Applications Nos. 58545 and 58546
Exhibit No.
Witness T. R. Mowrey
Commissioner R. D. Gravelle
Adm. Law Judge M. J. Gagnon

CALIFORNIA PUBLIC UTILITIES COMMISSION
Finance Division

STUDY OF COST OF CAPITAL AND RATE OF RETURN OF PACIFIC GAS AND ELECTRIC COMPANY

Application No. 58545 - Electric Department
Application No. 58546 - Gas Department

San Francisco, California
February 28, 1979

I

M E M O R A N D U M

This report was prepared by Terry R. Mowrey, Financial Examiner III, under the general supervision of James D. Pretti, Principal Financial Examiner, in connection with the request of Pacific Gas and Electric Company for authority to increase rates for gas and electric services as set forth in Application No. 58545 and Application No. 58546, respectively.

The rate of return recommended for the applicant is 9.94% for 1980 and 10.03% for 1981 which equates to an allowance of 13.40% on common stock equity for both years.

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Q. 1. Please state your name and business address.

A. 1. My name is Terry R. Mowrey. My business address is State Building 107 S. Broadway, Los Angeles, California 90012.

Q. 2. By whom are you employed and in what capacity?

A. 2. I am employed by the California Public Utilities Commission as a Financial Examiner in the Finance Division.

Q. 3. Please describe briefly your educational background and work experience.

A. 3. I am a graduate of California Polytechnic University at Pomona with a Bachelor of Science Degree in accounting. I have been employed by the Commission for approximately five years. During this period I have participated in the financial audits of numerous public utilities in connection with rate applications, certification matters and Commission-instituted investigations.

Prior to my being assigned to the Rate of Return Section of the Finance Division in the early part of 1978, I was a member of the Liquified Natural Gas Task Force and analyzed the proposed financing of that project. My most recent assignment was the preparation of the study of cost of capital and recommended rate of return for The Pacific Telephone and Telegraph Company in Application No. 58223. I have prepared reports and have testified before this Commission on accounting and financial matters in numerous formal proceedings.

Q. 4. What are your responsibilities in this proceeding?

A. 4. My responsibilities are to prepare a study of Pacific Gas and Electric Company's (PGandE) Cost of Capital and to recommend a rate of return.

Q. 5. What is your recommendation in this proceeding?

A. 5. In my opinion, a rate of return on common equity of 13.40% is fair and reasonable to both Applicant and its ratepayers. I am recommending that in order to achieve this return on common equity, a rate of return of 9.94% in 1980 and 10.03% in 1981 be applied to PGandE's intrastate rate base.

Q. 6. What is the basis for your recommendation?

A. 6. My recommendation is consistent with this Commission's stated policy to set rates so that major utilities can reasonably go at least two years without general rate relief. This policy was set forth in Decision No. 87710, dated December 12, 1978 in Application No. 57639 of Southern California Gas Company and Decision No. 87711, dated December 12, 1978 in Application No. 57602 of Southern California Edison Company.

Q. 7. Why are you recommending two rates of return, one for the test year 1980 and one for the year 1981?

A. 7. If I were to recommend one rate of return to cover both years, PGandE would have no opportunity to earn my recommended return on common equity in the second year because of the financial attrition which will occur in that year.

Q. 8. Would you explain what you mean by financial attrition.

A. 8. Yes, financial attrition is the change which occurs in a company's embedded cost of debt, effective dividend rate on preferred stock and capital structure due to the issuance and retirements of debt issues, preferred stock and common equity. Under today's economic conditions new debt and preferred stock are being issued at rates higher than a company's embedded cost thus driving the embedded cost up even further. PGandE will experience increases in its embedded costs in 1981 with the issuance of additional debt and preferred stock and it is these increases which necessitate my 1981 rate of return recommendation of 10.03%. Failing to recognize these cost increases in 1981 results in PGandE's return on common equity falling below my recommendation of 13.40%. Tables No. 5 and No. 7 show my estimates of additional debt and preferred stock and their respective rates.

Q. 9. Could you not recommend an equity return and a corresponding rate of return for 1980 test year which gives recognition to the 1981 financial attrition and which would, over the two year period, average out to the 13.40% return on common equity you are recommending?

A. 9. Yes, that would be one method of setting rates; however, I believe that such a method produces undesirable results. First of all, it would cause fluctuations in a utility company's earnings in that the first year would result in unreasonably high earnings and the second year would result in unreasonably low earnings. If this pattern were to continue for a number of years, it would appear to financial analysts and investors that the company's earnings were somewhat unstable. It could also have an unfavorable effect on a company's bond ratings. The bond rating agencies would not be favorably impressed with a company's earnings record which fluctuated from year to year, rather they would be more impressed with a stable earnings record. Secondly, such a method would be unfair to the ratepayers in that they would be required to pay higher than reasonable rates in the first year.

