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ORIGINAL

Decision No. 86794

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of )  
SOUTHERN CALIFORNIA EDISON COMPANY )  
for authority to increase rates )  
charged by it for electric service. )

Application No. 54946  
(Filed June 7, 1974)

(Appearances listed in Appendix A)

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O P I N I O N

Southern California Edison Company (Edison) seeks authorization to increase its California jurisdictional electric rates approximately \$339 million (21 percent) annually at the estimated 1976 level of sales. Edison originally estimated that the proposed rates, if effective for the full-year 1976, would produce a rate of return of about 9.6 percent on California jurisdictional operations. Its updated estimates, however, indicate that the proposed rates would yield a full-year 1976 rate of return of 9.4 percent.

After notice, 102 days of hearing were held before Commissioner V. L. Sturgeon and/or Examiner N. R. Johnson during the period November 6, 1974 through January 23, 1976, and the matter was submitted subject to receipt of concurrent opening briefs due on or before March 8, 1976 and concurrent closing briefs due on or before March 29, 1976.

In addition to Edison and the Commission staff, opening and/or reply briefs were received from the California Department of Water Resources (DWR), California Manufacturers Association (CMA), Committee to Protect California Economy (Committee), Metropolitan Water District of Southern California (MWD), Secretary of Defense on behalf of the Consumer Interests of All Executive Agencies of the United States (Government), Toward Utility Rate Normalization (TURN), and Western Mobilehome Association (WMA).

## I - EDISON'S PRESENT OPERATIONS

Edison furnishes electric service to over 315 unincorporated communities and 145 incorporated cities, or portions thereof, and outlying rural areas in 15 counties in central and southern California. The population of the area served was estimated to be 7,508,000 as of December 1973.

Edison also sells electric power for resale to the cities of Anaheim, Azusa, Banning, Colton, Riverside, and Vernon, and to Sierra Pacific Power Company, Southern California Water Company, Anza Electric Cooperative, Valley Electric Association, and the United States Naval Ammunition Depot at Hawthorne, Nevada. Electric power is also sold to, purchased from, or interchanged with Arizona Public Service Company, Bonneville Power Administration, Department of Water and Power of the city of Los Angeles, El Paso Electric Company, Imperial Irrigation Company, Portland General Electric Company, Public Service Company of New Mexico, Sacramento Municipal Utility District, Salt River Project, San Diego Gas & Electric Company, Sierra Pacific Power Company, State of California, and the United States Bureau of Reclamation.

Edison owns and operates 36 hydroelectric plants, 14 thermal electric generating plants, one diesel electric plant; it operates one jointly owned, coal-fueled thermal electric plant, one jointly owned thermal electric nuclear plant, and an electrical system owned by the city of Vernon; in addition, others operate for Edison and other agencies one jointly owned, coal-fueled thermal electric plant and one gas and oil-fueled generating plant. The

total effective operating capacity of these facilities available to Edison under optimum conditions, as of year-end 1973, was 12,265,695 kilowatts. As of the year-end 1973, Edison had available to it an additional 887,600 kilowatts of firm capacity under terms of power purchase agreements, 277,000 kilowatts of effective operating capacity at the Hoover Dam Power Plant, and 17,060 kilowatts via the United States Bureau of Reclamation at the Parker Dam sites.

As of December 31, 1973 Edison had approximately 11,188.2 miles of transmission lines, approximately 40,742 miles of overhead distribution lines, and approximately 18,473 miles of underground distribution cable of 16 kv or less.

At year-end 1974, Edison had a total of 2,691,691 California jurisdictional customers of which 2,385,705 were classified as residential customers.

## II - PARTIAL GENERAL RATE INCREASE

On November 4, 1975, after 85 days of hearing and a record which included 97 exhibits and more than 7,000 pages of transcript, Edison moved that this Commission grant, as an initial phase of this proceeding, a partial general increase in the amount shown by the record to be justified based on the Commission staff's estimates of revenues, expenses, and rate base as related to its recommended rate of return.

In Decision No. 85294 dated December 30, 1975 we found that because of the probability that a decision in this matter would not be issued in time to provide the test year 1976 revenues found necessary for jurisdictional operations, a partial general increase:

in rates to be construed as an initial phase in this proceeding was justified to arrest Edison's continuing erosion of earnings, to materially improve its financial performance, to enhance its ability to raise the additional capital required for financing its continuing construction programs, to provide better investor acceptance of its securities, and to reduce the risk of having these securities derated.

The amount of the partial general rate increase authorized was based on the staff's showing that \$80 million of additional revenues was required to provide the 12.25 percent return on equity adopted as reasonable in Decision No. 81919 dated September 25, 1973 on Edison's Application No. 53488 for a general rate increase.

This \$80 million partial increase, with one exception, was apportioned to the various customer groups on a uniform cents per kilowatt-hour basis because at that time "...the record is not yet completed or fully argued on the appropriate rate design for the apportionment of the authorized partial general increase, we are not in a position to logically apportion this increase to the various customer groups in accordance with one rate spread recommendation in preference to another." (Decision No. 85294, mimeo-page 12.)

The above noted exception was that portion of the domestic rate within the 0 to 300 kilowatt-hour a month consumption block which had substantially no increase and was considered as the first step in the establishment of lifeline rates for Edison as required by AB167. These rates, further discussed in Section VI of this decision, reflect a simplified rate structure consisting of a customer charge and two energy blocks (0-300 kilowatt-hours per month and over 300 kilowatt-hours per month).

III - RATE OF RETURN

General

The United States Supreme Court has broadly defined the revenue requirement of utility companies as being the minimum amount which will enable the company to operate successfully, to maintain its financial integrity, and to compensate its investors for risks assumed (Federal Power Commission et al. v The Hope Natural Gas Company (1944) 320 US 591, 605; 88 L. ed 333, 346) and will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties (Bluefield Waterworks and Improvement Company v West Virginia Public Service Commission (1923) 262 US 679, 692, 693; 67 L. ed at 1176). The determination of the sum specific to satisfy those requirements derives from the application of logic and informed judgment to numerous complex and inter-related factors such as the cost of money, capital structure of the utility in question as compared with other similar utilities, interest coverage ratios, return on common equity, price/earnings ratios, and price/book ratios. In California this net revenue requirement is expressed as a percentage return on weighted average depreciated rate base for California jurisdictional operations and is intended to provide sufficient funds to pay interest on the utilities' long-term debt, dividends on its preferred and preference stock, and a pre-determined reasonable return on common equity. Complete showings



on the revenue requirement of Edison in this matter were presented by Edison and the Commission staff. In addition, in its briefs Government and TURN argued that the return on equity of 12.25 percent found reasonable in Decisions Nos. 81919 and 85294 is adequate and need not be increased.

Position of Edison

An overview of Edison's position relative to the amount of a revenue increase needed was presented by its chairman of the board of directors and chief executive officer, Mr. J. K. Horton. He testified that it was necessary to file this, the fourth general rate increase application in a six-year period, because of the continued worsening of the economic climate in which Edison must operate. According to his testimony, the problem of general inflation has been aggravated by the current energy source shortage and its effect on fossil fuel prices and by environmental control measures that not only result in substantially higher operating costs but frequently involve significant investment in production equipment, which is not only expensive and nonrevenue producing, but also sometimes tends to reduce the operating efficiency of the utilities' facilities. To combat experienced attrition he recommended the adoption by this Commission of a range of reasonableness of plus or minus 0.75 percent for rate of return and plus or minus two percent for return on equity, with the initial rates designed to produce earnings at the upper end of the range. Such action would, in his opinion, insure Edison's

earning the full authorized rate of return for the test year in question. In addition, he proposed adjustment clauses, similar to existing fuel cost adjustment clauses, which would permit expeditious rate adjustment procedures to track changes in such basic items as property taxes, labor rates, and bond interest.

Edison's basic presentation on its required revenue increase, expressed as a requested rate of return of 9.6 percent on depreciated rate base, was made by its then financial vice president, the late Mr. Smith B. Davis. He assumed a capital structure consisting of 50 percent debt with an embedded cost of 6.31 percent, 13 percent preferred and preference stock at a cost of 6.91 percent, and 37 percent common equity with a return on equity of 15 percent. Inasmuch as most of the cost of bonds and preferred stock, fixed by the terms of the offering, are already a matter of record, controversy on an appropriate allowable rate of return centers about the appropriate return on common equity that should be permitted. This return on common equity allowance is necessarily a judgment figure based on many factors such as trends in interest rates and coverages for senior securities, earnings comparisons, capital structures, and the financial health of the involved utility.

Mr. Davis' testimony was included in Exhibits 4 and 40. In addition, he presented statistical comparisons and other financial data in Exhibits 1, 1A, 8, 8A, 38, and 39. The salient points emphasized in his presentation are as follows:

1. Edison estimates that for the period 1974-1978 it will have to rely on external financing for about \$471,000,000 a year (approximately 71 percent of its requirements) as contrasted to approximately \$166,000,000 (approximately 55 percent of its requirements) a year for the period 1963-1973.

2. During the most recent two years new Aa public utility bonds and public utility preferred stock have been issued at a cost ranging from 7.0 to 8.5 percent with the most recent issue of bonds going for 8.05 percent and the most recent issue of preferred stock costing 8.60 percent. (In its reply brief, Edison notes that its \$150 million Series FF bonds were issued on March 6, 1975 at a cost of 9.03 percent, its \$125 million Series GG bonds were issued on March 17, 1976 at a cost of 9.04 percent, and that \$50 million preferred stock issued in June of 1975 sold that month at a cost of 9.47 percent.)
3. Edison's embedded cost of debt rose from 3.97 percent in 1963 to 5.56 percent in 1973 and is expected to increase to 6.31 percent in 1976.
4. Comparative statistics of operating and financial characteristics were developed for the 20 largest electric utilities, for Moody's 24 public utilities consisting of 14 electric utilities and 10 combination utilities, and for Moody's industrials consisting of a composite group of 125 unregulated companies representing almost all major standard industrial classification codes (SIC Codes). These comparative statistics generally indicate that most of the 20 largest utilities and Moody's 24 utility companies are similar to Edison with respect to bond rating, times interest coverage ratios before and after taxes, and capital structure and that Edison's earnings per year growth has averaged about the same or somewhat less than those of these other comparison companies.
5. Utilities having Aa rated bonds should aspire to the maintenance of interest coverage of about 4.0 times before taxes and about 3.0 times after taxes.

6. A loss in bond rating from Aa to A not only increases the cost of debt but tends to reduce available markets because of investment laws which restrict banks, insurance companies, and other institutions from purchasing bonds and preferred stock which do not meet specified minimum coverage requirements.
7. The derating of utility bonds from Aa to A is a real threat as evidenced by the number of electric utilities that have been derated during the 1968 to 1973 period.
8. Edison's experienced and trended return on common equity is well below the 20 largest utilities, Moody's 24 utilities, and Moody's industrials.
9. Edison's stock prices have declined more during the period from year-end 1968 to year-end 1973 than have the stock prices of the comparison companies.
10. The price/earnings ratio for Edison and the two utility groups averaged well below those of Moody's industrials during the 1963-1973 period.
11. For the 20 largest utilities and Moody's 24 utilities to reach parity in price/book ratios with industrials, the return on common equity required would appear to average between 15 and 16 percent for the 1963-1973 period and between 17 and 18 percent for the 1968-1973 period.
12. The inclusion of \$400 million nonoperative construction work in progress in rate base would help mitigate Edison's serious cash flow problem by increasing cash flow by \$38.4 million for 1976, \$40.3 million for 1977, and \$42.3 million for 1978, a total of \$121.1 million for these three years. Furthermore, according to Mr. Davis' testimony, this additional cash flow, coupled with the accompanying dividend savings realized as a result of selling fewer shares of common stock, would decrease Edison's external financing requirements by \$138.5 million.

Mr. Davis further testified that because of the increase in cost of debt and preferred and preference stock since the application was filed, it would be necessary for Edison to earn a rate of return of 9.73 percent to provide the requested return on equity of 15 percent.

Position of Commission Staff

The staff position on the cost of capital and recommended rate of return was presented by Financial Examiner IV Russell J. Leonard. Mr. Leonard's prepared testimony discussed his accompanying exhibit containing 27 tables and 8 charts concerning interest rates, debt costs, earnings, capital structure, financing and other data pertaining to growth in net plant investment, revenues, expenses, and customers. Trends and five-year averages are shown for the years 1967-1973 in many of the tables in a form which compares Edison's operating results with averages developed for 10 electric utilities, Pacific Gas and Electric Company (PG&E), and 10 combination gas and electric utilities.

Mr. Leonard assumed anticipated debt issues aggregating \$160 million in 1975 and \$303.5 million in 1976 to which he applied estimated interest rates of six percent for pollution control bonds, eight percent for mortgage bonds, and 6.64 percent for notes to yield an estimated embedded cost of debt as of December 31, 1976 of 6.35 percent. Under cross-examination he increased this to 6.45 percent to reflect the cost experienced with the latest offerings. In addition, Mr. Leonard included in his estimate a \$75 million preferred stock issue with an estimated dividend rate of eight percent resulting in an overall preferred and preference rate of 6.87

percent. This figure was also revised upwards during cross-examination to 6.94 percent to reflect an actual issue of \$50 million of preferred stock in June 1975 at a cost of 9.47 percent.

Mr. Leonard testified that a comparison of reported earnings and related data for the selected group of utilities was used as a guide in the development of a range of recommended rate of return. He noted, however, that the recorded comparison data does not reflect the consequences of adjustments which would be considered in the ratemaking process and that the experienced earnings may be above or below normal. In addition, differences in the operations of comparison companies, such as income derived from nonutility operations, consumer mix, types of service provided, and the economic and regulatory environment of their respective service areas, necessitate consideration of factors other than historical earnings comparisons. Mr. Leonard did not include comparison data for industrial enterprises because the business and financial risks of such enterprises differ from those confronting public utilities because of the cyclical nature of the industrial's earnings, the effect of competitive influences, and the generally higher proportions of common equity in their capital structure.

Mr. Leonard recommended an earnings allowance for common equity ranging from 11.99 percent to 12.77 percent with an approximate coverage for interest on long-term debt of 2.81 to 2.91 times after income taxes and a coverage for debt interest and for dividends on preferred and preference stock of 2.17 to 2.25 times after income taxes. The application of the range of return on common equity of 11.99 to 12.77 percent to the staff's assumed capital structure and

cost of debt and preferred stock results in the staff's recommended rate of return ranging from 8.60 to 8.90 percent applicable to the California jurisdictional rate base as determined in this proceeding. Mr. Leonard testified that in his opinion the earnings resulting from his recommended rate of return would result in fair rates for consumers and provide a reasonable return to investors in Edison's common stock.

Position of Government

In its brief on this matter, Government argues that the United States Supreme Court has indicated that a utility's rate of return should be sufficient to enable a company to attract new capital and maintain its credit standing and financial integrity and to provide a return to the equity holder commensurate with returns being earned on investments in other enterprises having corresponding risks.

Government further argues that ratemaking philosophy has developed to restrict earnings at or near the minimum level that meets such criteria and that, since embedded cost of debt and preferred stock are established by the terms of the offerings, such return is governed by the cost of common equity which in turn is governed by corresponding risks. According to Government, Edison's exhibit entitled "Financial Characteristics, Cost of Money, and Required Return" does not satisfactorily address the subject of corresponding risk. This conclusion is based on a table-by-table analysis of the exhibit as follows:

1. Tables 1, 2, 3, 4, 5, 6, and 7, together with Charts 1, 2, 3, and 4 do not address the subject of comparable risks.

2. Table 8A and Chart 5 deal with the embedded cost of debt.
3. Tables 9, 10, and 11 present data for comparative companies and the results, according to Government, indicate that Edison is in better financial shape than the other comparative companies.
4. Table 13 compares the operating characteristics of utilities and Moody's industrials and, according to Government, is meaningless.
5. Edison's debt ratio has gone down over the past ten years while that of comparison groups has increased.
6. Edison's equity ratio has declined roughly half as much as that of comparison companies.
7. A list of bond deratings is interesting information but provides no information regarding comparable risks.
8. Computations regarding Edison's bond indenture and preferred stock coverage do not relate to comparable risks.
9. Data on comparative earnings, the bargain price of stock, price/earning ratios, and price/book ratios are of no value in determining required earnings on equity.
10. Tables 24 and 25 contain mathematical calculations deriving the ratios of price/book ratios of Moody's industrials to the price/book ratios of comparison utility companies and derive a factor which represents the average premium of recorded earnings over Moody's Aa utility bond yield. According to Government, these mathematical calculations have no value in determining required earnings on equity.



Government's overall conclusions from the above-described review of Mr. Davis' tables and charts is that there is little in those materials that addresses the subject of relative risk or comparable earnings and what little relative material there is contained in the exhibit indicates that Edison is in as good as or better position than the other groups. Therefore, Government concludes, earnings on equity for Edison should be in the 12 to 12.5 percent range.

Government further argues that the staff presentation is much more accurate and meaningful than that of Edison's and that a similar table-by-table review of the staff showing presents us with many more measures of comparable risks than does the company showing. Government notes that Edison is comparable to the comparison groups set forth in the staff exhibit except in the area of operating expenses. From this comparison Government concludes that the staff's exhibit supports a return on equity allowance in the range of 12 to 12.5 percent, the same as resulted from its analysis of Edison's showing. Government compares its recommended range of return on equity to Decision No. 84902 dated September 15, 1975 on PG&E's Applications Nos. 54279, 54280, and 54281 wherein this Commission found that the minimum reasonable return on equity was 12.0 percent (mimeo page 129) and concludes that the return on common equity to be allowed in this case should not exceed the 12.25 percent found reasonable in Decision No. 81919.

Position of TURN

In its brief TURN argues that Edison is requesting the highest utility equity rate in the nation to permit it to compete in the capital market, restore premiums of common over bond yields, and achieve what Edison believes is proper interest coverage. TURN notes that witness testimony by Edison indicated that returns on investment and equity were not exorbitant in the context of the then existing 10 percent prime rate and eight to nine percent bond rate. TURN notes that Decision No. 85294, effective December 30, 1975, granted an \$80 million increase to provide a return on investment of 8.7 percent and return on equity of 12.25 percent. TURN notes that the authorized return on equity is above the minimum of the range recommended by the staff witness and argues that it is therefore fully compensatory in view of the drop in prime rate from 10 percent effective in January 1975 to its present low level. TURN also assumes that the recent rise in stock prices will result in corresponding increases in the price of utility stocks. TURN further argues that this Commission must recognize Edison's relative financial good health and should, therefore, grant Edison no further increase.

