securities. While such an investment may reduce risk where the liability being funded is fixed, such a strategy could backfire in the context of decommissioning cost funding. If decommissioning costs rapidly escalate due to inflation but the yield of the fund had been previously fixed at a lower level through investments in long-term bonds, the future payout from the bonds would be inadequate to cover the inflated cost of decommissioning. In such a case, the significant shortfall would have to be funded by ratepayers in the future to make up the difference. Further, long-term bond prices can be quite volatile. If they had to be sold in an adverse market environment, the value of the funds would be substantially eroded.

C. <u>Comparison With Other Funds</u>

A witness estimated that her firm's average pension fund client had approximately 60% of its portfolio invested in equities. She further testified that the average allocation of the 2,000 largest pension funds was 53.7%. In the case of California Public Employees' Retirement System (Calpers), approximately 55% of that portfolio is invested in equities. Although pension funds may have a somewhat lower equity target on average than the 70% recommendation, there are differences between pension and decommissioning funds that, in her opinion, support the higher equity allocation.

D. <u>Adverse Short-Term Results</u>

DRA addressed the fact of occasional poor short-term performance by equities. Its witness asserts that trust funds should be invested based on the ultimate planning horizon not on the fluctuations which may occur over the short term. DRA would emphasize the objective of the funds, which is to provide for decommissioning 10, 20 years, and beyond 20 years. The appearance problem associated with adverse short-term equity returns must be considered in the context of its impact on ratepayers and the long-term objectives of the funds. The evidence shows that equities not only should outperform fixed-income securities but also that a 70% equity allocation should result in lower risk and lower contributions from ratepayers over the reasonably expected funding period of the trusts. Any short-term fluctuation should be considered in the context of the overall objective to reduce ratepayer risk and cost over the life of the fund.

E. Investment Committees

The equity percentage established in this proceeding would provide an upward limit on the percentage of the funds which could be invested in equities. It would not dictate that such percentage actually be invested in equities. That percentage would ultimately be decided for each utility by its investment committee. Each committee is comprised of five members, three of whom have been approved by the Commission and are not affiliated with the utility. The committee members are appointed by the utility and approved by the Commission based on their ability to oversee the prudent investment of trust assets. This independent assessment by each utility committee constitutes an additional safeguard to any overall equity limitation the Commission might establish. In this respect, the testimony supports the use of a reduced equity allocation as the time for decommissioning approaches. Each committee should be afforded the flexibility to take into account the special circumstances of each fund, including the remaining period of contributions and the projected time until decommissioning.

F. Early Decommissioning

In regard to whether economic conditions could cause a premature shutdown of the plants, it was pointed out that early shutdown would not result in early decommissioning. For example, the decommissioning of Humboldt, which was shut down almost 20 years ago, is projected to begin in the year 2013. As was explained by a witness, the funds for decommissioning are provided by both contributions and earnings, both of which are necessary to provide sufficient funds for future decommissioning. Both must be computed and determined using the same assumptions in order to prevent shortfalls. There is no sound policy rationale for using one projected time for decommissioning to establish contributions and another projected time to establish investment policy.

G. <u>Conclusion</u>

We believe that no more than 50% of a qualified trust's funds should be invested in equities. We are persuaded by the historical data and the inflation protection argument that it is important for the trusts to be investors in equities, but we are not persuaded that a 70% limit is advisable. Over the years equity markets have experienced significant downward movement. Should that movement occur just prior to our triennial review of projected decommissioning expenses and projected funds to meet those expenses, we would, perforce, have to increase electric rates to cover the projected expenses. We cannot assume market recovery. To the extent that a lessened equity investment reduces anticipated volatility, we have benefited ratepayers. Under the circumstances a 50% equity cap is conservative and, in our opinion, prudent. We note that large pension funds on average have slightly more than 50% invested in equities and Calpers has about 55% invested in equities, much closer to 50% than 70%.

No issue was raised regarding the equity investment of the unqualified trusts being reduced and no adjustment will be made.

<u>International Equities</u>

In the Joint Recommendation, the parties agreed that there should be no restriction on the amount of U.S. or international equities within the allowable equity range.