I believe that my recommendation of two rates of return, one for the test year 1980 and one for the year 1981 meets the objectives of setting rates so that a utility can reasonably go at least two years without general rate relief, provides the company with a reasonable opportunity to earn the authorized return on equity, avoids the undesirable effects of setting an artificially high rate of return for the test year to produce a reasonable two-year average, and provides protection to the ratepayers in that rates will more accurately reflect PGandE's actual capital costs.

Q.10. Did you base your recommended return on equity and the corresponding rates of return on estimated year-end or average year capital structure?
A.10. My recommendation is based on my estimate of PGandE's average year capital structure and related costs for the test year 1980 and the year 1981. My use of an average year capital structure and costs is consistent with my recognition of financial attrition in that it more accurately reflects PGandE's actual costs during the year than does a year-end capital structure. An average year capital structure is also consistent with the Commission's ratemaking policy of applying the authorized rate of return to average year rate base. Previously, the rate of return recommendations were based pon capital ratios developed for the end of the test year after considering financing anticipated during the test year and the costs associated with such financing. Year-end ratios were used in the recognition that rates would remain in effect beyond the test year period. However, with rate increases being filed on a two-year cycle under the regulatory lag plan, rates remain in effect only during that two-year period. Therefore, it is my opinion that capital costs should be recognized which equate only to the period that the rates are in effect and this requires use of average year capital ratios.

Q.11. Would you please compare your recommended rate of return with that requested by PGandE.
A.11. The following tabulation compares PGandE's estimated capital and requested rate of return at year-end 1980 with my estimated capital structure and rate of return for the two years.

PGandE Requested Rate of Return

Year End 1980

Component	Capitalization Ratios	Cost	Weighted Cost
Long-Term Debt	45.99%	7.83%	3.60%
Preferred Stock	13.99	7.92	1.11
Common Equity	40.02	15.00	6.00
	100.00%		10.71%

Staff's Recommended Rate of Return

Average Year 1980

Long-Term Debt	46.02%	7.63%	3.51%
Preferred Stock	14.47	7.87	1.14
Common Equity	39.51	13.40	5.29
	100.00%		9.94%

Average Year 1981

Long-Term Debt	45.74%	7.77%	3.55%
Preferred Stock	14.58	7.96	1.16
Common Equity	39.68	13.40	5.32
	100.00%		10.03%

Effect on Revenue Requirement ($000)

1980	Staff's Estimated Rate Base	$5,969,681
	X 1980 Difference	.77
	Difference Net Operating Revenues	45,967
	X Net-to-Gross Multiplier	2.05
	Difference - Gross Operating Revenues 1980	$ 94,232
1981	Staff's Estimated Rate Base	5,969,681
	1981 Increase Rate of Return	.09
	Net Operating Revenues	5,373
	X Net-to-Gross Multiplier	2.05
	Additional Gross Operating Revenue 1981	11,014
	Difference Gross Operating Revenues 1981	$ 83,218

The staff's estimated capital ratios shown on the preceding table for average years 1980 and 1981 were arrived at using the staff's estimated year-end capital shown below.

1979

	Amount	Ratio
Long-Term Debt	$ 3,860,734	46.12%
Preferred Stock	1,202,451	14.37
Common Equity	3,307,162	39.51
Total	$ 8,370,347	100.00%

1980

	Amount	Ratio
Long-Term Debt	$ 4,263,398	45.92%
Preferred Stock	1,352,451	14.57
Common Equity	3,668,102	39.51
Total	$ 9,283,951	100.00%

1981

	Amount	Ratio
Long-Term Debt	$ 4,691,485	45.57%
Preferred Stock	1,502,451	14.59
Common Equity	4,102,042	39.84
Total	$10,295,978	100.00

Q.12. Would you explain the differences between your projected capital structure and related costs to that of PGandE at year-end 1980.

A.12. The first difference is that I have used average year capital structures whereas applicant has used year end. My estimated capital structure uses as its starting point recorded data at December 31, 1978, whereas PGandE utilized recorded data through June 30, 1978 and projected the remainder of 1978. The applicant's projections for 1979 and 1980 were compiled in mid-year 1978, whereas my projections are based upon more recent estimates of capital requirements and financing needs.

The dollar differences are:

Long-Term Debt

My estimate of long-term debt financing through 1980 is approximately $75 million less than that projected by applicant.

Preferred Stock

My estimate of applicant's preferred stock issuances through 1980 exceeds applicant's by approximately $15 million.