Discussion

Edison's capital ratios at the end of the 1976 test year as estimated by Edison and the Commission staff are compared below together with the capital structure adopted in these proceedings:

<u>Component</u>	<u>Applicant</u>	<u>Staff</u>	<u>Adopted</u>
Long-Term Debt	50.00%	48.22%	49.95%
Preferred and Pref. Stock	13.00	13.11	13.63
Common Stock Equity	37.00	38.67	36.42
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Both Edison and the staff provided for \$290 million of external financing in 1975 based on estimated sales of securities consisting of long-term debt, \$160 million; preferred stock, \$50 million; and common stock, \$80 million. The increase in retained earnings for 1975 was estimated as \$64 million by Edison and \$73 million by the staff.

A review of the Edison's 1975 annual report on file with the Commission discloses that (a) \$161 million of long-term debt was issued at an approximate cost of 8.86 percent, including \$150 million of Series FF bonds costing 9.03 percent; (b) \$50 million of preferred stock was sold at a cost of 9.47 percent; (c) retained earnings increased by \$65 million; and (d) additional common shares were not issued or sold during the year.

To satisfy expected construction outlays and bond refundings in 1976, Edison and the staff estimated that a portion of the needed funds would be obtained from issuance of long-term debt in the amount of \$303.5 million and sale of \$180 million of common stock. Edison estimated that the increment in retained earnings for the year would amount to \$22 million as contrasted to the \$108 million used by the staff which gave consideration to the impact of a general rate increase in 1976.

The Commission takes official notice of Decision No. 85491 dated February 20, 1976 under which authority Edison sold \$125 million of its Series GG bonds in March at a cost of 9.00 percent. With respect to financing anticipated for the remainder of 1976, the company's 1975 annual report to stockholders states on page 12: "The timing and amount of additional external financing will depend

largely on regulatory action relating to rates and market conditions but may amount to \$150 million and include the issuance of common stock and other borrowings."

In light of these developments, it is evident that the estimates of both Edison and the staff are inapplicable in these proceedings. The capital structure urged by Edison does not represent an estimate of the actual position at the end of 1976 but rather an objective which it hopes to achieve; on the other hand, the staff's estimate does not reflect subsequent events.

The capital structure adopted herein as reasonable for the 1976 test year recognizes the financing which has actually been accomplished and simultaneously takes into account an increment of \$55 million for retained earnings and the issuance of an additional \$150 million of securities segregated equally between debt bearing a 9.00 percent interest rate and common stock. As to the cost of senior securities, we will adopt as reasonable an embedded cost of 6.51 percent for debt and 6.94 percent for preferred and preference stock after considering the financing already completed in 1976 and to be undertaken for the remainder of the year.

One of the considerations in the determination of the amount of increase presently sought by Edison is the level of earnings necessary to restore the market price of its common stock to at least book value. According to the testimony of Edison's witness a return on equity of 15 percent will not automatically result in the restoration of the market price of Edison's common stock to book price but that absent such a return the achievement of this stated goal would be impossible.

In support of this position, Edison presented Table 24 of Exhibits 1 and 1A and Exhibits 10 and 10-A supplementing said Table 24. Table 24 was intended to establish a relationship between a change in return on common equity and a change in the price/book ratio by factoring the price/book ratios of Moody's industrials with price/book ratios of the 20 largest utilities and with Moody's public utilities. The relationship thus established indicated that the return on common equity necessary to raise the price/book ratio of utility stock up to that of Moody's industrials was 15.0 to 15.7 percent for the years 1963-1973 and from 17.3 to 18.1 percent for the years 1968-1973. Translating this data from the 20 largest electric utilities and Moody's public utilities to Edison's operations indicates that a return on common equity of 15 percent would raise Edison's price/book ratio to 1.2 times the price/book ratio of Moody's industrials. In response to a question by the examiner, witness Davis admitted that according to the developed data a return on equity of 13.28 percent would raise Edison's price/book ratio from its existing level of 0.65 up to the desired 1.0.

Another factor utilized by Edison in support of its 15 percent return on common equity request is times interest coverage. Witness Davis testified that Edison required a 15 percent return on common equity to provide an interest coverage of about three times and that such a coverage is necessary for Edison to maintain its Aa bond rating. Mr. Davis further testified that although a 2.75 or 2.73 times interest coverage may have been satisfactory historically, he believes that because of Edison's large future construction requirements an increase to at least three times interest coverage will be required for Edison to maintain its present bond rating. In its brief, Edison argued that in Decision No. 81919 we found that an 8.2 percent rate of return resulting in 12.25 percent return on common equity and 2.91 times interest coverage after income taxes was the minimum rate of return which Edison needed to attract capital at reasonable cost and not impair its credit. Edison further argues that since the after tax interest coverage is a most important measure of the credit worthiness of a utility in the eyes of the investor, it is difficult to understand how a minimum coverage requirement of 2.9 times in 1973 can realistically become more than the maximum allowable coverage included in the staff's recommended range of rate of return after adjusting for the latest recorded embedded cost of debt and preferred stock dividend ratios. Staff witness Leonard testified under cross-examination that while times interest coverage was a factor considered in developing a recommended range in rate of return, it was a computed end result rather than a controlling factor in the determination of a recommended rate of return. In Decision No. 81919 we stated "...we find that 8.2 percent is a reasonable rate of return to be applied to the California jurisdictional rate

base. This return is the minimum needed to attract capital at reasonable cost and not impair the credit of the utility. An 8.2 percent rate of return on that portion of capital ascribed to the California jurisdictional rate base would provide an approximate interest coverage, before taxes on income of 3.94 times, and 2.91 times after taxes." (Mimeo. page 70.) It is obvious that the minimum referred to was the rate of return and not the times interest coverage as Edison incorrectly alleges.

Another factor for consideration in arriving at the proper rate of return level is the additional investment tax credit benefits accruing to Edison as a result of the Tax Reduction Act of 1975 (TRA). The record shows that Edison elected Option 2, ratable flow-through, for the additional 6 percent investment tax credit provided for by TRA. In Decision No. 85627 dated March 30, 1976 on Southern California Gas Company's Applications Nos. 55676 and 55544 and San Diego Gas & Electric Company's Applications Nos. 55677 and 55543 in a similar situation, we found as follows: "5. A rate of return adjustment downward of 0.25 percent on an \$824.5 million rate base will best recognize the reduction in risk claimed by SoCal in its choice of Option 2." Similarly in Re SoCal Gas Co., Decision No. 86595 dated November 2, 1976 in Application No. 55345 at page 96, we recognized "that because of SoCal's election of Option II, cash flow would be maximized, interest coverage increased, and the financial requirements in constructing facilities and acquiring gas supplies relieved". The corresponding reduction in risk redounding to Edison from its election of Option 2 was included in our considerations in arriving at our adopted rate of return.

After careful consideration of all the previously discussed relevant factors in the development of a reasonable return on common equity we adopt as reasonable a return on equity of 12.63 percent which, applied to our adopted capital structure and costs, translates to a rate of return of 8.8 percent developed as follows:

	<u>Capital Ratio</u>	<u>Cost Factor</u>	<u>Weighted Cost</u>
Long-term Debt	49.95	6.51	3.25
Preferred & Preference Stock	13.63	6.94	.95
Common Equity	36.42	12.63	4.60
Total	100.00	-	8.80

This return on capital is the minimum needed to attract capital at a reasonable cost and not impair the credit of Edison. This rate of return will provide an approximate times interest coverage after income taxes of 2.71 times and an interest plus preferred dividend coverage of 2.09 times. Relating this 8.8 percent rate of return to our subsequently discussed adopted summary of earnings for Edison's California jurisdictional operations results in a gross revenue increase of approximately \$122.5 million over the rates authorized by Decision No. 81919, or \$44.5 million over the rates authorized by Decision No. 85294.



#### IV - RESULTS OF OPERATION

##### General

Complete results of operation testimony and exhibits were presented by Edison and the Commission staff. In addition, Government's consulting engineer, Mr. D. J. Reed, presented testimony and exhibits setting forth 1976 test year estimates of sales, revenues, and customer bills by rate schedules for domestic Schedules D-1 through D-6 and general service Schedules A-1 through A-8.

Edison's estimates reflect revenues and expenses including the effect of anticipated fuel cost adjustment billing factors (FCABF) whereas the staff's and Government's estimates reflect revenues and expenses at base costs authorized by Decision No. 81919. Government's estimates are by rate schedule and are, therefore, not directly comparable to Edison's and the staff's estimates by revenue classifications. They do, however, encompass \$27,805,000 of the total \$28,384,000 differential between the staff's and Edison's estimates and were, therefore, valuable in making our determinations. With respect to the difference between revenue classification and rate schedule estimate presentations we stated in Decision No. 81919 as follows:

"It should be noted that all of the customer groups as used by Edison and the staff are not strictly comparable to the classes of service under which Edison reports its revenues under the FPC's Uniform System of Accounts. The customer groups are directly related to the various rate schedules, whereas it is necessary to allocate revenues from some schedules in order to arrive at revenues for classes of service. Sales to public authorities are an example of this. In future rate cases it would be helpful if the presentations were consistent, and customer groups seem to us to be preferable for this purpose." (Mimeo page 73.)

The validity of this statement was emphasized by the inability to directly compare the estimates of record in this proceeding. Since estimates by rate schedules are utilized by Edison in the preparation of its revenue estimates, the omission of such data from the primary exhibits does not appear to be justified.

Before detailing the bases for adopting the individual revenue, expense, and rate base items, it is necessary to resolve the following three issues of general concern: (1) The proper level of fossil fuel costs to be used for the test year revenue and expense estimates; (2) the proper level of wage adjustment to be applied to the test year estimates; and (3) the effect of Edison's recent force reductions on test year operating costs.

The staff's estimates of operating revenues, presented by Associate Utilities Engineer V. G. Putnam, and fuel and purchased power expenses, presented by Associate Utilities Engineer H. J. Lindenmeyer, reflect base rates and unit fossil fuel costs established by Decision No. 81919 for a general rate increase on the basis that the fuel cost adjustment increments of revenues and expenses were properly includable in Case No. 9886, our investigation into electric utility fuel cost adjustment tariff provisions and procedures. Such a procedure was essentially adopted for a similar situation in Decision No. 84902 dated September 16, 1975 on Pacific Gas and Electric Company's (PG&E) Application No. 54279 for a general rate increase of its electric rates. Decision No. 85731 dated April 27, 1976 on Case No. 9386 established the parameters for the development of an Energy Cost Adjustment Clause (ECAC) to replace the existing Fuel Cost Adjustment Billing Factor (FCABF). The base rates incorporated into

Edison's resulting ECAC are those rates for electric service in effect on December 31, 1975 and consist of the rates established by Decision No. 81919 plus the fuel cost billing factor adjustment of 0.949 cents per kilowatt-hour authorized by Resolution No. E-1414 adopted November 13, 1974 and the partial general increase authorized by Decision No. 85294. Consistent with our action in Decision No. 84902 we will retain the individuality of these two separate matters by basing our adopted results of operations and revenue requirement computations on the base rates and unit fossil fuel cost established by Decision No. 81919.

Edison's presentation was premised on the assumption that a general wage increase of 7 percent would become effective January 1, 1976. For comparability the staff's estimate included such a wage adjustment which was then backed out as a lump sum adjustment on the basis that it had not been negotiated as of that time. Attached as Appendix B to Edison's reply brief was a copy of a letter to its supervisory personnel over the signature of Jack K. Horton, the chairman of the board, announcing the granting or offering of an 8.5 percent increase to employees. Under these circumstances a lump sum amount of \$2,052,000 will be included in our adopted expenses to accommodate the difference between the 7 and 8.5 percent adjustments.

On July 3, 1975 Edison announced it had launched an additional cost reduction program designed to further cut expenses by 5 percent. A staff witness testified that the resultant savings could be on the order of \$15 million a year. This was rebutted by an Edison witness who testified that preliminary studies indicated an \$11 million cost reduction. We will utilize the \$11 million reduction in our adopted results.

#### A. REVENUES

Edison's revenue estimates were presented by its assistant comptroller, Mr. R. W. Scofield, and supported by the rebuttal testimony of its supervising rate engineer, Mr. C. Hyde. The sales estimates are prepared by a committee consisting of representatives from Edison's Comptrollers, Communications and Energy Management's Staff Services, Customer Service, and Revenue Requirements Departments, the System Operation Division of the Power Supply Department, and the Electric System Planning Division of the System Development Department. The kwhr sales and number of customer estimates developed by this committee are given to the Revenue Requirements Department which, based on past recorded data, develops the estimated future revenues by both rate schedules and revenue classifications.

Edison's latest sales and revenue forecasts reflect estimates resulting from such a committee meeting held on February 18, 1975. These estimates generally reflected lesser revenues, sales, and customers than the original estimates included with the application because of the effect of the general deterioration of the economy.

Mr. Hyde, in his rebuttal testimony, testified that in spite of the fact that both the staff and Government had later recorded data than Edison at the time their estimates were prepared, Edison's estimates were the more accurate ones because neither the Government's nor the Commission staff's witnesses properly considered the effect of such factors as changes in customer's utilization of equipment, discontinuance of Edison's promotional activities, the present emphasis on conservation, and the current high level of Edison's rates.

Commission Staff's Revenue Estimates

The Commission staff's engineer testified that the staff initially delayed its independent forecast of kwhr sales and revenues until it was able to consider one full year's experience under our conservation orders issued as a result of Case No. 9581, our investigation of the energy and fuel requirements of electric public utilities. As a result, the basic projections he used for the 1975 and 1976 estimates reflected recorded data for 1974 through April 1975. Estimates were prepared by rate schedules and the overall reasonableness of the estimates were verified by estimates prepared by revenue classification. According to the testimony of this witness, the downward trend of sales which predominated the 1974 recorded data reversed itself for all classes of service except industrial and resale as of December 1974. In addition, as of the date of his testimony (August 1, 1975) it appeared to him that the industrial sales trend had bottomed out but he would need later data to verify this fact.

Government's Revenue Estimates

Mr. D. J. Reed, a consulting engineer, appearing on behalf of Government, presented testimony and exhibits setting forth estimated 1976 test year sales, revenues, and customer bills by rate schedules for domestic Schedules D-1 through D-6 and general service Schedules A-1 through A-8.

In general the method utilized for the preparation of the domestic schedules consisted of projecting, by rate schedules, the recorded number of customers adjusted for zone changes and condemnations and the average usage per customer. Mr. Reed's review of the consumption patterns led him to the conclusion that conservation efforts resulted in depressing the kilowatt-hour usage per customer during the year 1974 but that the

domestic customers are renewing their full consumption patterns. He, therefore, applied the long-term growth rate (1967-1973) to the June 1975 recorded usage to obtain his 1976 test year estimated kilowatt-hour per customer per month. As an alternate calculation, Mr. Reed applied the Commission staff's estimate of kwhr per customer bill to his estimates of customer bills. The revenue was computed by the application of Edison's bill frequency analysis to his estimates of sales by rate schedules.

Mr. Reed's estimates of general service Schedules A-1 through A-6 differ from both the Commission staff's and Edison's estimates in that his estimates separately considered single-phase and three-phase customer use characteristics. Such analysis indicated to him that there is a trend underway for customer movement from single phase to three phase and from Rate A for small customers to the demand Rate B for larger customers. Mr. Reed believes his more detailed, and therefore more accurate, estimates should be adopted in preference to the other estimates.

Mr. Reed also testified that his large power Schedule A-7 and very large power Schedule A-8 should be adopted in preference to the other estimates because they are based on later data.

#### Comparison of Estimates

The following tabulation taken from the staff's Exhibit 60 and Government's Exhibit 79 summarizes the differences in Edison's and the Commission staff's estimates by revenue class and/or by rate schedules for the test year 1976, together with our adopted results. The bases for the adopted amounts are set forth in the following paragraphs:

Comparison of Estimates  
Of Operating Revenues, Sales,  
And Number of Customers

<u>Item</u>	<u>Edison</u>	<u>Staff</u>	<u>Government</u>	<u>Adopted</u>
<u>Average Customers</u>				
Residential	2,453,862	2,461,703	NA	2,451,703
Agricultural	24,742	24,850	NA	24,850
Commercial	224,166	224,386	NA	224,377
Industrial	30,095	30,090	NA	30,090
Public Authorities	32,839	32,872	NA	32,872
Interdepartmental	2	2	NA	2
Resale	18	18	NA	18
Total	2,765,774	2,773,921		2,773,912
<u>Sales (Millions of Kwhr)</u>				
Residential	13,680.0	14,660.0	NA	14,000
Agricultural	1,100.0	1,100.0	NA	1,280
Commercial	12,170.0	12,330.1	NA	12,880
Industrial	16,150.0	16,100.0	NA	15,650
Public Authorities	6,010.0	6,173.1	NA	5,700
Interdepartmental	1.5	1.5	NA	1
Resale	4,350.0	4,209.5	NA	4,210
Total	53,461.5	54,574.2		53,721

Comparison of Estimates  
Of Operating Revenues, Sales,  
And Number of Customers  
(Continued)

Item	Edison <sup>1/</sup>	Staff	Government	Adopted
(Dollars in Thousands)				
<u>Revenues (Excluding FCABF Revenues)</u>				
Residential	\$ 441,832	\$ 463,637	NA	\$ 449,962
Agricultural	27,200	27,300	NA	30,255 <sup>2/</sup>
Commercial	301,120	304,475	NA	311,005 <sup>2/</sup>
Industrial	258,900	259,500	NA	253,860 <sup>3/</sup>
Public Authorities	113,082	117,082	NA	112,508
Interdepartmental	45	45	NA	27
Resale	66,029	64,553	NA	64,553
Other Oper. Revenue	10,713	10,713	NA	10,713
Total	\$1,218,921	\$1,247,305		\$1,232,883

<sup>1/</sup> The estimates assigned to the utility were developed by the staff from information provided by Southern California Edison Company.

<sup>2/</sup> Includes Government's Schedule A-7 revenue computations.

<sup>3/</sup> Includes Government's Schedule A-8 revenue computations.