In support of this range (which theoretically could result in 50% of the trust funds being invested in international equities), a witness testified that the international equity markets have expanded in size tremendously over the past few decades, as have the technology and information available to investors. For her firm's pension fund clients, the average allocation to non-U.S. equities currently is 17% of total assets, with some clients having as much as 25% to 30%. The primary reason for the investment in non-U.S. equity is diversification. She believes that because the trusts should have a greater total equity allocation than the typical pension fund, it follows that a greater percentage of total investments of such trusts should be allocated to international investments to maintain the desired level of diversification.

Besides increasing the opportunity set from which to make investments, she said that the diversification feature of international equity investments is expected to smooth out returns and reduce risk. Over the 14 years ending in 1993, the U.S. was the best performing market in only one year. Over different annualized periods of 5 years, non-U.S. markets combined significantly outperformed as well as underperformed the U.S. Her primary point is that the non-U.S. markets have different return patterns over different periods of time. And these differing return patterns can smooth out the total equity performance. For annual periods, non-U.S. stocks may outperform or underperform the U.S. market significantly, yet produce a similar return over the long term.

The studies performed for PG&E and Edison show that a significant commitment to non-U.S. equities would benefit trust performance. The Callan Associates study for PG&E recommended a target asset allocation for Diablo Canyon of 20% hedged international equities. The Frank Russell Company asset allocation study for Edison indicated that 20% international equities was optimal for portfolios that had 50% and 80% total equities.

In our second interim opinion in this docket, we limited investment in non-U.S. equity securities to 20% of the total trust fund. (D.94-11-028, OP. 11.) We are not as sanguine as the parties in regard to the unlimited benefits of international investing. We believe that an international equities limit of 20% (of the total trust fund) is preferable to an unrestricted amount.

<u>Investment Grade Fixed-Income Securities</u>

In the Interim Opinion in this proceeding, we authorized the utilities to invest:

[U]p to 100% of the fair market value of the Trust funds in investment grade fixed-income securities (rated BBB or higher by Standard &

Poor's or equivalent ratings by other rating agencies) including government, agency, municipal, corporate, mortgage-backed, asset-backed, non-dollar, and cash equivalent securities." (D.93-10-076, p. 8.)

In the Joint Recommendation, the parties agreed that proper management of the trust funds requires diversification into various asset classes. Investment grade fixed-income securities offer a relatively attractive risk/return trade-off vis-a-vis equities and offer additional flexibility as the decommissioning date approaches.

The Joint Recommendation of the parties proposes a slight modification to the language of the Interim Opinion, to clarify that "investment grade" refers to a rating of BBB- and above (not BBB), and that fixed-income investments should not be limited exclusively to those listed in D.93-10-076. Also, the parties agree that the utilities should report their fixed-income investments by category in their annual reports. The Joint Recommendation conforms to standard industry practice, where BBB- is commonly considered part of the BBB (investment grade) rating category. Accordingly, the parties recommend that the Commission adopt the following with respect to fixed-income investments:

> "Up to 100% of the fair market values of the Trusts may be invested in investment grade fixed-income securities (rated BBB- or higher by Standard & Poor's or an equivalent rating by other rating agencies) including, but not limited to, government, agency, municipal, corporate, mortgage-backed, asset-backed, non-dollar, and cash equivalent securities. The amounts and percentage invested in each of the above investment grade securities should be reported by the Utilities in their annual Trust reports to the Commission."

We will adopt the parties' recommendation with one caveat. <u>No derivative security of any kind shall be considered an investment grade fixed-income security</u>.

Financial Derivatives

The Joint Recommendation provides that use of derivatives by the trusts should be authorized for the following limited purposes:

1. Use of currency forward, futures and options contracts to hedge the exposure of the portfolio to foreign currency movements,

2. Use of exchange-traded equity futures and options both on indexes and individual securities, for purposes of managing asset allocation, cash flows, tax exposure, and index fund tracking error, and

3. Use of exchange-traded fixed-income futures and options for purposes of managing the interest rate risk exposure of a fixed-income portfolio.