Common Equity

My total common equity outstanding at year-end 1980 is approximately $150 million less than that estimated by PGandE.

These differences incorporate revisions in projected capital requirements through 1980 as well as recorded changes in 1978.

The question of issuing long-term debt, preferred stock or common stock to meet external capital requirements is, of course, a management decision. My projections were made with the objective of maintaining the company's stated goal of a capital structure approximating 46% debt, 14% preferred and 40% common equity.

Q.13. In your opinion, are the capital ratios presented in your exhibit for PGandE reasonable?

A.13. Yes, I believe the capital ratios shown in Table No. 22 closely approximate the company's stated goals of 46% debt, 14% preferred and 40% equity, a goal with which I agree. A debt ratio in the range of 46% allows the company to maintain reasonable interest coverage and sufficient flexibility to attract future external financing.

Q.14. Would you briefly describe how you arrived at 13.40% on common equity as being fair and reasonable for PGandE.

A.14. The determination of a fair and reasonable rate of return is not subject to precise mathematical calculations and cannot be arrived at by any specific formula. It is of necessity a judgment determination which results from the consideration of many factors both tangible and intangible. The U. S. Supreme Court expressed this principle in Federal Power Commission v Hope Natural Gas (1943) 320 US 591, wherein it stated, "It is not theory but the impact of the rate order which counts." And, "it is the result reached not the method employed which is controlling."

In arriving at my recommendation, I was guided by the standards set forth by U. S. Supreme Court decisions in various landmark cases and by prior decisions of this Commission and other regulatory bodies.

In addition, I gave consideration to other factors in arriving at my recommendation, some of which are presented in the tables included in this report and others which are listed in Answer No. 17.

Q.15. How did you evaluate the comparison of earnings and related data shown in your report for PGandE and the selected groups of utilities?

A.15. The various comparisons shown in the tables for the years 1973 through 1977 served as additional guides in arriving at my recommendation. The figures in the pertinent tables are based on recorded information and do not consider any adjustments which could be considered in the process of setting rates. Some of the companies within each group could possibly have experienced earnings above or below a reasonable norm during the period. In addition, other differences exist between the companies with regard to such things as income from other sources, source of supply, types of services provided, regulatory environment, and the economic situation in their respective territories.

Q.16. Why have you confined your study to the 30 utilities shown?

A.16. It is my opinion that the 30 companies shown are large regulated public utilities having business and financial risks similar to those of PGandE and present a valid sampling for comparative purposes.

Q.17. What are some of the additional factors you considered in arriving at your allowance of 13.40% on common equity?

A.17. Some of the additional factors which I considered in arriving at my recommendation are as follows:

a. PGandE is a regulated public utility engaged in a business which affects the public interest and it must provide its services at reasonable rates.

b. PGandE flows through to its customers certain tax benefits in the form of lower rates which acts to reduce the internal cash flow as compared to a utility which normalizes tax benefits.

c. That rates must give consideration to both consumer and investor interests.

d. Economic conditions - the effects of continued inflation and increases in interest rates.

e. PGandE's recorded earnings experience.

f. Interest coverage requirements.

g. The Commission's Regulatory Lag Plan and stated policy that rates be set so that a utility can reasonably go at least two years without general rate relief.

h. The essentiality of PGandE's product to the public.

i. PGandE's capital requirements, capital structure and financial history.

j. The various balancing account adjustments granted PGandE.

Q.18. Do you have any further comments?

A.18. Yes. It is my opinion that the return on common equity that I am recommending is both fair and reasonable and balances the interests of PGandE's investors and ratepayers. I believe my method of considering financial attrition corresponds with the Commission's statement of policy expressed in D.89710 of Southern California Gas Company and D.89711 of Southern California Edison Company, both dated December 12, 1978. In these decisions, the Commission expressed a desire to set rates so that major utilities can reasonably go at least two years without general rate relief. My study, in developing data for both the test year and the subsequent year, gives adequate consideration to financial attrition which will occur during the two-year period. An equity allowance of 13.40% will allow the utility to service its fixed charges and provide the opportunity to pay a suitable dividend as well as provide moderate additions to earned surplus while maintaining adequate service to its customers.

Q.19. Does this conclude your testimony?

A.19. Yes it does.

EXPLANATION OF TABLES

This study contains 23 tables developed in the course of arriving at the 13.40% return on common equity and the corresponding rate of return recommendations of 9.94% for 1980 and 10.03% for 1981 for Pacific Gas and Electric Company. Many of the tables present trends and five-year averages for the years 1973 through 1977 in a form which compares applicant's operating results with averages for 10 combination and electric utilities, 10 electric utilities and 10 gas utilities. Other tables set forth trends in interest rates, ten-year summaries of PGandE's capitalization, book value, earnings and sources of financing.