Because of the size of Edison's operations the small percentage differences in the sets of estimates are represented by rather respectable sales and revenue figures. Government's estimates are based on recorded data for the period ended June 30, 1975. Mr. Reed testified that the recorded data for July and August 1975 supports the accuracy of his estimates when consideration is given to the reduction in air conditioning requirements that accompanied the relatively cool summer of 1975. According to the record, 1975 was cooler than average, 1974 was approximately average, and 1973 was warmer than average and the peak megawatt demands on the Edison system were less for 1974 than for 1973. The decrease in demand for the summer of 1974 is attributable in part to the decrease in cooling requirements and in part to the effect of conservation practices. From the record it appears that, at least insofar as domestic and small general service customers are concerned, conservation efforts are declining and the average consumption per customer is on the increase, although at a lesser extent than in the preconservation era.

For the test year 1976 Edison estimated a total of 29,592,000 customer bills for Schedules D-1 through D-6 as compared to 29,709,600 for the Commission staff and 30,108,981 for Government. On an overall basis this difference is less than 2 percent between Government and Edison and less than one-half percent between the Commission staff and Edison. It should be noted, however, that these differences represent a substantial difference in the number of domestic customers to be added during the year 1976. In his rebuttal testimony, Mr. Hyde noted that in the first six months of 1975 the average number of domestic customers increased 21,542. He further testified that during this same period building permits were issued for only 16,243

family units in Edison territory. These statistics confirm, in his opinion, Edison's estimates of 40,039 new customers per year in contrast to the staff's estimate of 46,572 new customers and Government's estimate of 68,760 new customers. Another difference reflected in these three estimates is the number of customer bills for each rate level. Government's consultant testified that he adjusted recorded data to reflect zone changes and condemnations before making his projections, whereas both the Commission staff's and Edison's witnesses made their projections from unmodified data on the basis that zoning was an ongoing occurrence and zone changes were thereby reflected in projections of recorded data. The recorded data used by Edison in support of its estimates reflect recessionary conditions. The steadily improving economy coupled with the pent-up demand for housing should result in more new housing than projected by Edison but not as much as projected by Government. We will therefore adopt the staff's estimate of new customers together with its apportionment to the various rate levels.

For general service Schedules A-1 through A-6, Mr. Reed separately estimated single-phase and three-phase-billi months and kilowatt-hours-per-bill month for Rate A and Rate B of the general service schedules. Such a method of estimating is, according to his testimony, more accurate than either Edison's method of estimating Rate A and Rate B as a whole or the staff's method of estimating by rate schedules as a whole and should, therefore, be adopted in preference to the other two estimates.

Mr. Hyde's rebuttal testimony reflected estimates based on later recorded data than used by Mr. Reed. This data led Mr. Hyde to the conclusion that there is a continuation of most of the conservation practices previously adopted by Edison's customers and that the sharp increases authorized for charges for electric service during the last few years encourages continued and additional customer conservation. He further testified that numerous contacts by Edison energy service consultants with general service customers was expected to achieve further reductions in energy consumption by the small general service customers. Based on these factors, Mr. Hyde concluded that Edison has slightly underestimated 1976 sales on Rate A and overestimated Rate B and total sales.

From our independent review of the record we cannot say that one sales estimate or another is persuasive. We will adopt a sales estimate in total somewhat higher than Edison's. We will adopt the staff's customer estimate.

#### B - EXPENSES

##### General

Testimony and exhibits of estimates of 1976 test year expenses were presented by Edison and the Commission staff. Excluding the following discussed items, the differences between Edison's and the staff's estimates were small and were generally caused by differences in estimating procedures. The staff's engineers utilized one or more of the following generally accepted estimating methods: average annual change in recorded expenses, least squares trend of total expenses, separate least squares trend of expenses, separate least squares trends of labor and non-labor components adjusted for increases, and the application of judgment to arrive at a composite of several of these methods.

Edison's estimates are based on budgeted amounts reflecting prior history and anticipated future work adjusted, where deemed appropriate, to reflect the latest available information. Both methods, properly applied, can produce valid estimates. We will, therefore, average the two estimates for items reflecting relatively minor differences, recognizing that in terms of our adopted rate base, a change of approximately \$775,000 is required to effect a change of 0.01 percent in the rate of return.

Production Expenses - Fuel and Purchased Power

Testimony on these matters was presented on behalf of Edison by its assistant manager of the Systems Operation Division of the Power Supply Department, Mr. M. H. Kent, and, as previously stated, on behalf of the Commission staff by associate utilities engineer, Mr. H. J. Lindenmeyer.

The component parts of these expenses are the total kilowatt hours of energy that must be provided, the average year availability and cost of hydrogeneration and purchased power, the unit cost and availability of the various fuels, and the heat rate to be obtained by the various thermal generating units.

Edison derives the total kilowatt hour generating requirement by independently estimating the annual system sales and the required kilowatt hours to be transmitted from generating stations and other sources. The difference between these estimates represents losses, billing lag, and company use. The correlation between sales and transmitted energy thus obtained is compared for reasonableness with computed conversion factors. The computed conversion factor developed by Edison for the test year 1976 is .925. The staff's engineer used the average of five years recorded data for the period ending 1974 to develop a conversion factor of 0.927. We will adopt

this latter figure as being more representative of average year conditions. Applying this conversion factor to our previously adopted sales of 53,721 millions of kWhrs results in a total Edison main system net requirement of 60,642 millions of kWhr.

The production resources available to Edison for fulfilling this requirement consist of company-owned hydroelectric, fossil-fueled steam, diesel, and gas turbine electric plants; jointly-owned fossil-fueled and nuclear-fueled steam-electric plants; and purchased power available from other utilities, DWR, U. S. Bureau of Reclamation, the Bonneville Power Administration, and others.

The following tabulation compares by energy sources, Edison's and the staff's estimates together with the adopted results. It will be noted that the total energy to be transmitted is 60,466 M<sup>2</sup> kWhr as estimated by Edison and 61,543 M<sup>2</sup> kWhr as estimated by the Commission staff, a difference of 1,007 M<sup>2</sup> kWhr or 1.78 percent. Assuming that 620 kilowatt hours can be generated per barrel of oil and assuming a price of oil of \$15.87 a barrel, the cost differential reflected by Edison's and the staff's estimates is approximately \$25,776,000.

Comparison of Relative Energy  
Sources Availability Estimates

Energy Source	Edison	Staff	Adopted <sup>1/</sup>
	(M <sup>2</sup> kw/hr)		
Sales to Other Co.	1,493	1,493	1,183
Interchange, etc.	1,655	1,655	1,655
<u>Purchased Power</u>			
Canadian Entitlement	576	576	576
Oroville-Thermalito	879	879	879
Navajo Layoff	1,585	1,585	1,585
BPA Surplus	1,322	1,325	1,325
Edison Hoover	255	266	266
Economy Purchases	611	664	664
Pre-release, (Long Beach)	270	270	270
Subtotal - Purchased Power	5,498	5,565	5,565
Edison Hydro	4,357	4,474	4,357
Nuclear	2,372	2,378	2,378
<u>Gas and Oil Units</u>			
Gas	438	509	509
Oil	35,318	36,134	35,660
Oil Pipeline & Storage	-	-	-
Subtotal	35,756	36,643	36,169
<u>Coal Units</u>			
Coal	9,082	9,082	9,082
Gas	253	253	253
Subtotal	9,335	9,335	9,335
Total Energy	60,466	61,543	60,642
Co. Generated	53,313	54,323	53,422
Fuel	48,946	49,849	49,065
Fossil Fuel - Excl. off-system	45,091	45,978	45,504
Fossil Fuel Total	46,584	47,471	46,687
Total Gas	691	762	762

<sup>1/</sup> Bases for adopted figures set forth in the ensuing paragraphs.

After review and independent analysis the Commission staff adopted Edison's estimate of 1,493 million kwhr sales to other companies. The staff's updated heat rate of 9,817 Btu's per kwhr for gas and oil fuel was applied to the base unit costs of 101.59 cents per million Btu's established by Decision No. 81919 to yield fuel costs of \$14,890,000 for this category as compared to Edison's computed figure of \$39,729,000 derived from the product of a heat rate of 9,897 Btu's per kwhr and a forecast unit cost of 268.86 cents per million Btu's. The staff also adopted Edison's interchange estimate of 1,655 million kwhr transmitted at a cost of \$655,000 and its estimates of energy transmitted from coal units of 9,325 million kwhrs. For the coal units, the staff's use of updated heat rates and the base unit costs established by Decision No. 81919 resulted in a 1976 test year-estimate of \$19,226,000 as compared to Edison's estimate of \$21,565,000. Edison estimated the average test-year fuel requirements by use of a computer program simulating the integration of system resources. The test-year unit loading and fuel requirements were based on generation designed to produce minimum emission of oxides of nitrogen from all of its fossil-fueled thermal plants in the South Coastal Air Basin. Edison used its supplier's estimates of average temperature gas fuel availability priced at the supplier's rate schedule. The fuel oil prices used in the computation were based on a monthly system unit price determined by using an average-year burn rate applied to the recorded oil inventory as of October 1 prior to the year for which the prices were developed. In our opinion the staff's estimate of sales to other companies is high. We have adopted the amount of 1,183 M<sup>2</sup>kwhr as the sales to other companies and have adjusted the staff's estimates accordingly (see table on page 38).

We will adopt the staff's estimate of total kilowatt-hour energy requirements adjusted for our adopted sales estimates and loss factor. We will adjust the staff's fossil fuel generation requirements to reflect the subsequently discussed adopted hydrogeneration quantities. As previously stated we will utilize the unit fossil fuel costs reflected in Decision No. 81919 in our adopted results of operations and for the computation of revenue requirements.

Known unit costs of purchased power and nuclear fuel as of January 1, 1975 were used by both the staff and Edison. The staff used the average of the latest 15 years of recorded kwhr production from the three divisions for estimating Edison's own hydroproduction whereas Edison based its estimates on an analysis of recorded hydrological conditions utilizing 53 to 55 years of data. Edison's estimates of its own hydroproduction will be adopted.

The staff's estimate of Hoover generation is based on the latest ten years of recorded kwhr received whereas Edison's estimate of Hoover generation approximates the average generation for the period 1972-1975. The staff's estimate, based on the longer time span, will be adopted.

For economy energy purchases, Edison used available 49-months recorded data with the intention of deriving future average purchases from a 60-month base of recorded data as such data becomes available. The staff used a 60-month average consisting of 51 months



of recorded data and nine months current outlook projection through December 1975. The staff's estimate, approximating Edison's eventual base data period, will be adopted.

Both Edison and the staff used a 60-months average of recorded data for estimating the availability of Pacific Northwest surplus energy. The staff's estimate, based on a later 60-months period, will be adopted.

After review of Edison's work papers and an independent evaluation of available data, the staff adopted Edison's estimates of Canadian Entitlement, Oroville-Thermalito generation, Navajo layoff, and Long Beach pre-release generation quantities.

The following tabulation summarizes the adopted quantities and expenses by energy sources.

Energy Source	Quantity M <sup>2</sup> - kwhr	Expense M - \$
Sales to Others	1,183	\$ 11,799
Interchanges	1,655	655
Purchased Power	5,565	38,330
Edison Hydro	4,357	-
Nuclear Power	2,378	3,397
Gas and Oil	36,169	321,667
Coal	9,335	21,283
Fuel Service Charge	-	1,284
Total Fuel and Purchased Power	60,642	398,415

Production - Excluding Fuel and Purchased Power

These expenses include power production operation and maintenance expenses for steam, hydraulic, nuclear, and other power generation.

With the exception of other power generation operation and maintenance expenses, Edison's estimates of production expense, including fuel and purchased power, presented by its manager of power supply, Mr. J. T. Head, Jr., closely approximate the staff's estimates presented by Associate Utilities Engineer G. J. Hobbs. The discrepancy in other power generation operation and maintenance expense estimates relate to the inclusion period for the Long Beach combined cycle plants. Edison used six months labor and a full years' material, overhead and indirect expenses as contrasted with the staff's utilization of three months' expenses based on a composite operational date of the plant of October 1, 1976. The record shows that the plant consists of seven 63 MW turbines that are scheduled for operation between July 2, 1976 and December 17, 1976, an 82 MW steam turbine scheduled for operation September 24, 1976, and one 49 MW steam turbine scheduled for operation on December 17, 1976. Under these circumstances, the staff's treatment of the Long Beach combined cycle steam generating units appears reasonable and will be adopted. The tabulation on the following page sets forth the 1976 test year total power production expenses as estimated by Edison and the Commission staff together with the adopted test year expenses.

Transmission Expenses

Edison's presentation of these expenses was made by Mr. Head and the staff's presentation was made by Mr. Hobbs. With the exception of Account 570, Maintenance of Station Equipment, the differences between Edison's and the staff's estimates were relatively

Item	CPUC Staff	Edison	Adopted
(Dollars in Thousands)			
<u>Steam</u>			
Fuel*	\$356,686	\$349,760	\$ 353,660
Operation	24,019	24,208	24,114
Maintenance	40,698	41,198	40,948
Total Steam	\$421,403	\$415,166	\$ 418,722
<u>Hydraulic</u>			
Operation	\$ 3,687	\$ 3,696	\$ 3,692
Maintenance	3,567	3,705	3,636
Total Hydraulic	\$ 7,254	\$ 7,401	\$ 7,328
<u>Nuclear</u>			
Fuel	\$ 3,397	\$ 3,388	\$ 3,397
Operation	4,612	4,700	4,656
Maintenance	2,184	2,228	2,206
Total Nuclear	\$ 10,193	\$ 10,316	\$ 10,259
<u>Other Power Generation</u>			
Fuel*	\$ 3,028	\$ 3,912	\$ 3,028
Operation	1,201	1,555	1,201
Maintenance	1,193	1,658	1,193
Total Other Power Generation	\$ 5,422	\$ 7,125	\$ 5,422
Purchased Power	\$ 38,985	\$ 38,293	\$ 38,330
Total Power Production Exp.	\$483,257	\$478,301	\$ 480,061

\*Fuel at base unit cost and fossil fuel mix.

small. Edison's estimate of Account 570 exceeds the staff's by \$297,000 due primarily to the difference in allowance for contingencies of \$600,000 by Edison and \$300,000 by the Commission staff. The record shows that staff's estimate more closely approximates actual recorded data and it will be adopted. The following tabulation summarizes Edison's and the staff's estimates together with the adopted expense for the test year 1976:

Item	Staff Estimated	Edison Estimated	Adopted Results
(Dollars in Thousands)			
Transmission Operation	\$22,389	\$22,523	\$22,456
Transmission Maintenance, excluding Account 570	9,298	9,268	9,283
Account 570, Maintenance Station Equipment	5,560	5,857	5,550
Total Transmission Expense	\$37,247	\$37,648	\$37,299

#### Distribution Expenses

Exhibits and testimony on distribution expenses were presented on behalf of Edison by its manager of staff services Mr. W. R. Dougher and on behalf of the Commission staff by Mr. Hobbs.

In this category of expenses, the major differences between Edison's and the staff's estimates was in Account 583, Overhead Line Expense. This account includes the expenses attributable to Edison's transformer load management program (TLM) which is intended to provide standards for fully loading new transformers and replacing existing, overloaded transformers. Such a procedure is anticipated to effect savings by a reduction in the purchase of new transformers and the elimination of expensive service interruptions due to burned out

transformers. The record shows that the program was accelerated over what was originally planned to provide work for approximately 60 construction workers who would otherwise have to be laid off because of a decline in plant construction. The budgeted amounts for the TLM program are \$1,090,000 for 1975, \$1,450,000 for 1976, \$1,380,000 for 1977, and \$570,000 for 1978. Edison used the 1976 budgeted amount for the test year whereas the staff based its estimate on the average TLM expense for the four year period. The staff's approach appears reasonable and will be adopted. The following tabulation compares Edison's and the staff's estimates and the adopted results.

Item	: Staff : Estimate	: Edison : Estimate	: Adopted : Results
(Dollars in Thousands)			
Distribution Operation Excluding Account 583	\$26,525	\$27,064	\$26,795
Account 583, Operation Overhead Lines	4,626	5,033	4,626
Distribution Maintenance	32,859	33,652	33,256
Total Distribution Expense	\$64,010	\$65,749	\$64,677

#### Customers' Accounts Expenses

Edison's presentation for this group of expenses was made by Mr. Dougher and the staff's presentation was made by Mr. Hobbe. Except for Account 904, Uncollectibles, the differences in estimates were relatively small. Edison's estimate for uncollectibles was predicated on the estimated amount necessary to maintain the reserve at a level approximating one-year's estimated net write-offs, or about 0.31 percent of revenue to be derived from ultimate customers whereas

the staff used the recorded average percent of revenue write-off of 0.2867 percent for the five-year period 1969 through 1973. The staff witness accepted, subject to check, that if the 1974 recorded amount had been included in the computation, the five-year average would be .297 percent and testified that had the data been available at the time he had prepared his estimate he would have used the figure for his estimate. We will therefore adopt this figure which applied to the previously adopted revenues yields a 1976 test year uncollectible expense \$3,421,000 at base rates.

The following tabulation compares Edison's and the staff's estimates and the adopted customer's accounts expense.

Item	: Staff : Estimate	: Edison : Estimate	: Adopted : Expense
(Dollars in Thousands)			
Customer Accounts Expense, Excluding Account 904	\$27,298	\$27,508	\$27,453
Account 904, Uncollectible Accounts	<u>3,464</u>	<u>3,408</u>	<u>3,421</u>
Total Customer Accounts Expense	\$30,762	\$31,016	\$30,874

#### Sales Expenses

Testimony and exhibits on the subject of sales expenses were presented on behalf of Edison by one of its vice presidents, Mr. E. A. Myers, Jr., on behalf of the Commission staff by Mr. Hobbs, and on behalf of TURN by the head of an advertising and public relations business, Burt Wilson.