The parties also agreed that:

4. Use of derivatives for speculative purposes or on a leveraged basis (including uncovered option positions) should be prohibited,

5. Derivatives should be limited to those trades on major exchanges (i.e., no swaps or over-the-counter instruments), except for currency forward contracts (entered into with financial institutions with a short-term credit rating of at least A-1 or P-1),

6. Utilities should report on their use of the three types of derivative instruments in their annual trust reports to the Commission, and derivative exposures (i.e. the underlying economic exposure of the derivative positions) should be included in the calculation of percentage limitations for equities and fixed-income securities, and

7. The total exposure to derivatives should not exceed 25% of the trust market value.

The Joint Recommendation demonstrates that participation in international markets necessarily results in exposure to fluctuations in currency values. Currency exposure can be hedged, and portfolio volatility reduced, through the use of forward contracts entered into with financial institutions, or with exchange-traded currency futures or options contracts.

At the hearing, the witness panel reviewed the purpose of currency management using forward contracts. They are commonly used on the date of a transaction to lock in the currency conversion rate for the date a transaction settles. This is recommended because currency fluctuations between the trade date and settlement date (which occurs several days later) introduce uncertainty into the total cost of the transaction. A witness testified that such administrative hedges are a part of the standard procedure for investment managers for all of his clients. By taking that capability away, you take away a tool that's part and parcel of the way that managers conduct their business overseas.

The parties point out that currency derivative instruments are also used to implement long-term or strategic hedging. As the percentage of international equity in a portfolio increases, currency volatility has a more pronounced effect on portfolio return and risk. The decision to hedge strategically depends on the level of international investment and the risk tolerance of the utilities' respective committees. The parties believe that the Commission should not limit the ability of the committees to use a long-term hedge, but should allow the committees to decide for their respective trusts.

A derivative is a financial agreement whose value is derived from the performance of some benchmark, such as interest rates, currencies, commodities, or debt instruments. Derivatives are complex hedging instruments that are used to defray the risk of changes in interest rates, stock prices, foreign exchange rates, and, in fact, almost any investment. (They may also be used for purely speculative purposes.) (See, for example, Wall Street Journal, February 1, 1995, p. 1; Wall Street Journal, October 28, 1994, p. 1; Wall Street Journal, October 28, 1993, p. 2; Business

Week, October 31, 1994, pp. 86-104.) Derivatives cannot be defined with specificity as new ones are created to take advantage of leverage and arbitrage opportunities as perceived in the financial community. But it is crucial to an understanding of derivatives to recognize that they are extremely risky, require the payment of a premium to the entity providing the hedge (which reduces overall return), and assume that the entity providing the hedge will be able to perform should the reason for the hedge materialize. And, of course, to recognize that the entity providing the hedge believes that the hedged event will not occur.

This Commission had had no experience with derivatives, nor, as far as we know, have the utilities. This is a new strategy which must be approached cautiously. We are acutely aware of the recent Orange County debacle which has been described as a "disastrous foray into Wall Street's high-rolling world of leverage and derivatives [which] came to a brutal end yesterday when the county and its investment funds filed for bankruptcy." (Wall Street Journal, December 7, 1994, p. 1.) Because of the risks involved, we believe that, with one exception, derivatives of all descriptions should be prohibited. The one exception is a hedge on foreign exchange risks between the buy or sell date of a foreign security and the settlement date. The trusts should be given the ability to lock-in their profit or loss on a foreign investment without concern for currency fluctuations between the buy or sell date and the settlement date. Long-term hedges are prohibited.

Management Style

The parties request that the utilities be allowed to manage their portfolio passively, actively, or semi-passively.

Passive management is a strategy that seeks to achieve the rate of return of a benchmark index (such as the Standard & Poor's 500, the Russell 2000, etc.) by replicating the composition of the index, but without making management decisions in an attempt to exceed the rate of return of the benchmark index. (A buy and hold strategy and a strategy which undertakes trading solely to minimize taxes are also examples of passive management.) In contrast, an active manager would construct a portfolio that was intended to outperform the index, and would actively trade to achieve intended results.)

Between the definitions of active and passive management are what the parties have termed "semi-passive" strategies that take limited positions away from a benchmark index.

> "One example includes 'tilted' portfolios that increase or decrease the dividend yield, price/earnings ratio or some other characteristic(s) relative to the index to produce better after-tax performance. Specifically, certain tilted strategies may be appropriate to optimize after-tax returns between qualified and non-qualified equity portfolios due to their different tax rates. Semi-passive strategies generally have higher fees than passive management, but lower fees than fully active management."