Table No. 1 shows the fluctuations which have occurred in the bank prime interest rates and the Federal Reserve discount rates for the period July 1975 through December 1978. Interest rates in both categories declined steadily from the September 1975 level to early 1977 when the bank prime interest rate and the Federal Reserve discount rates reached 6-1/4% and 5-1/4%, respectively. Since mid-1977, both the prime rate and discount rate have experienced a gradual upward trend to their present levels.

Table No. 2 compares yields on newly-issued public utility bonds with yields on seasoned issues, grouped by Moody's Rating Service, Aaa to Baa, which is shown by month beginning in July 1976 and ending in December 1978. This table shows that the yiel in all categories generally followed the decline experienced by short-term interest rates through early 1977 and the gradual increase thereafter.

Table No. 3 shows interest rate trends in bond and preferred stock yields and interest rate variations for prime commercial paper and government bills on an average annual basis for the years 1973 through 1977. Monthly fluctuations for all categories are shown beginning in January 1977 and ending in November 1978. The trends shown are generally consistent with the patterns exhibited in Tables Nos. 1 and 2 which show a decrease through 1976 with a gradual increase in rates thereafter.

Table No. 4 is a ten-year summary of nominal interest rates developed for PGandE and seven other large California utilities. Increases registered over the years reflect (a) periodic sales of new bonds at rates exceeding the average cost of debt outstanding, (b) refunding of low-coupon bonds at maturity, and (c) bond retirements in accordance with sinking fund requirements. PGandE experienced an increase over the ten-year period approximating the average increase of the other seven utilities. Over the last five years, PGandE experienced the second highest rate of increase in its nominal interest rate.

Table No. 5 presents the staff's development of PGandE's effective interest rate on long-term debt as of December 31, 1980 and 1981. Unamortized gains of approximately $55 million in 1980 and $64 million in 1981 have been added to the net proceeds of outstanding bonds in calculating the cost of 7.72% and 7.82% for the respective years. This treatment is in accordance with previous Commission practice and acts to lower the embedded cost of debt.

Table No. 6 presents PGandE's after-tax interest coverage for the period 1973 to 1977 compared with the other groups of selected companies. PGandE's 1977 interest coverage of 2.45 times compared favorably with that experienced by the other selected companies and exceeded the group averages over the five-year period. The interest coverage would be 2.83 x in 1980 and 2.82 x in 1981 based upon the staff's recommendation. Allowance for funds used during construction and income from other non-utility sources would also be available to further improve interest coverage.

For the calendar year ended December 31, 1978, applicant's reported earnings provided an interest coverage of 2.62 times.

Table No. 7 shows the effective dividend rate for the company's preferred stock at December 31, 1980 and 1981. Projections of additional preferred stock issuances and their respective dividend rates are shown for 1980 and 1981.

Table No. 8 summarizes data related to PGandE's common stock book value, dividends and earnings for the years 1968 through 1977. During the period book value increased approximately $1.6 billion. Earnings available for common totaled approximately $1.9 billion of which $1.2 billion was paid out in dividends. Book value per share increased annually through 1974, decreased slightly in 1975, then continued to increase in 1976 and 1977.

The table shows the strong reliance placed on common stock issuances by the company beginning in 1973 in an effort to strengthen its capital structure with less reliance on debt financing. During the entire period, the company has maintained moderate growth in total earnings and book value.

Table No. 9 presents PGandE's average common equity ratio compared with the other selected companies. PGandE has consistently maintained a common equity ratio higher than the selected combination and electric utilities and presently anticipates increasing its common equity ratio to approximately 40%. This strong equity position allows additional financial flexibility in the face of increasing construction expenditures and tends to reduce the risk to the equity holder.

Table No. 10 shows PGandE's earnings rate an average common equity for the five-year period. PGandE's earnings rate is below that of the other companies, however, since 1974 it has shown continual improvement in conjunction with the strengthening of its equity position. This is a positive trend which under the staff's recommended rate of return will continue.

Table No. 11 compares applicant's dividend payout ratio with that of the other selected companies. PGandE's payout ratio over the five-year period has been more conservative than the other companies, mitigating to a certain extent the amount of external financing needed to meet its construction expenditures.

Table No. 12 presents PGandE's flow of funds for the years 1973 through 1977. The primary sources of funds generated during this period were net income, 31%; depreciation, 21%; issuance of long term debt, 29% and issuance of common stock, 17%.

Applicant expended 69% for plant construction and returned 22% to investors in the form of cash dividends.