Edison's vice president testified that sales expenses have historically been incurred to enhance the selective acquisition and programming of loads which would increase the system load factor with

resultant benefits to ratepayers. However, according to his testimony, in recent years, due to the possibility of a shortage in generation capacity, the marketing emphasis was shifted to moderate the rate of growth in consumer demand and set the stage for a stronger energy management effort. Because of this change in direction and emphasis, Edison believes the titles and description of the various sales expense accounts set forth in the uniform system of accounts inapplicable and refers to the category as "Energy Management Expenses" and the individual accounts as "Supervision", "Customer energy management contracts", "Energy management advertising", and "Miscellaneous expenses" rather than "Sales expenses", consisting of "Supervision", "Demonstration and selling expenses", "Advertising expenses", and "Miscellaneous sales expenses" presently used. A change in account titles at this time could result in confusion and would not make such expenses more palatable to those opposed to saddling the ratepayer with any advertising or customer contact expense irrespective of its purpose. Consequently, it would serve no useful purpose to establish the nomenclature espoused by Edison. Edison's test year 1976 sales expense (energy management) estimates total \$1,984,000 and consist of \$47,000 supervision, \$1,105,000 in Account 912 (Demonstrations and Selling Expenses) and \$832,000 in Account 913 (Advertising Expenses). According to the testimony, the major expenses included in Account 912 are for personnel contacting commercial, industrial, agricultural, and public authority customers to urge a reduction in over-all energy use; labor and expenses for residential energy services personnel to contact major new construction developers to urge the installation of adequate levels of insulation materials and to recommend changes in design construction techniques to achieve energy conservation; labor and

expenses for consumer services personnel in advising residential customers of methods to reduce energy consumption; and labor and expenses of staff personnel to monitor and support the above. According to this witness's testimony, Edison included in Account 913 only the minimum amount of advertising expense required to effectively communicate energy management messages to the approximately 7,500,000 people served throughout its service territory. The record shows that \$265,000 of the recorded advertising expense incurred during the year 1973 resulted from our first interim order in Case No. 9581. Mr. Myers testified that, in his opinion, an increase in planned expenditures for achieving conservation was necessary because of the general de-emphasis of the need to conserve resulting from the end of the oil embargo. The amount Edison budgeted for media advertising in Account 913 for the years 1974, 1975, and 1976 was \$800,000.

The amount of informational advertising carried under Administrative and General Expenses in Account 930, Miscellaneous General Expenses, was also included in Mr. Myer's presentation. The recorded informational advertising expense for 1974 was \$22,704 of which \$10,000 was spent for kite safety messages and \$12,704 was spent for financial advertising. The budgeted amount for 1975 was approximately \$700,000 and consisted of kite safety - \$10,000, environmental protection measures - \$100,000, discussion of viable future energy sources - \$150,000, financial communications - \$40,000, and plant safety and siting advertising - \$400,000. For 1976 the budgeted amount for institutional advertising was increased to \$1,000,000 to reflect an increase of \$300,000 in the budgeted amount for advertising relating to plant siting and safety.

The Commission staff engineer's basic position on the level of sales expense to be included as media advertising in Account 913 is that the peak in energy conservation efforts, including consumer



education advertising pursuant to this Commission's three interim orders in Case No. 9581 should have occurred in 1974 and that the level of expense could be expected to be less for 1975 and 1976 than was incurred in 1974 and late 1973. On this basis, the staff's estimate for advertising in support of energy conservation has been set at \$572,000 for 1975 and 1976. The full amount budgeted by Edison for conservation advertising will be allowed. After independent study and evaluation, the staff's engineer adopted Edison's revised 1976 test year estimates for Accounts Nos. 911 and 912. We will, therefore, adopt these agreed upon amounts for Accounts Nos. 911 and 912.

Senior Utilities Engineer A. V. Day testified on Administrative and General Expenses including the reasonable expense for informational advertising to be included for rate-making purposes in Account 930. He testified that the specific expense under discussion was advertising to facilitate an adequate future supply of electric energy through factual discussions of plant siting, safety, and environmental impact as set forth on mimeo page 39 of Decision No. 81919. He noted that the recorded per customer expense for this type of advertising was 80 cents in 1971, 56 cents in 1972, and 35 cents in 1974. Extrapolation into 1976 resulted in a per customer expense of 16 cents which multiplied by the estimated number of customers resulted in his estimated expense for this kind of advertising of \$350,000. The 16 cents per customer cost was, in his opinion, quite comparable to the 20 cents per customer budgeted by PG&E and, therefore, justifies its adoption.

TURN's consultant testified to his belief that the only advertising that should be permitted at the ratepayer's expense is advertising associated with financial offerings. He stated that because Edison operates a monopoly utility service without competition

in its service area there is no compelling need to advertise other aspects of its program. This witness further testified that while we must all adopt a conservation ethic, it would be more appropriate for public entities who are responsible for establishing policy in this area to be the source of any programs to encourage conservation and cited, as an example, the advertising program initiated by the Federal Energy Administration. Under cross-examination he stated his belief that the public would be more likely to accept such statements from a public official such as a governor of a state than from the utility or even a state agency. He further questioned public acceptance of conservation advertising disseminated over the same media that formerly advocated increased usage of electricity. He stated his opinion that bill stuffers are an excellent means of advertising, but that the quality of bill stuffers currently being used is in need of improvement. This witness recommended that we disallow for rate-making purposes all expense items relating to public relations including that portion of salary and expense of local, district, and division managers and ancillary staff devoted to public relations functions, on the basis that such activities are self-serving and image-building and are, therefore, an inappropriate burden to be thrust upon Edison's customers.

We have reviewed the Commission's discussions of advertising and public relations expenses in recent decisions. (Re PG&E, Decision No. 84902 dated September 16, 1975 in Application No. 54279; Re PG&E, Decision No. 86281 dated August 24, 1976 in Application No. 55509; Re SoCal Edison, Decision No. 81919 dated September 25, 1973 in Application No. 53488.) The most detailed discussion of these expenses occurs in Decision No. 84902. In order to restate our position regarding the allowance of such expenses, we review the discussion in Decision No. 84902 and clarify it here.

First, with respect to advertising, in Decision No. 84902 the Commission disallowed all of PG&E's expenses for institutional advertising. We did allow for ratemaking purposes expenses for energy conservation and customer service advertising. Furthermore we asserted:

"Bland and general conservation advertising may simply be another form of institutional advertising and should not be charged to ratepayers. Specific, useful information about conservation...can be of great use to individual customers and can reduce costs for the system as a whole." (At p. 82.)

This continues to reflect Commission policy toward advertising, which can be summarized and emphasized as follows:

All institutional advertising shall be disallowed for ratemaking purposes. Furthermore, all other advertising, except that which is listed below, shall also be disallowed for ratemaking purposes.

- a. Financial advertising.
- b. Safety messages.
- c. Essential customer services information such as changes in location of offices, telephone numbers, payment agencies, and announcements of regulatory proceedings before this Commission or other regulatory agencies.
- d. Results-oriented, specific conservation advertising; this must, however, be accounted for separately as a conservation expense.

In regard to advertising, informational advertising expense of \$10,000 for kite safety messages and \$40,000 for financial advertising, or a total of \$50,000, is appropriate in this rate case.

Second, with respect to public relations, the Commission stated in Decision No. 84902:

"PG&E is placed on notice that it shall be the policy of this Commission henceforth to exclude from operating expenses for rate fixing purposes all amounts claimed for public relations expense for which it cannot be shown:

- "a. Provides normal liaison with, and channels of communication for, representatives of the press, radio, television, and other media.
- "b. Results in reduction of operating costs and more efficient service to the ratepayers.
- "c. Encourages the more efficient operation of the utility's plant, the more efficient use of the utility's services, or the conservation of energy or natural resources, or presents accurate information on the economical purchase, maintenance, or effective use of electrical or gas appliances or devices.
- "d. Presents factual discussion of specific topics dealing with plant siting, safety, and environmental impact.

"In future proceedings involving this and other utilities, we shall expect the utility to justify, and our staff to verify, public relations costs in detail and to supply, for the record, information on each aspect of the utility's public relations program so that we may make judgments regarding the reasonableness of each activity and of appropriate reasonable allowances." (At p. 84.)

We shall clarify the above as follows:

- a. Minimal staff shall be available to respond to inquiries into utility activities from the communications media.
- b. Reasonable expenses for customer services activities shall be allowed for ratemaking purposes. These shall include provision of essential customer service information (such as notification of changes in office locations, telephone numbers, payment agencies, or regulatory proceedings before this Commission or other regulatory agencies). These should, however, be explicitly accounted for and allocated where appropriate.

- c. Point c reflects PUC Code Section 796(b). We interpret this as pertaining to energy conservation expenditures which should be strictly and explicitly conservation related and should be accounted for separately as conservation expenses.
- d. Expenses reflected in Point d shall only be allowed for ratemaking purposes if they are for responses to specific requests for information from the communications media or from the general public or if they are to inform the public of regulatory proceedings before this Commission or other regulatory agencies. Site tours shall not be allowed for ratemaking purposes.
- e. We repeat with emphasis our admonition that all public relations expenses should be described and justified in detail by utilities and their appropriateness verified by our staff in all future rate proceedings.

On the ninety-eighth day of hearing on this matter, Mr. Myers presented an additional exhibit setting forth a plan directed towards the achievement of the objective of maintaining and/or improving Edison's conservation results through a broadening of its energy management programs. This exhibit outlined five new major programs which Edison estimates could lower the anticipated future annual sales by as much as 180,000,000 kilowatt-hours for residential and 130,000,000 kilowatt-hours for commercial customer groups at a reduction in revenues, including a fuel adjustment at total fuel costs, of \$15,900,000 and a reduction in operating costs of \$9,200,000. Excluding fuel adjustment, the corresponding reduction in revenues is \$9,200,000 and in operating expenses \$3,500,000. The additional programs are estimated to cost \$2,400,000 resulting in a net impact in revenue deficiency excluding fuel adjustment of \$8,100,000. This witness' testimony indicated Edison's belief that these proposed expanded energy management programs are timely in view of the newly announced programs of various state and federal agencies and should be implemented through appropriate expense allowances.

The five programs consist of (1) escalating contacts by energy services personnel with general service customers, (2) the installation of shower flow regulating devices, (3) expanded conservation publicity releases, (4) the furnishing of energy conservation kits, and (5) the analyses of individual customer's electric energy savings potential. A common denominator to the successful implementation of these various programs is the cooperation

and sincere desire of the customers to effect such conservation measures. The Commission's newly formed Energy Conservation Team recommends the adoption of Edison's supplemental program. The team intends to monitor the effectiveness of Edison's conservation programs carefully. We will recognize the additional conservation expense of \$2,400,000 and have recognized the reduced sales levels which in the longer term will result in more economic service to California customers.

In subsequent proceedings, a more detailed analysis will be undertaken and Edison's rate of return will be adjusted, upward or downward, as the evidence indicates. In connection with the filing of its 1977 conservation programs Edison shall clearly detail its various conservation advertising expenses.

Edison shall perform follow-up studies to determine the effectiveness of its conservation programs and shall inform the Commission of the results. Included shall be an assessment of the degree and effectiveness of efforts to distribute information and to market conservation hardware, with estimates of cost effectiveness and resulting energy savings. Justification shall be provided for relative emphasis among media for information transfer, among efforts directed toward behavior change as compared with hardware, and among various hardware options promoted.

Edison should also take the initiative to develop and bring before the Commission programs of incentives, including but not limited to subsidies, low-interest loans, and modified rates, for inducing conservation-oriented behavior and investment by end users.

The Energy Conservation Team shall review these programs and advise the Commission of any action which would be appropriate.

Administrative and General Expenses

Tabulated below are Edison's and the Commission's staff's 1976 test year estimated administrative and general expenses together with the adopted results. Edison's presentation was made by Mr. Scofield and the staff's presentation by Mr. Day. The bases for the adopted results are detailed in the ensuing paragraphs.

Acct. No.	Title	Test Year 1976		Utility	Percent	Adopted Results
		Staff	Utility	Exceeds Staff Amount		
(Dollars in Thousands)						
920	Admin. & Gen. Salaries	\$33,481	\$35,666	\$2,185	6.5%	\$33,905
921	Office Supplies & Expenses	8,202	8,202	-	-	8,800
922	Admin. Expenses Trnsf.	(14,297)	(15,047)	(750)	5.2	(14,642)
923	Outside Services Employed	2,077	2,191	114	5.5	2,134
924	Property Insurance	1,470	3,134	1,664	113.2	3,017
925	Injuries & Damages	2,878	2,940	62	2.2	2,909
926	Employee Pensions & Benefits	27,475	27,813	338	1.2	27,644
927	Franchise Requirements	8,907	8,681	(226)	(2.5)	8,798
928	Regulatory Comm. Expenses	231	248	17	7.4	240
929	Duplicate Charges - Credit	(24)	(24)	-	-	(24)
930	Misc. General Expenses	9,754	11,893	2,139	21.9	9,454
931	Rents	1,007	1,007	-	-	1,007
932	Maint. of General Plant	3,887	4,328	441	11.3	4,328
	Subtotal	\$85,048	\$91,032	\$5,984	6.6%	\$87,564
	Adjm. to Public Relations Exp.					(2,050)
	Total					\$85,514

(Red Figure)



Administrative and general expenses include public relations expenses which have been hereinabove discussed. In the absence of complete justification by Edison of all such expenses we have allocated \$750,000 of a total of \$2,800,000 for public relations for conservation, customer services, and other allowable expenses. The adjustment to administrative and general expenses as a result of this allocation is \$2,050,000. In the future the conservation expenses contained under A&G should be budgeted separately under conservation.

Edison's original estimates were based largely on the budgets and forecasts of anticipated expenses furnished in October 1973 by each department and/or division. The basic data for these estimates include prior years' expenditures and reflect anticipated changes in operations. The updated estimate of administrative and general expenses, introduced into evidence on March 20, 1975 included recorded 1974 expenses and revised 1975 and 1976 estimates. These revised estimates reflect function and manpower budget amounts prepared with the objective of maintaining 1974 controllable expenditures at or below 1973 levels, a continuation of the hiring freeze, and the utilization of applicable lay-off procedures to effect approved manpower reductions.

As a starting point in the preparation of his estimate of administrative and general expenses, the staff engineer made an analysis of the actual administrative and general expenditures made during the first ten months of 1974 which included the cost saving program commencing in February 1974. The 10-month recorded administrative and general expense of \$77,054,000 was reduced \$6,496,874 for the Vidal nuclear power plant and \$2,000,000 of nonrecurring increases in the reserve for possible injuries and damages. The remaining \$68,557,126 was further decreased to \$65,000,000 to reflect probable December transfers of research and development expenses. This \$65,000,000 was used as the basic amount for the administrative and general expenses excluding franchise requirements and was distributed to accounts proportionately to Edison's adjusted 1974 budget. The 1975 and 1976 staff estimates were

then developed to reflect expected costs savings and further ratemaking adjustments, labor adjustments, and allowances for expected increases in materials and other expenses which were applied accumulatively by accounts and by years as appropriate. The staff's final estimate was then derived from adjusting 1974 recorded data and adding to that base figure allowances for growth, inflation adjustments, and wage increases.

Accounts 920, Administrative and General Salaries, and 921, Office Supplies and Expenses, include the compensation, office supplies, and expenses of officers, executives, and other employees of the utility properly chargeable to utility operations but not chargeable directly to a particular operating function.

The staff's 1976 test year estimate for Account 920 was derived as detailed above. A downward adjustment of one-half percent was made to the approved budget figure to reflect a full year effect of the cost savings program started early in March 1974. The resulting 1974 adjusted figure was then increased for labor and growth and \$50,000 for a new executive development program in 1975 and an additional \$50,000 for new environmental planning functions. The total thus derived was \$33,480,800 for Account 920 which was rounded to \$33,481,000 or \$2,185,000 less than estimated by Edison. With the exception of the \$414,439 deduction for the 1-1/2 percent further cost saving adjustment, the staff estimate appears reasonable and well-founded. We will, therefore, adopt the staff estimate plus \$414,000 or \$33,905,000 for Account 920, less our public relations expense adjustment.

The staff engineer testified that he adopted Edison's estimate for Account 921 because the application of the same method to estimate this account would have resulted in a higher figure than included in Edison's budget. Under cross-examination, he estimated that the use of this method would have resulted in an estimate of approximately \$8,800,000. If the estimating method is reasonable for Account 920, it is reasonable for Account 921. We will, therefore, adopt the amount of \$8,800,000 for Account 921, less our public relations expense adjustment.

Account 922, Administrative Expenses Transferred-Credit, represents the administrative expenses in Accounts 920 and 921 which are transferred to construction costs. Consistent with our adopted expenses for Accounts 920 and 921, we will adopt a credit of \$14,648,000 for Account 922.

Account 924, Property Insurance, includes the cost of insurance of reserve accruals to protect the utility against losses and damages to owned or leased property used in its utility operation. Edison has, in general, utilized self-insurance for transmission and distribution plant, has separate insurance for its nuclear plant, has "spread-loss"<sup>1/</sup> insurance for the first \$20,000,000 (exclusive of the \$500,000 deductible) of other plant, and conventional insurance for other plant between \$20,000,000 and \$100,000,000.

The annual premium for the spread-loss insurance is \$1,430,000 of which approximately \$280,000 is for administrative fees and the balance of \$1,150,000 is credited to an interest-bearing premium accumulator reserve which is retained by the insurance company. Losses would be paid from this reserve to the extent funds are available. If the loss exceeds the accumulated reserve, the excess would be paid by the insurance carriers and the premium would be adjusted whereby Edison would pay this excess amount plus interest over a period of up to ten years. In the event that the premium accumulation reserve reaches \$9,400,000, the premium would be reduced so as to retain the reserve at that level.

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<sup>1/</sup> As used by Edison the term applies to the spreading of losses over a number of years rather than its more common use of spreading losses among a number of insurance companies.

The staff disallowed the spread-loss premiums on the basis that this insurance was a form of self-insurance in which there is no transfer of risk from Edison to the insurance carriers, that the same results could be obtained by Edison by depositing sums annually in its own cash accounts to cover future property losses, and that the premiums for conventional insurance for approximately the same coverage would be approximately one-half the amount paid. This disallowance of the spread-loss premium by the staff accounts for the major portion of the difference in Edison's and the staff's estimates for Account 924.

According to the rebuttal testimony of Edison's assistant treasurer and manager of insurance, Mr. W. G. Hughes, Jr., Edison implemented its spread-loss insurance for four reasons: (1) overall, the cost of premiums paid would be less and the initial premiums would be approximately equivalent to conventional insurance; (2) Edison was able to obtain \$50,000,000 of earthquake coverage (\$20,000,000 covered by spread-loss) at a time when it would have been difficult to have purchased even half that amount in the regular insurance market; (3) greater stability in terms of a pre-established, level premium payment which is not subject to substantial changes as market conditions change; and (4) such a policy provides greater incentive to the insured to reduce risk by effective loss-preventing activities.