The parties agree that more than 50% of equity investments should be managed passively. They believe that semi-passive equity investments should be considered one-half passive and one-half active. However, to ensure that the use of full passive management does not diminish significantly, no more than 20% of the trusts' equity should consist of semi-passive equity investments for the purpose of determining whether the passive investment minimum percentage has been met. Once the 50% passive management requirement has been fulfilled, the remaining equity portfolio may be invested in active or semi-passive management styles. Fixed-income management should be considered separately from equities with no passive requirements.

The parties found that with a long-term horizon in a taxable environment, the combination of higher management fees, trading costs, and tax consequences of turnover make it difficult for active managers to outperform a passive index after-tax.

However, there are active managers that have consistently outperformed passive indexes and active strategies may be designed uniquely for qualified trusts that add value. Also, as the time horizon becomes shorter, the compounding of capital gains becomes less extensive and the tax consequences become less of a factor in the choice between active and passive management. Further, active management may be useful in reducing the accumulated equity exposure in an efficient manner as the time horizon decreases. Based on these considerations, the parties have concluded that less than 50% of the trusts should be managed actively."

We recognize that there are trade-offs involved in the passive/active management decision. The trusts' taxable status, combined with a long time horizon, tends to favor passive equity management. However, there are active management strategies which can be designed specifically for a qualified trust (i.e., with low turnover and active tax management).

Our preference is for passive management for 100% of the equity portion of the trust. History shows that few, if any, portfolio managers, exceed the Standard & Poor's 500 average over long periods of time (e.g., 10 years). And, unfortunately, those few are unrecognizable before the fact. Nevertheless, because of the unanimity of position, in this instance, we will accept the parties' recommendation that only 50% of the equity portion of the trust need be invested passively. The remainder may be invested actively, as prudence dictates. We do not believe the hybrid "semi-passive" investment strategy has merit as a distinct policy. Certainly each utility may invest all or any portion of its active portfolio in passive management, and if it wishes to call that "semi-passive," so be it. We certainly approve of the passive investment. But to call that by a separate name in order to increase management fees or dilute the 50% passive management criterion, is not permissible.

Fixed-Income Investments

Since their inception, the trusts' fixed-income portfolios have been managed actively. Each of the utilities' portfolios have outperformed passive representations of the active manager's style from 1988 through the present. Beginning in 1994, the qualified trust has lower tax rates that do not give either taxable or tax exempt securities inherent advantages. Therefore, active management should have many opportunities to add value through exploiting changing fixed-income spread relationships. Also, passive fixed income is not truly passive because the benchmark index composition changes frequently as new issues come to market, and other issues mature. For these reasons, and because there has been no opposition to considering fixed-income management differently than equity management, we will not adopt any passive management requirement for fixed-income management.

Phase-In Period For The New Investments

Compliance with our decision on permitted investments should not be immediate. Investment restrictions which are narrower than those previously applicable to the trusts will require a phase-in period of at least 18 months. This will provide a reasonable time for the committees to adjust their portfolios to comply with the new guidelines.

The proposal to require more than 50% passive equity management will require phased-in compliance. For example, under the proposed investment guidelines, SDG&E's current equity strategy would not be considered passive. Therefore, SDG&E's committee would be required to hire and fund a passive manager to assure that more than 50% of the equity portfolio is managed passively. It would not be in the best interest of the trusts to sell equity securities immediately, simply to purchase other equity securities that fit within the new passive management requirement. This would only trigger taxable capital gains and generate commissions and other trading costs. The most efficient and cost-effective solution would be to use new contributions to the trusts or transfers from the fixed-income portfolio to achieve the desired passive/active equity portfolio mix.

Another example of why a phased-in compliance period is necessary is the proposed requirement that the fixed-income portion of the portfolio be rated BBB+ or higher. The current Edison and SDG&E guidelines allow for unrated securities if the investment managers believe the securities would meet the rating agency's guidelines if they were rated. Here again, it is in the best interest of the trusts to sell unrated fixed-income securities when market conditions are most favorable.

Investment Manager Contracts Should Not Be Put Out To Bid

All parties agree that manager selection should not be based on a bidding process. They argue with greater investment flexibility, the awarding of management contracts should be based on the capabilities, expertise, and resources of potential investment managers and not on a formal bidding process based on cost alone. Because the parties agree on this issue, and there has been no opposition, we will not adopt any bidding requirements for investment management contracts.