Table No. 13 contains a summary of PGandE's capital structure for the years 1968 through 1977. The company, by placing greater emphasis on equity financing since 1973, has reduced its debt component in 1977 to 47.07% from 53.06% in 1972. During the same period, the common equity component in its capital structure increased from 34.75% to 39.35%.

PGandE has stated that it has as a goal a capital structure of 46% debt, 14% preferred, and 40% common equity. Staff's estimated capital structure in 1980 and 1981 closely approximates these ratios.

Table No. 14 presents the earnings rate on average total capital. All groups showed improvement over the period, however, PGandE's earning rate over the last three years has been below the other companies with 1977 being the first year since 1974 that its earnings rate is comparable with the combination utilities.

Table No. 15 shows the average net plant investment of PGandE, and the selected utility groups. Net plant investment consists of gross utility plant, less depreciation and amortization reserves, advances for construction, contributions in aid of construction and deferred income taxes. Applicant's average net plant investment increased by 35% during the period as compared to average increments ranging from 19% to 49% for the other groups. Applicant's average growth rate was comparable to that experienced by the selected combination utilities.

Table No. 16 shows PGandE's revenues have increased at a comparable rate with the other groups of selected companies; however, in the last three years, beginning in 1975, PGandE's revenue growth far exceeded that experienced by the other companies. Also subsequent to 1975, applicant's revenue growth has surpassed the growth trend experienced in its net plant investment.

Table No. 17 shows applicant's expenses increasing at a rate over the five-year period comparable with its increase in revenues, however, in the last two years expenses have been exceeding revenue increases. The other selected groups have experienced expense increases comparable with revenue trend increases.

Table No. 18 brings together the results illustrated in Tables No. 16 and No. 17. This table shows the operating ratios of PGandE, and the other selected companies and indicates that all groups have shown a continually increasing operating ratio; however, PGandE's has increased at a greater rate.

<u>Table No. 19</u> shows that applicant's trend of net operating come is comparable with the gas utilities but has lagged behind that experienced by the combination and electric utilities.

<u>Table No. 20</u> compares ratios of operating revenues to average net plant investment for PGandE and the other selected companies. Applicant's growth rate over the period exceeded that experienced by the combination and electric groups to the point where its average is now comparable to the combination companies and larger than the electric utilities group.

<u>Table No. 21</u> presents the ratio of net operating income shown in Table No. 19 to average net plant investment presented in Table No. 15 and shows that applicant's total return over the five-year period averaged 6.58% compared to 6.95% for the combination companies, 6.93% for the electric utilities and 8.49% for the gas utilities. It should be noted that applicant's trend in the last three years has been comparable to the other groups, however, still lagging behind. These rates are considerably less than the earnings rates on total capital shown in Table No. 14 which includes earnings derived from other income, primarily allowances for funds used during construction. Applicant's trend of net operating income to average net plant investment is comparable to the trend shown for earnings on average capital.

Table No. 22 shows various earnings rates on common equity ranging from 12.80% to 14.00% and combines them with the embedded cost of PGandE's debt and preferred stock to produce various rates of return based upon the projected average capital structures for 1980 and 1981. The resulting rates of return range from 9.71% to 10.18% in 1980 and 9.79% to 10.27% in 1981. The financial attrition occurring between 1980 and 1981 at the assumed common equity returns indicates an attrition of .09% in rate of return.

Table No. 23 contains my rate of return recommendation of 13.40% on common equity which equates to a rate of return on rate base of 9.94% in 1980 and 10.03% in 1981.

TABLE NO. 1

PACIFIC GAS AND ELECTRIC COMPANY

Prime Rate - Discount Rate

Year	Month	Prime Rate	Discount Rate
1975	July	7 - 7-1/4 - 7-1/2%	6 %
	August	7-1/2 - 7-3/4	
	September	7-3/4 - 8	
	October	8 - 7-3/4	
	November	7-1/2	
	December	7-1/4	
1976	January	7-1/4 - 7 - 6-3/4	5-1/2
	February		
	March		
	April		
	May	6-3/4 - 7	
	June	7-1/4	
	July		
	August	7	
	September		
	October	6-3/4	
	November	6-1/2	5-1/4
	December	6-1/2 - 6-1/4	
1977	January	6-1/4	
	February		
	March		
	April		
	May	6-1/2 - 6-3/4	
	June	6-3/4	
	July		
	August	6-3/4 - 7	
	September	7-1/4	5-3/4
	October	7-1/2 - 7-3/4	6
	November		
	December		
1978	January	7-3/4 - 8	6-1/2
	February		
	March		
	April		
	May	8-1/4 - 8-1/2	7
	June	8-3/4 - 9	7-1/4
	July		
	August	9-1/4	7-3/4
	September	9-1/4 - 9-1/2 - 9-3/4	8
	October	9-3/4 - 10 - 10-1/4	8-1/2 - 9-1/2
	November	10-1/2 - 10-3/4 - 11 - 11-1/2	9-1/2
	December	11-1/2 - 11-3/4	

SOURCE: Irving Trust Company Weekly Interest Rates Listings.