Mr. Hughes further testified that the conventional insurance premiums between the \$20 million and \$100 million coverage amounts was \$425,000 which, added to the spread-loss premiums of \$1,360,000 for 1973 and 1974 and \$1,430,000 for 1975, results in general insurance premiums of \$1,785,000 for 1973 and 1974 and \$1,855,000 for 1975. This compares with recorded amounts of \$469,000 for 1967,

\$524,000 for 1968, \$582,000 for 1969, \$960,000 for 1970, \$876,000 for 1971, and \$1,828,000 for 1972. According to the testimony, the substantial increase in the premium for 1972 over 1971 resulted from Edison's damage claims filed in 1971 as a result of the Sylmar earthquake and two substantial generating station losses which occurred in that year. It is noted that the effect of extraordinary losses occurring in one year is a substantial increase in the amount of premiums paid, not unlike the effect of such losses under the spread-loss policy to which the staff takes exception. It is further noted that the general insurance premiums for the year 1972 closely approximate the 1973, 1974, and 1975 general insurance premiums encompassing the spread-loss concept. Another facet of the spread-loss insurance which should not be overlooked is the effect of experienced losses on the amount of premiums paid. Within the limits of the insurance company's administrative costs and the balance in premium accumulation reserve, the premiums track experienced losses. It appears, therefore, that the insurance plan used by Edison is not at odds with appropriate ratemaking considerations. Consequently, for this proceeding, we will adopt \$3,017,000 for Account 924, consisting of the staff's estimate of \$1,470,000 plus \$1,430,000 spread-loss premium, plus one-half of the difference between Edison's and the staff's estimates excluding the spread-loss premium, as a reasonable operating expense for Account 924. In passing, we note that this amount is less than the \$3,454,000 amount found reasonable for the 1973 test year in Decision No. 81919.

Account 927, Franchise Requirements, is computed by the application of a formula that relates franchise requirements to revenues. Both Edison and the staff used the same formula with the difference in estimates resulting from the inclusion of fuel clause

adjustment revenues by Edison and not by the staff. We will apply this formula to the previously discussed adopted revenues to derive a 1976 test year expense for Account 927 of \$8,798,000.

Account 930, Miscellaneous General Expenses, consists of general management expenses not provided for elsewhere and includes such items as dues and donations, labor and expenses for experimental and general research work, and informational and goodwill advertising. The major differences between Edison's and the staff's estimates are nonlabor and include the following staff deletions: (a) \$500,000 of dues and donations; (b) Huntington Beach write-off of \$547,000; (c) Vidal nuclear plant write-off of \$865,000; and (d) \$652,000 of Edison's estimated informational advertising expense of \$1,000,000.

The staff made an item-by-item analysis of dues and donations and excluded, in a total amount of \$500,000, those deemed to be nonqualifying in line with Commission policy since this Commission's decision in Pacific Telephone and Telegraph Co. D.67369, C.7409 (1964) 62 CPUC 775 at 851, as upheld by the California Supreme Court in Pacific Tel & Tel Co. v Public Utilities Commission (1964) 62 Cal 2d 634 at 668. There the Commission declared a future policy of excluding dues, donations, and contributions by a utility from operating expenses for ratemaking purposes. Upon review, the California Supreme Court expressly held that the policy adopted by the Commission to exclude such contributions from operating expenses for rate fixing purposes is correct. (Pacific Tel. & Tel. Co. v Public Utilities Commission, supra, at 669.) We will adopt the staff's figure for this item.

The staff's exclusion of \$547,000 from Account 930 and its inclusion as a "Special Amortization" in the summary of earnings has no ratemaking effect. This amount is the annual amortization charges

for the abandonment of Units 6 and 7 at Huntington Beach Power Plant. It was transferred out of Account 930 to the summary of earnings to reflect the after taxes effect of this special amortization.

Unlike the Huntington Beach Power Plant write-off the staff's witness excluded from Account 930 and did not include elsewhere an \$265,000 amortization write-off for the Vidal nuclear generating station. He testified that data on the cost savings of the abandonment procedure was unavailable at the time he prepared his estimate so he was unable to determine whether or not it was a prudent abandonment. An Edison witness presented rebuttal testimony on this matter to the effect that: (1) Edison cancelled its contract with General Atomic Company for two 770 megawatt High Temperature Gas-Cooled Reactors (HTGR's) on July 31, 1974; (2) it was stated that customer energy conservation efforts would enable Edison to defer by three to five years the planned operating dates for the units; (3) the time delay would permit the engineering design of relatively more economical 1,500 MW HTGR's for the Vidal location; and (4) General Atomic announced that they would "not undertake any commercial commitments for the HTGR for the time being." We have evaluated the record on this matter and are unable to conclude that Edison has met its burden of proving that this expense ought properly to be borne by its ratepayers. We will, therefore, disallow any inclusion of the Vidal write-off as an expense item for ratemaking purposes.

Our adoption of \$50,000 in Account 930 for informational advertising has been previously discussed under sales expenses.

The difference between the staff's and Edison's estimates for Account 932, Maintenance of General Plant, is \$441,000 or 11.3 percent. The difference derives from the amount of maintenance to be incurred during test year 1976 for Edison's new Rosemead Computer Center. The record shows that the building was occupied in late 1974 and the staff's estimate reflects only the recorded partial year 1974 expense increased by one percent per year. We will adopt Edison's estimate for this account.



Taxes, Other Than Income

These expense items consist of ad valorem or property taxes, miscellaneous taxes, and payroll taxes. The significant differences between Edison's and the staff's estimates of these items is ad valorem taxes. Edison's 1976 test year estimate of this item is \$94,854,000 as compared to the staff's estimate of \$89,577,000, a difference of \$5,277,000. The record shows that Edison overestimated the 1975 assessed evaluation by \$40,000,000 and the tax rate by ten cents per \$100 of assessed value with the result that Edison's estimated 1975 taxes were approximately \$2,200,000 higher than the recorded taxes. The staff's estimated 1975 taxes were only slightly higher than the recorded amount which tends to confirm the accuracy of the staff's 1976 ad valorem tax estimate and justifies its adoption. We will also adopt the staff's estimates, based on later data, of payroll and miscellaneous taxes.

Taxes - Income

There are two areas of differences between Edison's and the staff's 1976 income tax estimates, namely, (1) the staff's inclusion of an \$11,000,000 tax deduction for repair allowance; and (2) the staff's adjustment to reflect the additional investment tax credit of \$11,400,000 for 1976 allowed by the provisions of the Tax Reduction Act of 1975 (TRA).

In 1974 Edison filed an amended federal tax return for 1973 in which it claimed a \$12,372,920 "Repair Allowance" as allowed under the A.D.R. regulations. This repair allowance is elective by each taxpayer each year based on whether or not he can avail himself of the right to take such an allowance. Each type of plant, i.e., nuclear, hydraulic, steam, transmission, distribution, etc., has a specific repair allowance percentage that is permitted within certain limitations. Edison's repair allowance for the year 1973 reflected only transmission and distribution facilities. The allowance for such plant is two percent of the total qualifying plant. The requisite computations for the determination of the repair allowance can only be derived from an analysis of the previous year's completed work orders. Edison's witness testified that it is his belief that the above-mentioned \$12,372,920 repair allowance for 1973 complies with the complex regulations governing such an allowance but that he won't know for sure until IRS audits the books. For this reason, Edison did not include a repair allowance in its estimates for the years 1974, 1975, and 1976.

The staff's engineer multiplied the 1973 repair allowance by the ratio of the average investment tax credit for the years 1973 through 1976 to the actual tax credit taken in 1973 to derive a computed repair allowance of \$11,037,634 which he rounded to \$11,000,000 for ratemaking purposes. This computation method is premised on the indirect relationship that both the ITC and repair allowance bear to current additions. This computed figure of \$11,000,000 compares favorably to the actual repair allowance of \$12,372,920 for 1973 and approximately \$12,000,000 for 1974, appears reasonable, and will be adopted for the purposes of this proceeding.

TRA, signed into law by the President on March 29, 1975, provides, among other things, for an increase in the investment tax credit rate from four percent to 10 percent (seven percent for certain transmission lines) for new qualified plant expenditures made subsequent to January 21, 1975 and before January 1, 1977, when the investment tax credit reverts back to the previous rate.

TRA further provides that those utilities, such as Edison, that use flow-through accounting for tax depreciation elect, by June 26, 1975, one of the following three options applicable to the authorized additional investment tax credit: Option 1-reduce rate base by the amount of the credit to be restored ratably over the book life of the affected properties, Option 2- credit income with the amortization of investment credit over the life of the property (ratable flow-through), or Option 3- flow-through immediately the additional credit to net revenue through reduced tax expense. On June 25, 1975, Edison elected Option 2-ratable flow-through.

TRA also provides that the additional ITC benefits shall not apply if the taxpayer's cost of service for ratemaking purposes is reduced by more than a ratable portion of the allowable credit or if the base to which the taxpayer's rate of return for ratemaking purposes is applied is reduced by reason of any portion of the allowable credit.

In addition to the increased ITC allowances, TRA provided for the acceleration of credit allowances through the exercise of the Qualified Progress Expenditures (QPE) provision permitting the qualifying of a portion of each year's construction expenditures for investment credit. According to the rebuttal testimony of Edison's manager of taxes and assistant secretary, Mr. C. S. Reanders, the total ITC for the years 1975-1979 is as follows:

	<u>1975</u> (1)	<u>1976</u> (2)	<u>1977</u> (3)	<u>1978</u> (4)	<u>1979</u> (5)	<u>Total</u> (6)
	(Thousands of Dollars)					
<u>Flow Through</u>						
1971 Act @ 4%	\$ 6,541	\$ 7,377	\$12,500	\$ 8,600	\$ 7,800	\$ 42,816
Additional from QPE	<u>1,259</u>	<u>5,823</u>	<u>11,200</u>	<u>14,600</u>	<u>21,600</u>	<u>54,482</u>
Tot. Flow Through @ 4%	\$ 7,800	\$13,200	\$23,700	\$23,200	\$29,400	\$ 97,300
<u>Deferred - Option 2</u>						
QPE and Qual'fied Plant	\$ 4,320	\$11,400	\$ 7,200	\$ 4,500	\$ 4,200	\$ 31,620
Additions @6%						
Total ITC	<u>\$12,120</u>	<u>\$24,600</u>	<u>\$30,900</u>	<u>\$27,700</u>	<u>\$33,600</u>	<u>\$128,920</u>

Associate Utilities Engineer, R. U. Joshi, testified that for ratemaking purposes he used direct flow-through for the original four percent investment tax credit, for four percent of the QPE, and for one-fifth of the additional six percent investment tax credit in that particular year. The remaining four-fifths of the additional credit was deducted from rate base. Such a procedure, according to this witness's testimony, would apportion the benefits of the additional ITC between the utility and the ratepayer. The benefits to the ratepayer would be the reduced revenue requirement associated with the tax credit and the benefit to the utility would be the additional cash available to it of \$3,563,000 in 1975, \$11,850,000 in 1976, \$19,505,000 in 1977, \$22,881,000 in 1978, \$27,177,000 in 1979, \$16,727,000 in 1980, \$8,573,000 in 1981, and \$3,126,000 in 1982. The additional cash, according to the testimony, would result in a reduced revenue requirement of \$891,000 in 1975, \$4,077,000 in 1976, \$9,973,000 in 1977, \$18,187,000 in 1978, \$29,529,000 in 1979, \$35,525,000 in 1980, \$32,206,000 in 1981, \$24,102,000 in 1982, and \$15,640,000 in 1983. The staff witness further testified that for the five-year period 1975 through 1979 the additional investment tax credit generated would be \$56,710,000 which under the staff's proposal, would result in \$27,177,000 of increased cash flow for Edison and a reduction of \$29,533,000 in revenue requirement for the ratepayer.

Edison vehemently opposes the staff's ratemaking recommendations on the additional ITC provided by TRA on the following bases: (1) it combines a cost of service adjustment with a rate base adjustment either of which would, in Edison's opinion, deprive it of its ability to obtain the additional ITC benefits provided for by TRA;

(2) the impact of such a loss would be in excess of \$15,000,000 for the year 1976 and, depending on the future action of Congress, for future years could be immense; (3) for the five-year period 1975-1979, the staff's proposal would flow through to the ratepayers 91.4 percent of the ITC benefits amounting to 97.8 percent of the revenue requirement reduction benefits as contrasted to Edison's proposal of flowing through 76.4 percent of the ITC benefits and 87.4 percent of the revenue requirement reduction; and (4) according to Edison the staff's recommendation violates the clear legislative purpose behind TRA of providing for a sharing of such benefits when Option 2 is elected by the utility by the application of ratable flow-through for ratemaking purposes. Mr. Reenders further testified that the selection of Option 2, ratable flow-through, was a prudent act because the effect of such an election is a reduction in external financing requirements and increased marketability of Edison's bonds due to the beneficial effects of normalization on times interest coverage which could result in the extension of the act and other further positive steps by the Federal Government in its efforts to improve the financial integrity of the electric utility industry. According to the testimony, such actions would assist Edison in the financing of new production facilities as intended by Congress. Similar arguments were advanced by Southern California Gas Company (SoCal) in connection with Application No. 55676 and Application No. 55544 for offset increases and by San Diego Gas & Electric Company (SDG&E) in connection with Application No. 55677 and Application No. 55543 for offset increases as justification for their election of Option 2.

In Decision No. 85627 dated March 30, 1976, in regard to SoCal, we reflected the decrease in investor risk associated with the increase in before taxes times interest coverage and the decrease in external financing requirements resulting from the election of Option 2 by a reduction of 0.25 percent in the authorized rate of return and, in regard to SDG&E, we accepted its election of Option 2 but served notice of again reviewing the issue in connection with its next general rate proceeding. Similarly, as previously noted, we included the decreased investor risk associated with Edison's election of Option 2 as a factor considered in arriving at our determination of a proper rate of return to authorize in this proceeding.

Depreciation Expense

For the test year 1976 the staff estimate for depreciation expense presented by Senior Utilities Engineer H. L. Ong is \$123,328,000 exclusive of any wage adjustment whereas Edison's estimate for depreciation expense presented its valuation engineer, A. B. Bowker, for the same test year is \$136,491,000, a difference of \$13,163,000. Of this amount, \$253,700 is attributable to a lower staff estimate of plant additions and \$1,179,000 is due to the utilization of different lives for experimental transmission plant. The remaining \$11,730,000 differential results from use by the staff of lower depreciation rates for transmission, distribution, and general plant accounts. The record shows that the staff's lower depreciation rates derive primarily from the staff's utilization of relatively higher future net salvage ratios which in turn results from the different treatment accorded "other items". As discussed on the record in this proceeding "other items" include monies paid Edison for the relocation of facilities and the settlement of damage claims, losses covered by Edison's self-insurance plans, the sales

of utility plant such as in condemnation proceedings and reserve transfer and adjustment bookkeeping entries. In the past reimbursement received for such relocation and similar work was accounted for by (a) crediting operation and maintenance expenses to the extent of actual expenses occasioned by the plant changes and (b) crediting the remainder to contributions in aid of construction. The depreciation expense associated with this plant was used to reduce the balance of contributions in aid of construction. Under such an accounting procedure monies received as detailed above had no effect on the depreciation accrual amount. The staff engineer testified that, in his opinion, the accounting for reimbursements received from other parties should be done in accordance with NAKUC Rule No. 67 which states in part:

"The cost of plant retirement should be accounted for in accordance with the rule applicable thereto. The cost of new plant should be included in the appropriate plant accounts at actual cost of construction. The reimbursement received shall be accounted for (a) by crediting operation and maintenance expenses to the extent of actual expenses associated by the plant changes and (b) crediting the remainder to the reserve for depreciation, unless contractual terms definitely characterize residual or specific accounts as applicable to the cost of replacement. In the latter event, appropriate credit should be entered to the plant account."

Such a procedure would result in decreased depreciation accruals by either reducing the balance in plant accounts or increasing the balance in depreciation reserve. Another factor affecting "other items" was FPC Order No. 490 which eliminated Account 271, Contributions In Aid of Construction, effective January 1, 1974. As of that date the account balance for plant in service was ordered transferred to appropriate plant accounts and the residue of the account balance went to depreciation reserve. As a result of this order Edison adjusted its plant balances \$86,710,657.23 and its depreciation reserve \$13,170,935.73.



According to the staff engineer's testimony, the Commission staff's Standard Practice U-4, "Determination of Straight-Line Remaining Life Depreciation Accruals", states that future net salvage represents an estimate of the dollars which will be realized from the future retirement of all units now in service and that net salvage is gross salvage realized from resale, re-use, or scrap disposal of the retired units less cost of removal. In his opinion, "other items" fall within these parameters. This witness further testified that his estimates, although based on recorded data for the period 1969 through 1973, reflect a decrease in the percent of future net salvage from 18.73 to 17.46 percent. He contrasts these percentages with Edison's estimates indicating a decrease in future net salvage from 18.46 to 8.61 percent within a three-year period. He testified to his belief that such a radical change is completely unrealistic and unreasonable. Edison asserts that this rapid decline in the percentage of future net salvage to be realized indicates only that past practices have resulted in underaccruing for depreciation and not that its test year estimates are unreasonable.

Edison further argues that the money received as compensation for relocations is credited directly to expense and, thereby, results in a reduction in the recorded cost of operations. It is its viewpoint that to consider such monies in the nature of salvage in the development of depreciation expense is clearly a duplication of the reduction in cost of service.

We agree with the staff contention that monies received from governmental agencies for relocation work and similar projects are properly includable in deriving future net salvage in computing depreciation expense and accruals. However, in view of marked decline in freeway construction and other similar work that would normally produce monies for such relocation projects for inclusion as "other items", we will reduce the amount of monies to be received from such projects to one-half the amount included in the staff's estimates.

The staff witness also testified that Edison proposes to revise the average service lives for 15 plant accounts. With the exception of two accounts, Account 366, Underground Conduit, and Account 368, Line Transformers, Edison's proposed changes appear to the staff engineer to be reasonable. With respect to these two accounts Edison proposes to reduce the average service life for Account 366 plant from 75 to 45 and for Account 368 from 30 to 21 years. The staff used Edison's retirement data to develop average service lives for Account 366 by the Brennan, Bauhan, and Garland methods for spans of five, 10, and 15 years. The average service lives thus developed ranged from 35 to 74 years indicating to the staff engineer that a reduction of service lives for this account was warranted but that 55 years would be more appropriate than the 45 year life proposed by Edison. Similar studies made for Account 368 plant indicated a spread of average service lives ranging from 19 to 27 years resulting in the staff engineer's recommendation of an

average service life of 24 years as compared to Edison's proposed use of 21 years. We will adopt an approximate midpoint of the spread of service life indicated by the three studies for these two accounts resulting in the utilization of a service life of 55 years for Account 366 and 23 years for Account 368.