Approval Process For Investment Management Contracts

The formal application process currently being used to obtain Commission approval of investment management contracts is, in the opinion of the parties, unnecessarily burdensome and the Joint Recommendation proposes that it should be changed:

> "Contracts, instead, should be filed for Commission approval through the Commission's advice letter process as required under General Order 96-A within ten days of a contract's execution. Executed contracts, therefore, should remain subject to Commission approval and would be binding only after Commission approval has been granted."

The reasons for the proposed change, which will clearly benefit management of the trusts, include (1) adequate oversight, which is in place already in the form of the Commission's approval of a majority of committee members, a majority of whom are not affiliated with the utility, and whose nominations are approved by the Commission, and (2) the annual and three-year reporting requirements of the Commission. With those safeguards in place, the review process as currently performed under formal application is not justified and places unnecessary administrative burdens and time constraints on the utilities and Commission staff. It is disadvantageous to continue to allow an investment manager to manage a portfolio after the manager has been notified that it will be replaced, pending Commission approval of a new manager. In the past, the approval process has taken longer than 60 days. It is in the best interests of the trusts and the ratepayers that investment manager review and approval be handled through the Commission's advice letter process as to expedite investment manager changes when they become necessary.

There has been no opposition to the proposed change to the management contract approval process. For the reasons stated, when awarded, investment management contracts should be filed for Commission approval through the Commission's advice letter process as required under General Order 96-A within 10 days of contract execution.

Various Studies

The parties recognize that the Commission needs to be adequately and frequently informed in its oversight capacity of the status of the trust funds, the decommissioning cost liability, and other relevant information. The Joint Recommendation proposes that engineering studies of decommissioning costs continue to be performed every three years through the current general rate case (GRC) process, or in lieu of GRC, as may be required by alternative performance-based regulatory mechanisms. The analysis of ratepayer contributions would occur in conjunction with the review of the engineering studies. Utilities would continue to report trust performance annually as required by the trust agreements.

We agree with the parties' recommendations that engineering cost studies and ratepayer contribution analysis should continue to be performed every three years through the current GRC process, or in lieu of GRC's, should be performed as may be required by alternative performance-based regulatory mechanisms, and trust performance reports should continue to be provided annually as required by the trust agreements. The time between hearings shall not be longer than three years. Should there be no timely GRC or comparable proceeding to consider these reports, the parties shall, within three years from the effective date of this order or the last GRC or comparable proceeding, whichever is later, petition the Commission to adopt their most recent engineering cost study and ratepayer contribution analysis.

<u>Investment Management Fees</u>

We first discussed management fees for these trusts in D.87-05-062 in OII 86. At that time we were asked to approve fees of 0.50% for the first $50,000,000 of trust assets and 0.40% for the excess, plus expenses. We refused. We did, however, grant flexibility. We said: "Any agreements entered into with investment managers must contain, at the minimum, a declining block fee schedule with a cap of ten basis points at a reasonable portfolio value." (24 CPUC 2d at 316.) The parties have adhered to this standard, although SDG&E's management fees are higher than expected.

The parties urge us to increase investment management fees. They argue that while the current 10 basis point fee cap was acceptable in the very limited "Black Lung" investment environment, it would not be in the best interest of the trusts to maintain this fee cap under the expanded investment guidelines proposed in this proceeding. Investment management fees are generally higher on equity and international accounts; thus, the utilities may not have access to the most qualified and experienced investment managers in these asset classes under the current fee structure.

In the Joint Recommendation, the parties recommend that:

> Investment management agreements should contain, at a minimum, a declining fee block fee schedule with an incremental cap of:
>
> 10 basis points for domestic fixed-income managers,
>
> 20 basis points for domestic equity managers, and
>
> 30 basis points for international managers of either bonds or equity, at a reasonable portfolio level.

The parties' recommendation is based on market data as well as the utilities' pension fund experience. The market data, provided by Frank Russell Company, show the range of fees for Russell client accounts for U.S. fixed income, U.S. growth equity, and non-U.S. equity. For $100 million accounts, the data show the median average fees for U.S. fixed income, U.S. growth equity, and international equity are 26 basis points, 53 basis points, and 57 basis points, respectively.