TABLE NO. 2

PACIFIC GAS AND ELECTRIC COMPANY

Yields on Public Utility Bonds - Newly-Issued vs. Distributed

Month	Aaa Securities: Newly-Issued: Millions	Aaa Securities: Newly-Issued: Yield	Aaa Securities: Distributed: Yield	Aa Securities: Newly-Issued: Millions	Aa Securities: Newly-Issued: Yield	Aa Securities: Distributed: Yield	A Securities: Newly-Issued: Millions	A Securities: Newly-Issued: Yield	A Securities: Distributed: Yield	Baa Securities: Newly-Issued: Millions	Baa Securities: Newly-Issued: Yield	Baa Securities: Distributed: Yield
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1976												
Jul	$ -	- %	8.78%	$210	8.70%	9.02%	$160	9.56%	9.37%	$155	10.10%	9.88%
Aug	175	8.25	8.64	-	-	8.83	160	8.94	9.13	-	-	9.67
Sep	100	8.00	8.57	270	8.43	8.69	305	8.68	8.90	70	9.45	9.47
Oct	175	8.26	8.50	260	8.41	8.60	310	8.59	8.79	115	9.00	9.41
Nov	100	8.30	8.39	385	8.30	8.61	210	8.40	8.76	110	9.10	9.34
Dec	150	7.90	8.15	180	8.22	8.45	110	8.41	8.62	90	8.61	9.21
1977												
Jan	280	8.18	8.14	280	8.08	8.41	100	8.38	8.61	-	-	9.17
Feb	280	8.24	8.21	45	8.24	8.46	42	8.39	8.65	-	-	9.19
Mar	590	8.29	8.27	55	8.40	8.49	655	8.51	8.70	50	8.85	9.20
Apr	275	8.17	8.21	330	8.44	8.51	140	8.67	8.71	40	8.85	9.17
May	100	8.15	8.22	-	-	8.49	80	8.68	8.71	205	8.94	9.13
Jun	500	8.05	8.12	260	8.19	8.37	130	8.34	8.58	162	8.78	9.02
Jul	-	-	8.10	242.5	8.29	8.32	75	8.60	8.51	245	8.25	8.97
Aug	-	-	8.13	75	8.17	8.36	-	-	8.49	65	8.59	8.91
Sep	315	8.04	8.07	365	8.24	8.32	198	8.35	8.46	-	-	8.85
Oct	-	-	8.18	85	8.25	8.44	330	8.52	8.61	325	8.98	9.01
Nov	400	8.27	8.23	280	8.40	8.48	137	8.56	8.64	26	9.15	9.06
Dec	-	-	8.34	180	8.57	8.55	110	8.64	8.64	115	9.08	9.08
1978												
Jan	-	-	8.52	315	8.97	8.76	125	8.90	8.92	150	9.35	9.27
Feb	-	-	8.57	35	8.80	8.79	30	8.90	8.97	100	9.45	9.29
Mar	225	8.72	8.57	45	8.75	8.79	255	9.02	8.98	138	9.53	9.37
Apr	-	-	8.69	175	9.04	8.86	365	9.08	9.09	25	9.42	9.54
May	-	-	8.83	145	9.01	9.02	170	9.35	9.22	220	9.69	9.70
Jun	250	8.90	8.92	275	9.41	9.19	195	9.42	9.40	70	10.00	9.78
Jul	10	9.10	9.02	300	9.57	9.26	375	9.53	9.51	200	9.88	9.73
Aug	450	8.75	8.86	300	8.86	9.11	60	8.90	9.32	-	-	9.53
Sep	150	8.625	8.84	245	8.95	9.09	205	9.04	9.28	-	-	9.47
Oct	525	9.12	9.04	275	9.55	9.28	15	9.50	9.46	235	9.75	9.69
Nov	100	9.16	9.19	400	9.54	9.46	20	9.625	9.68	-	-	9.99
Dec	150	9.27	9.34	110	9.31	9.56	10	9.32	9.70	-	-	10.08

SOURCE: Moody's Bond Survey.