Our adopted test year depreciation expense will therefore be \$131,171,000 reflecting the staff's estimated depreciation expense increased by \$7,400,000 to reflect less relocation work and \$443,000 to reflect a decrease in the average service life of Account 368 plant from 24 to 23 years.

#### C - RATE BASE

##### General

For the test year 1976 the Commission staff's estimate of rate base presented by Mr. Ong exclusive of wage adjustment was \$3,838,830,000 as compared to Edison's estimate presented by its senior plant appraiser, Mr. L. O. Chubb, of \$4,338,300,000, a difference of \$499,470,000 or 13.1 percent. As shown in the following tabulation the primary differences in estimates in order of diminishing magnitude are: (a) the staff's disallowance of any nonoperative construction work in progress, (b) the staff's use of weighted average rather than year-end balances of replacement plant and/or plant installed to meet environmental requirements when such plant will not contribute to increased production or revenues, (c) the staff's recommended reduction in fossil fuel stock in the working capital allowance, and (d) the staff's assumed reduction of additions in distribution transformer plant as a result of the continuation of Edison's transformer load management program.

Item	Staff (000)	Edison (000)	Adopted <sup>1/</sup> (000)
<u>Utility Plant</u>			
Beg. of Yr. Plt. in Service	\$4,433,281	\$4,438,000	\$4,433,281
Nuclear fuel, Oper. CWIP	111,000	111,000	111,000
Prop. Held Future Use	59,502	61,000	61,000
Nonoperative CWIP	-	310,000	-
Total Beg. of Yr.	<u>\$4,603,783</u>	<u>\$4,920,000</u>	<u>\$4,605,281</u>
<u>Weighted Average Additions</u>			
Plant in Service <sup>2/</sup>	\$ 57,169	\$ 61,200	\$ 59,169
Nuc. Fuel & Oper. CWIP	9,400	9,400	9,400
Prop. Held Future Use	1,325	1,900	1,900
Nonoperative CWIP	-	90,000	-
Special Items - Nonweighted	-	66,000	-
Total Wt. Avg. Adds	<u>\$ 67,894</u>	<u>\$ 228,500</u>	<u>\$ 70,469</u>
<u>Adjustments (Cust. Advances)</u>	<u>\$ (19,273)</u>	<u>\$ (19,000)</u>	<u>\$ (19,273)</u>
<u>Working Capital</u>			
Fuel Stock - Fossil	\$ 209,105	\$ 256,200	\$ 192,187
M&S and Fuel Prepayment	29,400	29,400	29,400
Working Cash Allowance	179,864	164,000	161,292
Total Working Capital	<u>\$ 418,369</u>	<u>\$ 449,600</u>	<u>\$ 382,879</u>
Total Before Deductions of Reserve	<u>\$5,070,773</u>	<u>\$5,579,100</u>	<u>\$5,039,356</u>
Deductions for Reserve Rate Base	<u>\$1,231,943</u>	<u>\$1,240,800</u>	<u>\$1,237,220</u>
	<u>\$3,838,830</u>	<u>\$4,338,300</u>	<u>\$3,802,136</u>

1/ Basis for adopted figures set forth in ensuing paragraphs.

2/ Includes additions of distribution line transformers.

Nonoperative CWIP in Rate Base

The inclusion or exclusion of nonoperative construction work in progress (NOCWIP), involves a question of fundamental regulatory policy. Historically, utilities subject to this Commission's jurisdiction have accrued an allowance for funds used during construction (ADC) on CWIP. This was done to capitalize the carrying charges or financing cost during the period when the plant is under construction. The ADC so applied is capitalized as part of the total construction cost when the plant becomes operative.

Such CWIP included in the ADC base has thus been excluded from rate base on the theory that ratepayers should pay a return only on revenue produced by plant that is used and useful for utility services supplied. Edison proposes to include NOCWIP in rate base as a means of improving its cash flow to reduce its external capital requirements needed to finance its ongoing construction programs. Edison contends that with a plant expenditure program projected at almost three billion dollars for the five-year period 1974 through 1978 (excluding refunding requirements) of which capital from external resources exceeds 2.1 billion dollars any procedure which will reduce the need for additional outside capital will aid materially in meeting such financing requirements. Mr. Smith Davis testified that the inclusion of NOCWIP in rate base at rates of return in the nine to 10 percent range would reduce its reliance on outside sources of capital by approximately \$138,000,000 by the third year or 10 percent of its capital requirements and result in a reduction of dividend requirements of over \$9,000,000.

In the past when both construction time and cost of capital were relatively much less than at present the inclusion or exclusion of NOCWIP in rate base had a very minor effect on a utility's financing. In this matter, however, with the \$400,000,000 NOCWIP that Edison requests be included in rate base representing in excess of ten percent of the staff's estimated test year rate base, with the current allowance for interest during construction rate at the eight percent level, and with the cost of capital approaching the nine percent level, we will review our position on this issue.

Testimony and exhibits on the inclusion of NOCWIP in rate base were presented on behalf of the Commission staff by Mr. Ong and by Financial Examiner J. A. Bilci and on behalf of Edison by Mr. Smith Davis and Mr. L. Chubb. The staff's financial examiner urged the Commission to consider that the inclusion of NOCWIP in rate base will result in a minimal improvement in cash flow, will have the effect of shifting revenue requirements from future customers to present day customers, and could eliminate or reduce Edison's incentive to expedite the completion of construction projects since uncompleted projects were included in the same rate of return computations as completed plant in service. He noted, however, that over the life of the plant the inclusion of NOCWIP in rate base results in a smaller total revenue requirement for the ratepayer than if an allowance for funds used during this construction is added to the dollar amounts of CWIP and the total is included in future rate base computations. He further recommended that if we permit NOCWIP in rate base that Edison be allowed to include only \$300,000,000 of NOCWIP in rate base rather than the requested \$400,000,000 amount and, also, that Edison be ordered to prepare a study to show the

impact on other methods of improving cash flow and bond interest coverage that are available to it. He further testified that inadequate cash flow is a serious problem facing many utilities but that absent any showing that the inclusion of NOCWIP in rate base is the best alternative available to Edison to increase its cash flow he is in no position to make a positive recommendation urging that Edison's request be granted. The staff witness also mentioned the fact that every dollar of cash flow resulting from the allowance of NOCWIP in rate base requires two dollars of revenue be supplied by the ratepayer which, in his opinion, has a dampening effect on the initial appeal of such action.

In our recent decision concerning PG&E (Decision No. 86281 dated August 24, 1976 in Application No. 55509), we reviewed in detail our position on CWIP and came to the conclusion that CWIP should not be included in rate base. We are not persuaded that Edison's financial position is so different from PG&E's that we should arrive at a different result.

We are acutely aware of the benefits and burdens created by including CWIP in rate base, and in the PG&E decision we suggested possible alternatives, especially one that would expedite the inclusion in rate base of plant as it comes on line. But our conclusion in PG&E is equally applicable here, where we said:

"We recognize that with the unprecedented demands for new capital presently confronting utilities that they are obliged to seek new and different methods of financing, including customer participation in raising funds for plant construction. At the same time, we have a continuing concern that because of the impact of income taxes that proposals such as inclusion of CWIP in rate base require more than \$2 of added revenues from customers for each dollar of additional cash flow finally made available to the utility. We urge applicant to carefully explore all methods of customer participation in meeting financial needs that will eliminate this 'two-to-one' tax effect." (Decision No. 86281, page 52.)

It has been brought to our attention that as part of the overall treatment of CWIP is the subsidiary issue of "phantom" taxes. This issue arises from the tax treatment of ITC and bond interest relating to CWIP and interest during construction. In Edison's next rate case we will expect Edison and the staff to present evidence and exhibits showing the tax treatment resulting from various methods of considering CWIP and interest during construction.

Special Items - Nonweighted

Edison proposes to depart further from historical rate base considerations by the inclusion in rate base of the year-end, rather than weighted average, balance of \$66,000,000 of certain nonrevenue increasing items such as replacement plan and plant installed to meet environmental requirements. For the test year 1976, Edison proposes to discontinue the inclusion of these special items in the ADC base and include them in rate base at their year-end balance rather than on the basis of completed weighted average additions.



These replacement items, consisting generally of deteriorated distribution plant, storm damaged items, and overhead-to-underground conversion projects, appear to have relatively short construction periods and, therefore, no departure from past practices appears justified. Also lacking in this record is convincing evidence that justifies special treatment of environmental items as contrasted with other NOCWIP. Consequently, the special items will be included in the ADC base until completed and placed in service when they will be included in rate base on a weighted average basis as has been done historically.

#### Fossil Fuel Stock Estimate

Fossil fuel stock is comprised of fuel oil and coal in inventory for the operation of fossil fuel generating plants. To safeguard against the impact of possible involuntary energy curtailment, Edison maintains sufficient quantities of fuel stock to operate for approximately 90 days. The month-end inventory of fuel oil is derived by deducting the current month's burn from the previous month-end inventory on a first-in-first-out (FIFO) basis, and then adding in quantities received during the month at the current market price. In computing its inventory balances, Edison utilized the recorded average balances of fuel oil stock. It is the staff's position that such balances reflect more than a normal supply due to the 1974 above average availability of hydrogenerated energy which reduced the amount of oil burned to below average year quantities.

In Decision No. 84577 dated June 24, 1975 in Application No. 55198, we found that the fuel oil inventory of 14,600,000 barrels estimated for year-end 1975 represented approximately the 90-day supply required to protect Edison against an interruption in supply. We will adopt the 14,600,000 barrels as the amount of fuel oil to be included as fossil fuel stock which at \$15.868 per barrel utilized by the staff engineer in the preparation of his estimate results in a rate base allowance of \$231,673,000 excluding an adjustment for unpaid invoices. The staff used the average percentage of unpaid invoices of 25.87 percent for the years 1971 through 1974, whereas Edison's unpaid invoice adjustment figure was 20 percent based on the weighted average dollar amount for the period 1971 through 1974. In view of the abnormally low dollar value of purchases made during the year 1974 because of the availability of greater than average energy supplies from the Pacific Northwest, the utilization of weighted dollar figures including such an abnormal year would tend to distort the results. Consequently, we will adopt the staff's unpaid invoice balance rounded to 25 percent. Under these circumstances, the fossil fuel stock allowance which we will adopt for ratemaking purposes is \$192,187,000 consisting of 75 percent of the adopted fuel oil inventory amount and \$19,433,000 for other fossil fuel.

Transformer Load Management

The staff witness noted that Edison increased its Account 583, Overhead Line Expense, \$1,090,000 in 1975 and \$1,450,000 in 1976 for the escalation of its transformer load management program (TLM). He reflected these increased TLM expenses by a reduction of

Edison's budgeted distribution transformer plant additions of \$4,719,000 for the year 1975 and \$8,333,000 for the test year 1976. The \$8,333,000 figure was based on information supplied by Edison that TLM had resulted in a reduction in distribution plant below that which would have been required absent TLM of \$50,000,000 in a six-year period. It is Edison's position that the reduction of \$50,000,000 in rate base results in annual savings in return and depreciation expense in excess of \$9,000,000, and justifies continuation of the program. Edison argues that there is no basis for assuming a continuation of the \$8,333,000 reduction in transformer plant additions. The record shows that Edison estimates that the reduction in transformer additions for the test year 1976 would be \$3,200,000 or \$1,600,000 on a weighted average basis. Edison's contention that the initial annual reduction in plant additions of \$8,333,000 will not be sustained appears logical but an approximate two-thirds reduction in the savings in plant additions appears excessive. We will therefore adopt the staff's estimate of \$4,433,281,000 beginning-of-year plant in service and \$59,169,000 weighted average additions to plant in service to reflect a reduction in transformer plant additions of approximately \$4,000,000 over the budgeted amount as a result of TLM.

Ormond Beach Plant Cost

The Ormond Beach generating station was charged with the cost of a contract to construct an off-shore marine oil pipeline mooring facility. Edison consummated this contract without receiving prior approval from responsible governmental agencies. The approval was denied and the project was terminated in 1973 at a cost to Edison of approximately \$670,000. This amount was retained in the work order costs for the utility plant. The staff's financial examiner recommends that the item be removed from the utility plant accounts

and that Edison strengthen its procedure for receiving permit approval before undertaking similar projects in the future. It is axiomatic that some design and engineering costs have to be incurred prior to receipt of governmental approval on a contemplated project in order to have sufficient information upon which to base a request for such governmental approval. Under these circumstances, we will permit the disputed plant costs to remain in rate base.

#### D - SUMMARY OF EARNINGS

In 1964 the United States Supreme Court held that the sale of electric energy to the city of Colton was a sale at wholesale in interstate commerce within the meaning of the Federal Power Act. (Southern California Edison Company and California Public Utilities Commission v Federal Power Commission and city of Colton (1964) 376 US 205, 11 L ed 2d, 638.) As a result of that decision, it is necessary in proceedings, as in this one, where resale service is present to segregate revenues and allocate expense and rate base items between those subject to our jurisdiction and those subject to the jurisdiction of other regulatory agencies. The following tabulation summarizes the previously discussed adopted results of operations and, utilizing the subsequently discussed monthly peak responsibility method, the apportionment of revenues and allocation of expense and rate base items between those subject to our jurisdiction and those that are not.

SUMMARY OF EARNINGS  
Year 1976 at Present Rates

Item	System	CPUC
(Dollars in Thousands)		
<u>Operating Revenues</u>		
Revenues 1/	\$1,232,883	\$1,166,807
<u>Operating Expenses</u>		
Production 2/	480,061	442,685
Transmission	37,299	34,635
Distribution	64,677	64,584
Customer Accounts	30,901	30,890
Sales	1,984	1,984
Conservation Program Expense	2,400	2,400
Administration & General	85,584	82,832
Subtotal	<u>702,906</u>	<u>660,010</u>
Special Amortization 3/	547	529
Net Wage Adjustment	(8,948)	(8,656)
Depreciation	131,171	126,294
Taxes Other Than Income	100,169	95,936
Income Taxes	32,054	30,652
Total Operating Expense	<u>957,899</u>	<u>904,765</u>
Net Operating Revenue	274,984	262,042
Rate Base	3,802,136	3,629,462
Rate of Return	7.23%	7.22%

(Red Figure)

- 1/ At base rates established by Decision No. 81919.
- 2/ At unit costs and fuel mix adopted in Decision No. 81919.
- 3/ Huntington Beach write-off.

## V - COST ALLOCATION

### General

This Commission, together with numerous other utility regulatory agencies and practitioners, has consistently held that cost-of-service is an important guideline in the reasonable apportionment of overall revenue increases among the various customer groups. For any given operation, the method of classifying expense and rate base items into components and allocating these components to the various groups can materially affect the groups' indicated costs of service. Under these circumstances, it is not surprising that representatives of a particular customer group would advocate classification and allocation methods that cast their group in the most advantageous light. Evidentiary cost allocation material was presented in this proceeding by Edison, the Commission staff, TURN, Kaiser, CMA, Committee, and Government.

As previously stated, it was first necessary to segregate revenues and allocate expense and rate base items between those subject to our jurisdiction and those subject to the jurisdiction of other regulatory agencies. CPUC jurisdictional expense and rate base items were then allocated to the following customer groups: Domestic (Schedules D-1/6, DWL, and portion of OL-1); Lighting and Small Power (Schedules A-1/6, P-1, TC-1, and a portion of OL-1); Large Power (Schedule A-7 and Sequoia Park); Very Large Power (Schedule A-8 and Edwards A.F.B.); Agricultural Power (Schedules PA-1 and 2); Street Lighting (Schedules LS-1 and 2); and Off-peak (MWD).

After the overall costs to serve have been established by an appropriate results of operation study, the first steps in the process of arrangement of cost groups for purposes of allocation are functionalization and classification. In this proceeding expenses and rate base items, exclusive of Santa Catalina Island, Pacific Intertie, Other Electric Revenue, Fringe, and Pooling contracts, are functionalized into Power Pool and Distributing System and classified into demand, commodity, and customer components.

Consistent with its showing in its recent rate increase applications, Edison classified as commodity the following: 100 percent of its production fuel expense; that portion of purchased power expense computed by the energy charge; certain items from production-other expense; 50 percent of all hydro expenses (including O&M, A&G, depreciation, taxes, and return); percentages of production maintenance costs, and fossil fuel handling costs. Classified as demand component are the remainder of production-other expenses and purchased power expense, production rate base, and all transmission expenses and rate base. Distributing system expenses and rate base items were classified between commodity, demand, and customer components by analysis. The Commission staff's witnesses, Supervising Utilities Engineer D. L. Houck and Senior Utilities Engineer P. E. Golsan, Jr., used the same classification procedure as Edison.

Statements of the alleged inappropriateness of some of the above classifications were included in the testimony of some of the various witnesses. G. B. Scheer, testifying on behalf of Kaiser Steel Corporation (Kaiser), and D. J. Reed, testifying on behalf of Government, both took issue with Edison's and staff's classification of 100 percent of fuel and fuel handling expense

as commodity stating that, in their opinion, no-load fuel and fuel handling costs should be included in the demand component. In support of his position on no-load fuel, Mr. Reed quoted excerpts from the NARUC Cost Allocation Manual indicating that fuel is the best example of an energy-related cost, at least, beyond the level of no-load fuel and that some argue that no-load fuel should be classified as demand component. He also noted that both the staff and the utility treated no-load fuel as a demand cost in cost allocation studies prepared in connection with PG&E's Application No. 54279. Edison's assistant manager of the Systems Operation Division of the Power Supply Department, M. H. Kent, testified that Edison does not operate its generating units at no-load, but provides spinning reserve from a number of partially loaded units. Such operations justify the exclusion of no-load fuel (assuming that a reasonable figure could be derived) from the demand component. We will, therefore, accept the staff's and Edison's classification of fuel as 100 percent commodity.