Using the U.S. fixed-income average fee as a proxy for the current trust fee structure, the data indicate that other asset classes have a higher fee structure for U.S. and international equity. While it may be possible to negotiate active equity fees that meet the 10 basis point incremental cap and still produce an acceptable level of revenues to the manager, the parties believe it would require either a very high initial fee, or a 10 basis point cap at a high level of assets. The parties assert it is more reasonable to modify the fee caps as proposed to reflect different fee levels for different asset classes, as the institutional investment industry does.

We decline to make any change in the current fee schedule. There is no evidence that current managers will refuse to perform under our more liberal investment policy, nor that competent management will be unavailable should the utilities decide to change managers. The evidence shows that current management fees have attracted competent managers in equity investment.

Management Fees

	Edison		PG&E		SDG&E	
	*($720)	($120)	($513)	($59)	($60.5)	($32.7)
	Qual.	Nonqual.	Qual.	Nonqual.	Qual.	Nonqual.
1988	0.35%	0.41%	0.28%	0.27%	0.38%	0.38%
1989	.25	.29	.23	.37	.38	.38
1990	.22	.23	.32	.34	.34	.34
1991	.19	.21	.22	.20	.32	.32
1992	.18	.18	.19	.20	.27	.27
1993	.16	.17	.21	.21	.24	.32

* The numbers on this line reflect the current assets, in millions, under management in the trusts.

The table shows that Edison's 1992 management fee payment for qualified trust management was 0.18% and for "more active" nonqualified trust management was 0.18%. PG&E's was 0.19% and 0.20%, respectively. SDG&E's was 0.27% and 0.27%, respectively. We see no reason to increase fees for "more active" management. Results for 1993 were essentially the same except for SDG&E, which had a 0.05% increase in its nonqualified trust.

Findings of Fact

1. Historical data shows that equity securities can be expected to outperform fixed-income securities by a wide margin, particularly over a long time horizon.

2. Over a time frame of ten years or longer, placing 50% of the funds in equities actually reduces ratepayer risk, in the sense of being more likely to avoid a high-cost outcome to the ratepayers. In this respect, the risk of decommissioning escalation rates exceeding inflation is better managed by an

investment strategy that includes a significant allocation to equities.

3. Stocks have outperformed bonds in 58 out of the past 93 years. Over ten-year periods this advantage for stocks becomes even more pronounced. Stocks have outperformed bonds in 71 out of 84 periods, or 85% of the time over rolling ten-year time horizons.

4. Escalation rates for decommissioning costs are estimated to be roughly the cost of inflation plus 3%. Bonds have met or exceeded this target in only 24% of rolling 20-year historical time periods. However, stocks have equaled or exceeded this target 76% of the time.

5. The inability of bonds to hedge inflation adequately significantly increases the risk for ratepayers associated with a heavily weighted fixed-income portfolio.

6. The objective of the funds is to provide for decommissioning 10, 20 years, and beyond 20 years. Adverse short term equity returns must be considered in the context of the long term objectives of the funds. Equities not only should outperform fixed-income securities, but also a 50% equity allocation should result in lower risk and lower contributions from ratepayers over the expected funding period of the trusts.

7. It is reasonable to adopt a 50% investment in equity securities for qualified trusts.

8. An international equities limit on investments of 20% of the total trust funds (both qualified and nonqualified) is reasonable.

9. Up to 100% of the fair market values of the trusts may be invested in investment grade fixed-income securities (rated BBB or higher by Standard & Poor's or an equivalent rating by other rating agencies) including but not limited to government, agency, municipal, corporate, mortgage-backed, asset-backed, nondollar, and cash equivalent securities. The amounts and percentage invested in each of the above investment grade securities should be reported by the utilities in their annual trust reports to the Commission. No

<u>derivative security of any kind shall be considered an investment grade fixed-income security</u>.

10. A derivative is a financial agreement whose value is derived from the performance of some benchmark, such as interest rates, currencies, commodities, or debt instruments. Derivatives are complex hedging instruments that are used to defray the risk of changes in interest rates, stock prices, foreign exchange rates, and, in fact, almost any investment. (They may also be used for purely speculative purposes.) Derivatives cannot be defined with specificity as new ones are created to take advantage of leverage and arbitrage opportunities as perceived in the financial community. Derivatives are extremely risky, require the payment of a premium to the entity providing the hedge (which reduces overall return), and assume that the entity providing the hedge will be able to perform should the reason for the hedge materialize.