TABLE NO. 3

PACIFIC GAS AND ELECTRIC COMPANY

Trends in Interest Rates

	Bond Yields								
	U.S. Government Long-Term	State and Local	Industrials	Rails	Public Utilities	Preferred Stock Yield	Prime Commercial Paper	U.S. Government 3 Months Bills	U.S. Government 3-5 Years Issues
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1973 Average	6.30%	5.22%	7.60%	8.12%	7.83%	7.23%	8.15%	7.03%	6.92%
1974 Average	6.99	6.19	8.78	8.98	9.22	8.23	9.87	7.84	7.81
1975 Average	6.98	7.05	9.25	9.39	9.88	8.38	6.33	5.80	7.55
1976 Average	6.78	6.64	8.84	8.85	9.17	7.97	5.35	4.98	6.94
1977 Average	7.06	5.68	8.28	8.13	8.58	7.60	5.60	5.27	6.85
1977 Jan	6.68	5.87	8.24	8.26	8.59	7.54	4.74	4.62	6.49
Feb	7.15	5.89	8.33	8.31	8.63	7.55	4.82	4.67	6.69
Mar	7.20	5.89	8.36	8.31	8.66	7.56	4.87	4.60	6.73
Apr	7.14	5.73	8.32	8.28	8.65	7.60	4.87	4.54	6.58
May	7.17	5.75	8.30	8.26	8.64	7.63	5.35	4.96	6.76
Jun	6.99	5.62	8.23	8.06	8.53	7.62	5.49	5.02	6.58
Jul	6.97	5.63	8.18	8.02	8.48	7.51	5.41	5.19	6.67
Aug	7.00	5.62	8.21	8.05	8.47	7.55	5.84	5.49	6.90
Sep	6.94	5.51	8.19	8.03	8.43	7.58	6.17	5.81	6.92
Oct	7.08	5.64	8.27	8.07	8.56	7.60	6.55	6.16	7.23
Nov	7.14	5.49	8.36	8.10	8.61	7.67	6.59	6.10	7.28
Dec	7.23	5.57	8.42	8.10	8.65	7.85	6.64	6.07	7.40
1978 Jan	7.50	5.71	8.60	8.20	8.87	7.93	6.79	6.44	7.71
Feb	7.60	5.62	8.65	8.32	8.90	7.99	6.80	6.45	7.76
Mar	7.63	5.61	8.66	8.41	8.93	8.07	6.80	6.29	7.76
Apr	7.74	5.80	8.72	8.49	9.05	8.06	6.86	6.29	7.90
May	7.87	6.03	8.84	8.60	9.19	8.11	7.11	6.41	8.10
Jun	7.94	6.22	8.92	8.68	9.33	8.31	7.63	6.73	8.31
Jul	8.09	6.28	9.05	8.70	9.38	8.42	7.91	7.01	8.54
Aug	7.87	6.12	8.95	8.72	9.21	8.26	7.90	7.08	8.31
Sep	7.82	6.09	8.90	8.68	9.17	8.24	8.44	7.85	8.38
Oct	8.07	6.13	9.03	8.74	9.37	8.29	9.03	7.99	8.61
Nov	8.16	6.19	9.21	9.01	9.58	8.43	10.23	8.64	8.97

SOURCES: Federal Reserve Bulletins.
Moody's Bond Survey.

TABLE NO. 4

PACIFIC GAS AND ELECTRIC COMPANY

Nominal Interest Rates
Major California Utilities
1968 - 1977

Company	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	Increase 68 - 77	Increase 72 - 77
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
San Diego Gas & Electric	4.22%	4.60%	5.30%	5.32%	5.94%	6.65%	7.13%	7.15%	7.23%	7.65%	81%	29%
Pacific Telephone	4.51	4.75	5.39	5.92	5.95	6.10	6.59	6.64	6.68	6.79	51	14
General Telephone	4.86	5.21	5.76	5.81	6.00	6.15	6.24	6.20	6.15	6.39	31	7
Southern California Edison	4.60	4.75	5.06	5.10	5.29	5.41	6.00	6.14	6.34	6.46	40	22
Pacific Ltg. Utility System	4.33	4.48	4.80	5.40	5.61	5.86	5.96	6.16	6.43	6.43	48	15
California Water Service	4.05	4.19	4.79	5.07	5.07	5.30	5.55	7.05	7.74	7.87	94	55
Southern California Water	4.43	4.59	4.95	5.04	5.04	5.36	5.33	5.43	6.57	6.55	48	30
Pacific Gas and Electric	4.22	4.46	4.93	5.25	5.44	5.60	6.03	6.61	6.70	7.18	70	32

Nominal rate developed by dividing interest charges for the year by the average of beginning and end-of-year long-term debt and short-term debt for capital purposes.