Mr. Reed further quoted from the NARUC Cost Allocation Manual to support the classification of fuel handling expense as being demand related as follows:

"Some utilities have considerable plant investment in fuel handling equipment, such as piping for natural gas, oil, or slurry, and nuclear fuel handling equipment. If the fuel were delivered to the plant, rather than through the utilities' equipment, the cost of the fuel would reflect any costs associated with delivering the fuel to the plant. Therefore, it is sometimes argued that the plant-related costs of the fuel-handling equipment should be classified as an energy-related cost. It should be evident, however, that such investment, while unaffected by variations in energy use, is directly related to the capacity requirements of the utility." (Emphasis added by witness.)



Such a statement supports the witness' position that fuel handling costs should be classified for inclusion in the demand component. However, FPC Order No. 421 (Docket No. R-391) added Item 4 for inclusion in Account No. 151, Fuel Stock, on the basis that these costs should be included in the fuel stock account so that the cost of fuel would be more accurately reflected. Item 4 reads:

"Operating, maintenance and depreciation expenses and ad valorem taxes on utility-owned transportation equipment used to transport fuel from the point of acquisition to the unloading point."

With the FPC requirement that fuel handling cost be included as a cost in the fuel stock account the staff's and Edison's inclusion of these costs in the commodity component is appropriate.

Edison's chief regulatory cost engineer, E. R. Sample, was cross-examined in detail on the basis for the classification of 50 percent of hydro expenses as being energy-related for inclusion in the commodity component. He responded that only the energy available during an adverse hydro year could be considered as dependable capacity and, therefore, only those rate base and expense items related to this dependable capacity, expressed as a percentage of total hydro rate base and expense items, are properly included in the demand component. On the Edison system, according to this witness' testimony, adverse hydro year generation is approximately one-half that of an average hydro year generation forming the basis for the 50 percent figure. This methodology is discussed as an acceptable basis for classification of hydro rate base and expense items in the NARUC manual. In view of Edison's past practices and the general acceptability of this method, its adoption in this proceeding is warranted.

The record indicates that most of the rate base and expense items relating to the distributing system are classified by Edison as includable in the customer component. In sharp contrast to this practice, Dr. Coyle of TURN would include in the customer component only costs relating to meters, services, and customer accounting and collecting and Dr. Dunn of Committee would include only the costs of metering, billing, customer accounting, service to customers, uncollectibles, and the ownership and maintenance cost of that portion of the distribution system actually used to serve a given class. The other distributing system items would be classified by both of these witnesses as demand related. Such positions are generally supported by the NARUC manual which specifies either the minimum size of facilities or the zero intercept methods of classifying distribution facility items between demand and customer components. Mr. Sample, in his rebuttal testimony supporting Edison's method of classification of distribution facility items to customer groups, stated that the allocations are based on the weighted number of customers and the use of weighting factors which reflect size and usage, and produce results that are not dissimilar to those obtained by the use of methods advocated by others. Edison's position does not appear unreasonable and we will not further pursue the matter at this time. We will, however, place Edison on notice that the similarity of results produced by Edison's method and either of the two methods discussed in the NARUC manual will have to be satisfactorily verified before we will accept such results in future proceedings.

Allocation of Demand-Related Costs

The allocation of the commodity component to groups on the basis of kilowatt-hour sales at a common level and the allocation of the customer component to groups on the basis of average or weighted number of customers is relatively straightforward and noncontroversial. The basis for the allocation of the demand component, however, can be, and often is, highly controversial. The three methods discussed in detail on the record in this proceeding were the Load Factor-Diversity Factor (LFDF), the Maximum Non-Coincident Demand (NCD), and the Monthly Peak Responsibility (MPR) methods. The record shows that Edison has used the LFDF method for the allocation of the demand component to customer groups since 1952 and the MPR method for the allocation of this component to jurisdictions since 1970. In both Decision No. 78802 dated June 15, 1971 in Application No. 52336 and Decision No. 81919 we found these methods of allocating rate base and expense items between jurisdictions and California jurisdictional customer groups reasonable.

In general the results derived from the application of the NCD method produce results that favor the relatively high load factor groups whereas the MPR results favor the relatively low load factor groups. It is, therefore, not surprising that Mr. Reed, testifying on behalf of Government, advocated the use of the NCD method of allocating demand-related items, whereas Dr. Coyle, testifying on behalf of TURN, urged the use of the MPR method for such allocations. Both of these witnesses, although presenting widely divergent viewpoints, took issue with both the theoretical validity and the practical application of the LFDF method.

Mr. Reed testified that the LFDF method is a cost reclassification rather than a cost allocation method. He stated that once the costs have been classified as between demand-related costs and commodity-related costs the application of LFDF formulae to the demand-related costs results, in the case of Edison, in approximately 20 percent of the demand-related costs being reclassified as commodity-related costs. Mr. Reed's prepared testimony (Exhibit 100) contained quotes from articles by such well-known utility regulatory theorists as C. S. Reed, H. W. Hill, and Constantine Bary supporting the following conclusions on the LFDF method of allocating demand-related rate base and expense items: (1) the LFDF method encourages low monthly and low annual load factors because it rewards the type of customer whose load characteristic is minimal to the best interests of the utility; (2) within the actual range of load factors utilized for cost-of-service studies, the contribution of a customer group to the system peak demand is independent of the customer group's annual load factor invalidating the theoretical conclusion that the LFDF method allocates diversity benefits in proportion to each customer group's contribution to such benefits; and (3) diversity and coincident factors of customer groups are materially influenced by the variance of weather conditions from normal weather conditions. The LFDF method of allocating demand-related items differs from the NCD method in the apportionment of diversity benefits. This differential is reflected in the apportionment of a percentage of the demand-related costs on the basis of average demands and the remainder on the basis of maximum non-coincident demands. The mathematical result of this procedure is the same as though a portion of the demand-related items were to be reclassified

as commodity. There is, however, a theoretical differential which cannot be overlooked and that is that the apportionment of costs on average demand is a demand and not a commodity apportionment. It is noted that although Mr. Reed quotes widely from various portions of the NARUC manual there are no quotes from Chapter VII "Summary of Results and Conclusions". Of particular interest in this discussion is the following quote relating to the Load Factor-Excess Demand (LFED) method which yields the same customer group total allocated costs as the LFDF:

"The Load Factor-Excess Demand method is based on the premise that a linear relationship exists between a customer group demand coincidence and load factor. The application of this method allocates proportionately less of the diversity benefits to the high load factor customer groups and more to the low load factor groups. The Load Factor-Excess Demand method is recommended as a suitable vehicle to properly allocate costs where a number of significant peak loads increase the probability of greater participation by the high load factor customers."

Mr. Houck advocated the use of the MPR method for the allocation of California jurisdictional power pool costs and the LFDF method for the allocation of distributing system costs. Dr. Coyle in his prepared testimony (Exhibit 98) stated that the NCD method, applicable to approximately 80 percent of the demand-related items on the Edison system, is not appropriate for allocating demand costs on the basis that it gives no consideration to the time of customer group peak demand as related to system peak demands. He agrees with the staff that MPR should be used for the California jurisdictional allocations as well as for the allocations between jurisdictions.

In its brief, Edison argues that the MPR method has two serious defects that preclude its suitability for use for California jurisdictional allocations in this proceeding: (1) lack of data indicating what the simultaneous peak of the customer groups is at the time of system peak; and (2) the wide variation of results that could obtain as a result of the shifting of time of system peak. It is obvious from the record that there is some validity to both of these purported defects. The lack of suitable data is highlighted by the staff's presentation (Exhibit 95) wherein the MPR results are shown for a composite customer group consisting of Lighting and Small Power, Agricultural and Pumping, Street Lighting, and Off-Peak because of the unavailability of data for the individual customer groups. In addition, as argued in Government's briefs, the accuracy of the allocations based on 1973 test data, the year in which OPEC embargoed oil with the result that this Commission instituted conservation regulations, coupled with the experienced mild winter, is highly questionable. In spite of these infirmities, however, the results presented in the staff's study serve a useful purpose in emphasizing the spread of results obtainable by the use of the various widely accepted alternate methods available for classification and allocation of demand-related costs.

After a careful review of the exhaustive and detailed cost allocation data contained in the record of this proceeding, we are persuaded that the MPR method for jurisdictional allocations is reasonable and should be extended for California jurisdictional operations in the manner recommended by our staff.

We are putting Edison on notice, however, that it should expand its load study program to enable an MPR allocation of demand costs between all customer groups to be made in any future rate proceeding before this Commission. Edison is well aware of the Commission's orders concerning time-of-day rates for electric

service. Customer groups which benefit the system by shifting loads off the system peak due to the implementation of time-of-day rates, load management programs, or conservation efforts, would receive a commensurate reduction in assigned costs under a peak responsibility method of allocating such costs. Because of this compatibility of peak responsibility allocation with load shifting practices being promoted by this Commission, we expect Edison to submit alternate allocation studies for production and transmission demand related costs in any future rate proceeding it may file before this Commission.

## VI - RATE DESIGN

### General

The apportionment of any authorized increase to the various customer groups and the appropriate design for the various rates within the respective groups were by far the most controverted issues raised in this proceeding. Most of the testimony and exhibits presented by other than the Commission staff and Edison related to this subject. In order of their appearance, presentations were made by Norman E. Nichols and Dennis B. Whitney, on behalf of the Los Angeles Department of Water and Power; George B. Scheer, on behalf of Kaiser Steel Corporation; D. J. Reed, on behalf of the U. S. Department of Defense; Lloyd H. Harvego, on behalf of California Department of Water Resources; Emerson Lewis, Richard B. Pool, and Silas L. Yount, on behalf of California Manufacturers Association; Dr. Eugene P. Coyle, on behalf of TURN; Dr. C. L. Dunn, on behalf of Committee; D. J. Reed, on behalf of California Manufacturers Association; W. J. Govan, on behalf of Committee; John F. Roberts, Jr., and Norman Busch, on behalf of Western Mobilehome Association; and Dennis Kavanagh, on behalf of Golden State Mobilehome Owners League.

However, only Edison and the Commission staff proposed a complete set of rates. Edison's proposed rates, presented by its manager of rates, John L. Dee, purportedly reflect consideration of many factors including rate history, revenue stability, characteristics of use, zoning criteria, comparison with other utilities, cost-of-

service, environmental factors, value of service, and comparative considerations, together with reliance on judgment and experience in applying such factors to reach a conclusion as to proper rate design. In general, the changes in rate design from prior rates contained in Edison's proposals reflect a leveling of the rates from the initial block to the terminal block, substantial increases in the customer charge in the domestic and general service rates, and substantial increases in the demand charges of the large power and very large power rates.

The staff's recommended rates presented by Mr. Houck were designed to yield 50 percent and 100 percent of the requested revenue increase with the intent that the relative apportionment of any authorized increase could be interpolated for intermediate values. The staff first designed domestic rate alternatives consistent with its interpretation of our lifeline rate policy enunciated in Decision No. 84902. At the 100 percent of requested increase level, this amounted to approximately \$51 million. According to the testimony, the remaining \$287 million of the requested increase was apportioned to the remaining customer groups after considering various factors such as the relative variation in rates of return between large power and very large power customers and their relationship to the other customer groups and the total company return and the relative percentage increases that would result for the various customer groups.



Related Matters

At the time of issuance of Decision No. 85294 granting Edison a partial general rate increase we had before us three matters affecting the overall rate design issue on this matter as follows: Case No. 9804, our investigation into changes, if any, to be made to electric rate structures to encourage conservation of electricity; Case No. 9886, our investigation into electric utility fuel cost adjustment tariff provisions and procedures; and Case No. 9988, our investigation into the determination of a lifeline volume of gas and a lifeline quantity of electricity and into gas and electric utility rate structures and the changes, if any, that should be made in presently constituted rate structures to provide a lifeline quantity of energy to the average residential user for specified end uses. Decision No. 85559 dated March 16, 1976, Decision No. 85731 dated April 27, 1976, and Decision No. 86087 dated July 13, 1976 were rendered on these matters. Many of the active participants in this proceeding were also active participants in one or more of the above proceedings with the result that parallel presentations were sometimes made in two or more of these proceedings.

Case No. 9804 was undertaken pursuant to the request of Legislature in Assembly Concurrent Resolution No. 192 urging a thorough investigation of alternate rate structures designed to discourage rather than encourage increased consumption of electricity. The alternatives specified for inclusion in the investigation were discount prices for reduced consumption, placing all increases in tailblocks, inversion of rate structure, time of day pricing, seasonal peak pricing, and marginal cost pricing. In addition, we expanded our investigation to include rates based on price elasticity, special rates for large domestic

users, rates for small domestic users, rates related to peak loads, and other relevant alternatives. Decision No. 85559 requires the major electric respondents, including Edison, to file time-of-day pricing tariffs for large usage customers having the requisite metering equipment, to install additional metering for customers whose demand exceeds 500 KW and file time-of-day tariffs for such customers, submit proposals for time-of-day pricing tariffs for customers whose demands are less than 500 KW, submit proposals for experimentation with end-use tariffs such as for air conditioning, study and submit annual proposals on price elasticity and cross-elasticity, file experimental tariffs for the application of peak load pricing to large domestic users who install load-shedding or similar devices, cooperate with large customers in the development of load management techniques, and submit specific proposals for the utilization of waste heat developed by certain industrial customers. Decision No. 85559 also found that marginal cost data would be useful in establishing rates, and that both average and marginal cost data should be used by this Commission in designing rates for electric service. Edison is hereby put on notice that marginal cost data must be included with any future rate application filing before this Commission.

As previously discussed, Decision No. 85731 provided the basis for the establishment of an energy cost adjustment clause to replace the presently effective fuel cost adjustment billing factor.

Decision No. 26087 established lifeline quantities of electricity for basic residential use, water heating, and space heating for four climatic zones for single-family and multi-unit complexes. The revenue effect of the establishment of these lifeline quantities of electricity was included in our consideration of the appropriate apportionment of the authorized revenue increase to the various customer groups.

Rate Spread

A review of the copious material presented by parties to this proceeding on the allocation of the authorized rate increase leads us to the conclusion that a uniform cents-per-kilowatt-hour increase is the most appropriate method to utilize in this matter. This decision takes into consideration the fact that the overall increase being authorized herein is substantially less than the amount requested by Edison, and further that a rate reduction of similar magnitude on a uniform cents-per-kilowatt-hour basis due to an energy cost adjustment clause filing is being issued concurrently with this decision. We will maintain the domestic schedule

restructuring and uniform cents-per-kilowatt-hour increase to all other schedules from the interim decision and will also apportion the additional increase of \$44.5 million to the California jurisdictional customer groups including lifeline sales on the basis of a uniform cents-per-kilowatt-hour increase. Because of a concurrent reduction in Edison's ECABF, the utility's revenue level will not be increased as a result of the ECAC decision being issued simultaneously with this general rate increase decision. However, with the corresponding reduction in the ECAC rate, the bills for lifeline usage will result in lifeline rates being maintained at the January 1, 1976 level. A summary of the adopted increases by customer groups is as follows:

Customer Group	Sales : M2Kwh	Pre-interim : Revenues	ECAC : Revenues	Total : Pre-interim : Revenues
(Dollars in Thousands)				
Domestic	14,000	\$ 449,962	\$132,860	\$ 582,822
Lighting & Small Power	9,626	278,942	91,351	370,299
Large Power	12,911	227,651	122,525	350,176
Very Large Power	9,103	119,733	86,387	206,120
Agricultural & Pumping	2,150	48,352	20,404	68,756
Street Lighting	621	29,651	5,893	35,454
Total Customer Group	48,411	1,154,207	459,420	1,613,627
Other	1,100	12,600	-	12,600
Total Jurisdictional	49,511	1,166,807	459,420	1,626,227

Customer Group	Interim : Increase	Current : Revenue	Adopted Increase : Amount	Increase : Percent <sup>1/</sup>
(Dollars in Thousands)				
Domestic	\$ 9,740	\$ 592,562	\$12,870	2.17%
Lighting & Small Power	19,240	389,539	8,850	2.27
Large Power	25,530	375,706	11,870	3.16
Very Large Power	18,050	224,170	8,370	3.73
Agricultural & Pumping	4,300	73,056	1,970	2.70
Street Lighting	1,240	36,694	570	1.55
Total Customer Group	78,100	1,691,727	44,500	2.63
Other	-	12,600	-	-
Total Jurisdictional	78,100	1,704,327	44,500	2.61

<sup>1/</sup> Above current revenue.

DWR Contracts

Testimony and exhibits were presented by Edison, the Los Angeles Department of Water and Power (LADWP), and the California Division of Water Resources (DWR) relative to the following agreements: the supplier's contract between PG&E, SDG&E, Edison, LADWP, the State of California, and DWR; the purchase contract between PG&E, SDG&E, Edison, and DWR; and the EHV contract between Edison, PG&E, SDG&E, and DWR.

The supplier's contract provides for supplying capacity and energy to DWR for the operation of its pumping plants on the aqueduct system of the State Water Project at 3.0 mills per kilowatt-hour and 20,000 kilowatts of on-peak capacity at \$17 per kilowatt-year. The purchase agreement provides for the purchase of the output of DWR's Hyatt (Oroville)-Thermalito hydroelectric power plants at approximately 2.59 mills per kilowatt-hour for energy and \$12 per kilowatt-year for capacity. The EHV contract provides, among other things, for the sale to Edison of substantial portions of the DWR entitlement to Canadian entitlement power at 2.6 mills per kilowatt-hour for energy and \$6.60 per kilowatt-year for capacity.

It is Edison's position that the revenue received under the supplier's contract is not adequate to cover the cost of generating such energy and that the purchase cost of energy bought under the purchase and EHV contracts is well below current and future costs of providing such power under alternative arrangements. Edison argues that under such present arrangements it is the shareholders who bear the burden of the revenue deficiency and the ratepayers derive the benefit of the cost-of-service reduction. Edison proposes that the benefits and burdens be

equalized by either (1) reflecting only the actual revenues received when computing revenue requirements; or (2) by imposing a fuel cost adjustment on sales to DWR. Alternative (1) is recommended by Edison because of the possibility of DWR withdrawing the Oroville-Thermalito power for its own use with a resultant need by Edison of obtaining substitute power.

LADWP favors alternative (2) on the basis that a fuel cost adjustment would cause the price paid for energy by DWR to more closely reflect the actual cost of such energy and DWR favors alternative (1) on the basis that all three contracts should be considered as a whole with both the benefits and burdens accruing to the ratepayer.