11. Derivatives of all descriptions should be prohibited, except that the trusts may hedge foreign exchange risks between the buy or sell date of a foreign security and the settlement date. Long-term hedges are prohibited.

12. Passive management is a strategy that seeks to achieve the rate of return of a benchmark index (such as the Standard & Poor's 500, the Russell 2000, etc.) by replicating the composition of the index, but without making management decisions in an attempt to exceed the rate of return of the benchmark index. (A buy and hold strategy and a strategy which undertakes trading solely to minimize taxes are also examples of passive management.) In contrast, an active manager would construct a portfolio that was intended to outperform the index, and would actively trade to achieve intended results.

13. Not less than 50% of the equity portion of the qualified and nonqualified trusts shall be invested passively.

14. There is no need for a semi-passive investment strategy for these trusts.

15. A passive management requirement for fixed income management is not needed.

16. A phase-in period of 18 months is reasonable to permit the trust committees to adjust their portfolios to comply with the new guidelines.

17. Investment management contracts need not be put out to bid.

18. Management contracts should be filed for Commission approval through the Commission's advice letter process as required under General Order 96-A within ten days of a contract's execution. Executed contracts would be binding only after Commission approval.

19. Engineering cost studies and ratepayer contribution analysis should continue to be performed every three years through the current GRC process, or in lieu of GRC's, should be performed as may be required by alternative performance-based regulatory mechanisms. The time between hearings shall not be longer than three years. Should there be no timely GRC or comparable proceeding to consider these reports, the parties shall, within three years from the effective date of this order or the last GRC or comparable proceeding, whichever is later, petition the Commission to adopt their most recent engineering cost study and ratepayer contribution analysis. Trust performance reports should continue to be provided annually as required by the trust agreements.

20. Changes in the current fee schedule are not necessary. There is no evidence that current managers will refuse to perform under our more liberal investment policy, nor that competent management will be unavailable should the utilities decide to change managers. Current management fees have attracted competent managers in equity investment.

Conclusions of Law

1. The petitions for modification should be granted to the extent provided in the following order.

2. This decision applies to the nonqualified trusts to the same extent that it applies to the qualified trusts, except that

the nonqualified trusts may continue to invest up to 60% of their assets in equities.

O R D E R

IT IS ORDERED that:

1. Decision 87-05-062 is modified to authorize Pacific Gas and Electric Company (PG&E), Southern California Edison Company (Edison), and San Diego Gas & Electric Company (SDG&E) to invest the funds in their respective qualified and nonqualified nuclear decommissioning trusts as follows:

   a. Not more than 50% of the fair market value of the qualified trusts may be invested in equity securities.

   b. Not more than 20% of the fair market value of the trusts may be invested in international equity securities.

   c. Up to 100% of the fair market values of the trusts may be invested in investment grade fixed-income securities (rated BBB- or higher by Standard & Poor's or an equivalent rating by other rating agencies) including, but not limited to, government, agency, municipal, corporate, mortgage-backed, asset-backed, nondollar, and cash equivalent securities. The amounts and percentage invested in each of the above investment grade securities shall be reported by the utilities in their annual trust reports to the Commission. No derivative security of any kind shall be considered an investment grade fixed-income security.

2. Derivatives of all descriptions are prohibited, except that the trusts may hedge foreign exchange risks between the buy or sell date of a foreign security and the settlement date. Long term hedges are prohibited.

3. Not less than 50% of the equity portion of the qualified and nonqualified trusts shall be invested passively.

4. A phase-in period of 18 months is reasonable to permit the trust committees to adjust their portfolios to comply with the new guidelines.

5. Investment management contracts need not be put out to bid.

6. Management contracts shall be filed for Commission approval through the Commission's advice letter process as required under General Order 96-A within 10 days of a contract's execution. Executed contracts shall be binding only after Commission approval.