According to testimony of Edison's witness, alternative (1) could be implemented by the simple expedient of proper application of the cost allocation procedure. Equating the purchased power expense to the revenues received from the sales, however, only accommodates a portion of the alleged revenue deficiency burden being applied to the stockholder. The major portion of the revenue deficiency burden would have to be shifted from the shareholder to the ratepayer by a slight modification of the method of computing the fuel cost adjustment billing factor. Decision No. 85731 provides that the revenue deficiency for sales to DWR be included in the ECAC revenues to be recovered from the balance of the ratepayers, thereby adopting, in effect, alternative (1). Consequently, no further consideration of this item is necessary in this proceeding.

#### VII - SERVICE

During the first eight days of hearing several parties presented statements or testimony concerning alleged service problems. Edison was directed to investigate these matters and report the results of these investigations to the staff. The matters were reportedly satisfactorily resolved. The relatively small number of service complaints indicates that a generally high level of service is being provided by Edison.

#### VIII - OTHER ITEMS

After an examination of Edison's accounting and financial records, together with those of its domestic subsidiaries for the years 1972, 1973, and 1974, staff Financial Examiner II Rene A. Angus expressed criticisms and made recommendations on eleven of Edison's accounting practices as follows:

1. Edison included land cost for CWIP in ADC interest base whereas staff recommends it be maintained in land held for future use until the project is completed. Edison revised its accounting practices to conform to staff's recommendation.

2. Staff recommends an annual reconciliation of general ledger accounts with continuing property records. Edison maintains that such accounting is, from a practical standpoint, neither possible nor necessary and that were it possible it would have no impact on costs borne by ratepayers. We will accept Edison's position on this matter.

3. Staff recommends removal from plant accounts of the abandoned Ormond Beach Generating Station offshore mooring facility and marine oil pipeline. This matter was discussed under the section of this decision relating to rate base.



4. Staff recommends that work orders be credited a fair value for energy produced during test periods instead of just the fuel cost of the energy. Edison takes the position that a higher credit for the energy would result in higher operating costs with no effect on the ratepayer. Edison's position appears reasonable.

5. Staff recommends that the staff be kept informed of all research and development programs costing over \$1 million. Edison asserts it already endeavors to comply with this recommendation.

6. Edison has reportedly already implemented the staff's recommended nuclear fuel reprocessing accounting procedure.

7. Staff recommends that certain dues and donations be excluded from operating expenses and included in Account No. 426, Miscellaneous Income Deductions. These items were considered under expenses and appropriate ratemaking adjustments were made.

8. Staff recommends that the uncollectible reserve be based on six-months' actual write-off. Edison points out that the reserve increase, adjusted in 1974, has no effect on 1976 test year results and need not be considered in this proceeding. We agree.

9. Staff recommends disallowance of "spread-loss" insurance premiums. This matter was resolved under the expense portion of this decision.

10. Staff recommends that future nuclear insurance premiums be reduced by refunds received. The record shows that these refunds were made in 1974 on premiums paid in 1973. A continuation of such premium refunds is problematical and should not be reflected in our 1976 test year results.

11. Staff recommends that we disallow the estimated or actual court settlement involving discrimination in employment practices as an operating expense as such practices are contrary to the social responsibilities of everyone including Edison. This matter was resolved in the expense portion of this decision.

## IX - FINDINGS AND CONCLUSION

### Findings

1. Southern California Edison Company is in need of additional revenues but the proposed increase of \$339 million (21 percent) is excessive.

2. A reasonable rate of return to be applied to Edison's California jurisdictional rate base is 8.8 percent.

3. The 12.63 percent return on common equity included in the computations deriving the above 8.8 percent rate of return is reasonable and includes consideration of the election of Option 2, ratable flow-through, for the additional investment tax credit allowances permitted by the Tax Reduction Act of 1975.

4. The 12.63 percent return on common equity will provide an interest coverage on Edison's debt of 2.71 times after taxes.

5. The adopted estimates previously discussed herein of operating revenues, operating expenses, and rate base for the test year 1976 reasonably indicate the results of Edison's operations in the near future. Specific findings on some of the more controversial issues are:

a. The adopted California jurisdictional revenues and fossil fuel expenses reflect the base rates and fuel costs established by Decision No. 81919.

b. A lump sum adjustment of \$2,052,000 to reflect an 8.5 percent overall wage increase rather than an anticipated 7 percent increase effective January 1, 1976 is reasonable.

c. Edison's announced additional cost reduction program designed to further cut expenses by 5 percent should result in additional savings to Edison of \$11,000,000 for the test year 1976.

d. Edison's estimates of its own hydroproduction, and the staff's estimates of Hoover generation, economy energy purchases, and Pacific Northwest surplus energy are reasonable for the test year 1976.

e. A reasonable allowance for advertising and public relations is \$800,000.

f. The "spread-loss" insurance premium of \$1,430,000 is a reasonable amount for inclusion in Edison's operating expenses for the test year 1976.

g. The Vidal write-off of \$865,000 a year (one-fifth of the total cost to be amortized) is disallowed.

h. The staff's inclusion of an \$11 million income tax reduction for repair allowance is reasonable.

i. Edison's selection of Option 2, ratable flow-through, for the increased ITC allowances provided in the TRA of 1975 reduces external financing requirements and thereby reduces investor risk and should be included in our consideration of a proper rate of return.

j. Monies received from governmental agencies for the relocation of electric facilities are properly includable in computing depreciation expense.

k. The inclusion of nonoperative construction work in progress in rate base is adverse to the public interest.

l. The inclusion of replacement plant and plant installed to meet environmental requirements at other than a weighted average basis is an improper ratemaking procedure.

m. The staff's estimate of fossil fuel stock based on 90 days' average requirements with an approximate 25 percent unpaid invoice adjustment is reasonable.

n. The staff's estimate of the savings in distribution plant resulting from Edison's transformer load management program is reasonable.

6. For the purpose of allocating cost and rate base between jurisdictions, the modified peak responsibility method is reasonable.

7. For the purpose of allocating average cost between classes of customers within California jurisdictional operations the MPR method should be used in the future. Marginal cost data should also be developed.

8. Edison's California jurisdictional rates should be increased approximately \$122.5 million over its base rates in effect on December 30, 1975 which equates to \$44.5 million over the rates authorized by Decision No. 85294 which granted Edison an \$80 million partial general rate increase (or \$78.1 million on the adopted sales herein). This amounts to a 2.61 percent increase over current revenue including ECAC.

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

10. The apportionment of the authorized rate increase to the various customer groups as previously described is reasonable.

The Commission concludes that the application should be granted to the extent set forth in the order which follows.

O R D E R

IT IS ORDERED that after the effective date of this order, Southern California Edison Company is authorized to file revised rate schedules with rates increased from present levels by .092 cents per kilowatt-hour for all rate schedules. Such filing shall comply with General Order No. 96-A. The effective date of the revised schedules shall be two days after the date of filing. The revised schedules shall apply only to service rendered on and after the effective date hereof.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 21st day of DECEMBER, 1976.

I concur in the above  
ordering paragraph  
and will file a  
separate concurring  
and dissenting opinion

*William J. Lyons*  
Commissioner

*[Signature]*  
President

*Vernon L. Sturgeon*

*[Signature]*  
Commissioners

Commissioner Robert Katinovich, being necessarily absent, did not participate in the disposition of this proceeding.

I will file a written  
conurrence and dissent

*Vernon L. Sturgeon*  
Commissioner

APPENDIX A

LIST OF APPEARANCES

Applicant: Rollin E. Woodbury, Robert J. Cahall, William E. Marx, Dennis G. Monge, by William E. Marx, Dennis G. Monge, and Richard K. Durant, Attorneys at Law.

Protestants: George Gilmore, Attorney at Law, Dr. Eugene Coyle, and Sylvia M. Siegel, for Toward Utility Rate Normalization, Consumers Federation of California, Fight Inflation Together, Energy Reform Group, Citizens of San Bernardino, Upland, etc.; and Robert D. Rudnick, Attorney at Law, for POWER (People Outraged With Electric Rates).

Interested Parties: T. W. Anderson and A. W. Hooton, for General Portland, Inc., California Division; Best, Best & Krieger, by Michael D. Harris, Arthur L. Littleworth, and Glen E. Stephens, Attorneys at Law, for Desert Water Agency, City of Palm Springs, Palm Springs Unified School District, Desert Hospital District, and Desert Hot Springs County Water Agency; Will H. Braunle, for Safeway Stores, Inc.; Brobeck, Phleger & Harrison, by Gordon E. Davis, Thomas G. Wood, Attorneys at Law, and Robert E. Burt, for California Manufacturers Association; Richard D. DeLuce, Attorney at Law, Edward Sherry, and Dr. Harris Nissel, for Air Products and Chemicals, Inc.; Frank J. Dorsey, Attorney at Law, and Daniel J. Reed, for Consumer Interests of the Executive Agency of the United States; Enright, Elliott & Betz, by Norman Elliott, Attorney at Law, for Monolithic Portland Cement Co. and Committee to Protest California Economy; Dennis B. Kavanagh, Attorney at Law, for Golden State Mobilhome Owners League; Paul P. Hendricks, for City of Vernon; Graham & James, by Boris H. Lakusta and David J. Marchant, Attorneys at Law, for Western Mobilehome Association; William L. Knecht and William H. Edwards, Attorneys at Law, for California Farm Bureau Federation; Arthur Kirgel and Joe Westmoreland, for City of Riverside; W. C. Leist and R. F. Smith, for Union Carbide Corp.; Overton, Lyman & Prince, by Donald H. Ford, Attorney at Law, for Southwestern Portland Cement Co.; William M. Pfeiffer and David B. Follett, Attorneys at Law, for Southern California Gas Company; John R. Phillips, Attorney at Law, for Planning and Conservation League; Burt Pines, City Attorney, by Frederick H. Kranz, Jr., Attorney at Law, for Los Angeles Department of Water and Power; Louis Possner, for City of Long Beach; Kenneth M. Robinson, Attorney at Law, and George B. Scheer, for Kaiser Steel Corporation; Robert W. Russell, by Kenneth E. Cude, for City of Los Angeles; R. M. Shillito, for California Retailers Association; James F. Sorensen, for Friant Water Users Association; John P. Terry, for Los Angeles Department of Water and Power; Robert P. Will, John M. Davenport, R. D. Twomey, and Gerald Winerman, Attorneys at Law, for Metropolitan Water District of Southern California; and M. Keate Worley, Attorney at Law, for Texaco, Inc.

Commission Staff: Timothy E. Treacy, Attorney at Law, Robert C. Moeck, and Kenneth K. Chew.

COMMISSIONER WILLIAM SYMONS, JR., Concurring in Part and  
Dissenting in Part

I concur with the increase approved in the single ordering paragraph insofar as it provides a portion of the financial relief which the facts show is needed and justified; however, I take issue with five major points in the body of discussion: (1) rate of return, (2) construction work in progress, (3) budget for public information, (4) method of cost allocation and rate design and (5) write-off of Vidal Plant. Overall, I judge the resulting level of earnings to be seriously deficient.

1. Rate of Return

While not granting Edison's requested 9.6% rate of return, I find the hearing Examiner's proposed 9.2% rate of return more appropriate than the punitive 8.8% adopted here today. The utility's external financing requirements through 1978 are substantially greater than it has experienced in the recent past. With a 9.2% rate of return, the resulting return on capital should meet that minimum needed to attract capital at a reasonable cost and not impair the credit of Edison. Even at the 9.2% rate of return level, we note that the "times interest coverage" of 2.91 which resulted in Edison's last general rate case decision in 1973 (Decision No. 81919) will slip to 2.83.

Insufficient earnings also are signalled by the degree to which the purchase price of common stock has fallen below book value. The probable outcome of today's order with its 8.8% rate of return and a resulting 12.63% return on equity has been known to the investment community for several weeks. That this return is inadequate may be discerned from the results of the recent sale of Edison common stock. On December 8, 1976, Edison sold 5,000,000 shares of common stock. The price received was about \$22/share. This occurred at a time when current book value was over \$30/share.



Investment Tax Credit. The reason which really determines this low 8.8% rate of return is not discernible in this decision. Perhaps it is caused by a desire by the majority to rechannel the effects of the Federal Investment Tax Credit. I have dissented from such attempts in the past because they are dangerous and contrary to the policy of Congress. (See Dissenting Opinion to D. 85627, March 30, 1976) I consider it foolhardy for state regulators to run such a risk where the state's utilities and their customers stand to be the ultimate fall guys. I can understand the terrorized state of the major utilities who fear (1) not just "docking" of millions of dollars in earnings by the California Commission because of the utility's free selection ITC Option 2, but (2) having to pay a second time because the bullying conduct of the California Commission causes the Internal Revenue Service to disallow California companies the 6% investment tax credit. The Commission majority may consider itself safe because it has been imprecise as to the quantitative impact of this consideration (today's Opinion, page 22, also Finding #3, page 103). But if this "enigmatic" approach fails before the IRS, I suspect we will be treated to a further shameful episode in this ITC affair, as the responsible regulators try to push the blame off onto the utility companies.

2. Nonoperative Construction Work In Progress (NOCWIP)

Current sizeable increases in (1) construction time, (2) cost of capital, and (3) size of capital projects argue for some inclusion of NOCWIP in rate base. When consideration is given to the tax deductibility of the debt component of return, we have a method of increasing cash flow at the rate of approximately one dollar for every dollar and a half of revenue, a superior method of increasing cash flow. The NOCWIP in rate base also eliminates the discrepancy of the allowance for funds used during construction (ADC) which is currently at the 8% level, where the cost of capital runs in excess of 9%.

Partial inclusion at this time of NOCWIP in rate base would be appropriate and beneficial. It would be a transition from the present future cost payment method to this pay-as-you-go basis, and should be limited initially. For the case at hand and for consideration in later cases, we would do well to follow the policy example of Federal Power Commission Order No. 555 dated November 8, 1976. In that case, NOCWIP related to pollution abatement plant modification was allowed. Rather than the Examiner's proposed \$300 million NOCWIP inclusion, pollution-abatement-related NOCWIP per Exhibit 47 in this proceeding would provide a \$45 million rate base allowance equivalent to a \$7.4 million revenue requirement at a 9.2% rate of return.

3. Budget for Public Information

A "smaller ticket" but vital item in this decision is the slashing of the Public Relations/Public Information budget of the utility from approximately \$3,800,000 down to \$800,000. In the public discussion by the Commissioners urging this course, lack of sufficient documentation was the given explanation. Yet, we see emerging from the newly inserted language a thrust not just for documentation, but a blatant attempt to control the content of the information the utility may give to the public in the ordinary course of business. Proceeding in an Orwellian manner, communication of thoughts not specifically permitted is forbidden. On page 51, only informational advertising expense of \$10,000 for kite safety messages and \$40,000 in notices of financial offerings are allowed. Conservation messages are also allowed. But specifically excluded, even though neither the P.U.C. staff nor hearing Examiner recommended it, were \$400,000 for plant safety and siting advertising or \$150,000 for a discussion of viable future energy sources.

Why should the public be cut off from discussion of viable future energy sources by the energy utilities? It doesn't make sense. However, if we recall that special political interest groups have sought to silence the utilities, and that certain Commissioners have expressed ire at utility discussions of Nuclear Power, we can see that what may not be good government may be "good" politics. This whole area is too important to allow government power to be used to stifle full public discussion. Further attention will have to be paid to exactly what is in the "guidelines" the government is imposing.

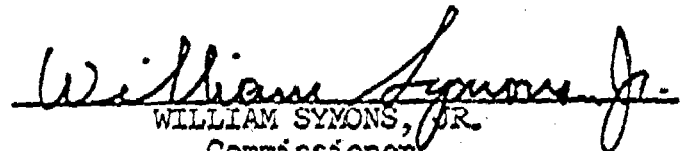
4. Method of Cost Allocation and Rate Design

Greater care must be given to cost allocation and rate design. I agree with the Examiner's recommendation that we maintain the use of the Monthly Peak Responsibility method for jurisdictional allocations and the Load Factor Diversity Factor method for California jurisdictional allocations. The decision on rate spread is made less crucial by the fact it is balanced by a simultaneous rate reduction due to the operation of the energy cost adjustment clause. Yet, simply hiking rates on a uniform cent-per-kilowatt hour ignores relating prices to actual costs. Testimony, such as Mr. Reed for the California Manufacturers' Association, that present domestic rates in the Edison system as authorized by Decision No. 85294 are insufficient to meet the out-of-pocket cost to serve for usages under 1,500 Kwhr a month which includes 98.8% of the bills rendered by the utility, should ring an alarm bell. We must have rates where each class--residential, commercial, industrial or other--pulls their own weight as to costs. "Lifeline", "welfare" or "income redistribution" rates can spell doom for the economic future of California with farm products too expensive to market, and business and jobs driven from California.

5. Write-off of Vidal Plant

The amortization of the Vidal nuclear generating station is another victim of alleged insufficient documentation, though the hearing Examiner did not so find. On this point it should be noted that the staff did not testify against the propriety of the write-off, assuming cost savings information was available. Today's decision is too terse concerning the future course the Commission intends to take regarding this expense. I would have added to the discussion by noting that the Commission does not intend to preclude subsequent relief on this point in a special proceeding where further documentation and evaluation will be possible.

San Francisco, California  
December 21, 1976

  
WILLIAM SYMONS, JR.  
Commissioner

COMMISSIONER VERNON L. STURGEON, Concurring in Part and  
Dissenting in Part

The return on rate base and the resultant return on common stock equity authorized herein is the product of total disregard of the principles laid down in Federal Power Commission v Hope Natural Gas Company, (1944) 320 US 591.

I deem this a serious charge as these principles are, without doubt, to utility regulation what Polaris is to navigation.

Change being both inevitable and constant, it is to say the least, disconcerting to witness irresponsible over-reaction to it.

There is nothing in this record which warrants adjustment outside of the Hope guidelines.

Rate levels for a straight electric utility authorized to produce a rate of return of 8.8% and a return on common equity of ~~12.63%~~ will not allow Southern California Edison Company to operate successfully, maintain financial integrity and attract capital. These are the guidelines set forth by Hope and found essential to produce an "... end result which will be just and reasonable."

It follows that applicant will not be able to maintain its present high level of service and will not be able to adequately assist in the discovery, development and conservation of energy.

San Francisco, California  
December 21, 1976

  
VERNON L. STURGEON  
Commissioner