7. Engineering cost studies and ratepayer contribution analysis shall continue to be performed every three years through the current general rate case (GRC) process, or in lieu of GRC's, shall be performed as may be required by alternative performance-based regulatory mechanisms. The time between hearings shall not be longer than three years. Should there be no timely GRC or comparable proceeding to consider these reports, the parties shall, within three years from the effective date of this order or the last GRC or comparable proceeding, whichever is later, petition the Commission to adopt their most recent engineering cost study and ratepayer contribution analysis. Trust performance reports shall continue to be provided annually as required by the trust agreements.

8. The Executive Director is authorized to sign amendments to PG&E's, Edison's, and SDG&E's qualified and nonqualified trust agreements to allow the trusts to be invested subject to the investment guidelines set forth in this order.

This order is effective today.

Dated July 24, 1995, at San Francisco, California.

DANIEL Wm. FESSLER
President
P. GREGORY CONLON
JESSIE J. KNIGHT, JR.
HENRY M. DUQUE
Commissioners

I will file a written concurrence.

/s/ JESSIE J. KNIGHT, JR.
Commissioner

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

Wesley Franklin

Acting Executive Director

O.I.I.86
D.95-07-055

Knight, Commissioner concurring

I support this order increasing the limit on the amount of investment the decommissioning trust may make in equity securities on a permanent basis. This decision is a step in the right direction, but I believe that even greater discretion should be afforded the investment committee in the future and would have supported greater discretion here.

I support the 70% equity limit supported by the Commission's Division of Ratepayer Advocates and all the utilities. In fact, I believe that a limit as high as 75% would be reasonable. The Commission should give greater latitude to the trustees of the funds, trustees that the Commission approves to serve. We should not hamstring their ability to manage the trust in light of the high caliber of overall talent that oversees the portfolio. The Commission should avoid the natural inclination of regulators to micro-manage the process. The Commission established the trusts, now we must let them go about their business without undue constraints.

In fact, there are even some areas of the joint recommendation, including the limit of 20% of equity investment in international equity securities, that I find overly restrictive. The severe limitation of both this decision and the Administrative Law Judge's proposed decision on the use of derivatives, in my view, unduly constrain the discretion of the trust's investment committee. While the trust should not be allowed to engage in the type of highly leveraged derivatives that led to the situation in Orange County, California, to prohibit the trust investment committee from using the risk management tools provided by derivatives is, in my view, not in the public interest. However, I support this decision allowing the use of derivatives to hedge against currency fluctuations because it is a step in the right direction.

Allowing the share of the assets of the trust to be invested in equity investment to greater than the 50% proportion authorized in this decision is in the public interest for the following reasons:

1.) **The data suggests that historically stocks have outperformed bonds.** In my view, performance of the funds could be substantially improved with equity investments. Limiting the discretion of the investment committee could result in decreased performance of the fund, at the expense of ratepayers.

2.) **The inability of bonds to hedge inflation adequately argues for greater latitude in the level of equity investment.** Inflation could place the greatest pressure on the ability of the trust to adequately meet its future responsibilities. A superior hedge against inflation will protect ratepayer interests in the long-run.

3) **The evidence in the case shows that equities not only should out perform fixed-income securities, but that also a 70% equity allocation should result in lower risk and lower contributions from ratepayers over the reasonably expected funding period of the trusts.** If we look to other funds, we see evidence of the need for more latitude as to equity investment levels. The Public Employees Retirement system (PERS) invests over 50% of its value in equities, despite payout requirements that would argue for a lower equity investment than the likely payout requirements of the decommissioning trusts. Furthermore, many other decommissioning trusts in other states invest over 50% in equities.

I would hope that future Commissions will look toward the experience we have with the 50% limitation on equity securities and reconsider providing greater discretion to the investment committee of the trusts. In my view, the differential between 50% and 70% equity investment levels represents an opportuniy cost for ratepayers. Every day that the trusts are constrained by these limitations from making the optimal investment decisions is a lost opportunity for ratepayers.

While this decision represents a small step toward increasing the discretion of the investment committee, and I therefore support the decision, I regret that Commission did not move further to provide greater discretion to the investment committee more along the lines of the joint recommendation of DRA and all the utilities. I concur in this decision, as an improvement over the existing system, but still believe that greater discretion is needed by the investment committee to ensure adequate funding of the trust at the time the monies are required to decommission California's nuclear power plants.

/s/ Jessie J. Knight Jr.
Jessie J. Knight, Jr.
Commissioner
July 28, 1995