TABLE NO. 5

PACIFIC GAS AND ELECTRIC COMPANY

Effective Interest Rate on Debt
December 31, 1980

		Par Value	Net Proceeds	Annual Charge	Effective Rate
Outstanding Issues 1/		$3,288,398	$3,259,259	$237,680	7.29%
Bonds Sold in 1979					
Series 79 A - T, 9.375%		100,000	99,940	9,377	9.38
79 A1-T1, 9.375%		75,000	74,940	7,034	9.39
Issues Planned					
1979	9.25%	300,000	300,000	27,750	9.25
1980	9.00%	255,000	255,000	22,950	9.00
	9.00%	245,000	245,000	22,050	9.00
Totals		$4,263,398	$4,234,139	$326,841	7.72%

December 31, 1981

		Par Value	Net Proceeds	Annual Charge	Effective Rate
Outstanding Issues 1/		$3,216,485	$3,187,914	$230,701	7.24%
Bonds Sold in 1979					
Series 79A - T, 9.375%		100,000	99,940	9,377	9.38
79A1-T1, 9.375%		75,000	74,940	7,034	9.39
Issues Planned					
1979	9.25%	300,000	300,000	27,750	9.25
1980	9.00%	255,000	255,000	22,950	9.00
	9.00%	245,000	245,000	22,050	9.00
1981	9.00%	250,000	250,000	22,500	9.00
	9.00%	250,000	250,000	22,500	9.00
Totals		$4,691,485	$4,662,794	$364,862	7.82%
Total, December 31, 1979		$3,860,734	$3,830,569	$288,651	7.54%

1/ Bonds outstanding on December 31, 1978 adjusted for sinking fund provisions, gains on reacquired bonds and retirements at maturity through December 31, 1980 and 1981, respectively.

Dollars in Thousands.

TABLE 6

PACIFIC GAS AND ELECTRIC COMPANY

TIMES LONG-TERM DEBT INTEREST EARNED*
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	2.77	2.40	2.44	2.37
1974	2.54	2.19	2.22	2.19
1975	2.23	2.25	2.13	2.21
1976	2.35	2.45	2.28	2.30
1977	2.45	2.46	2.37	2.42
5-YR AVERAGE	2.47	2.35	2.29	2.30
INDEX- 1973	100	100	100	100
1974	92	91	91	92
1975	81	94	87	93
1976	85	102	93	97
1977	88	102	97	102
5-YR AVERAGE	89	98	94	97

* AFTER INCOME TAXES

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE NO. 7

PACIFIC GAS AND ELECTRIC COMPANY

Effective Dividend Rate on Preferred Stock
December 31, 1980

	Par Value	Net Proceeds	Annual Charge	Effective Rate
Outstanding Issues 1/	$1,102,451	$1,150,021	$ 88,690	7 1%
Issues Planned				
1979 - 9.50% Series	100,000	105,960	9,500	8.97
1980 - 9.25% Series	150,000	158,940	13,875	8.73
Total	$1,352,451	$1,414,921	$112,065	7.92%

December 31, 1981

	Par Value	Net Proceeds	Annual Charge	Effective Rate
Outstanding Issues 1/	$1,102,451	$1,150,021	$ 88,690	7.71%
Issues Planned				
1979 - 9.50% Series	100,000	105,960	9,500	8.97
1980 - 9.25% Series	150,000	158,940	13,875	8.73
1981 - 9.25% Series	150,000	158,940	13,875	8.73
Total	$1,502,451	$1,573,861	$125,940	8.00%
Total, December 31, 1979	$1,202,451	$1,255,981	$ 98,190	7.82%

1/ As of December 31, 1978.

Dollars in Thousands.

TABLE NO. 8

PACIFIC GAS AND ELECTRIC COMPANY

Common Stock Book Value, Dividends, Earnings

1968 - 1977

Year	Book Value December 31	Net Earnings After Preferred Dividends	Dividends on Common Stock	Earnings To Book Value Percent	Dividends to Book Value Percent	Dividend Payout Ratio	Shares Outstanding December 31	Book Value Per Share December 31	Earnings Per Share	Annual Dividend Rate Per Share
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1968	$1,275,195	$149,488	$ 85,168	11.72%	6.68%	56.97%	58,737	$21.71	$ 2.55	$1.45
1969	1,338,502	151,413	88,106	11.31	6.58	58.19	58,737	22.79	2.58	1.50
1970	1,445,542	147,660	89,868	10.22	6.22	60.86	61,086	23.66	2.42	1.50
1971	1,521,527	167,715	100,181	11.02	6.58	59.73	61,086	24.91	2.75	1.64
1972	1,610,025	184,235	105,068	11.44	6.53	57.03	61,086	26.36	3.02	1.72
1973	1,811,467	206,925	114,171	11.42	6.30	55.18	65,159	27.80	3.18	1.78
1974	2,002,850	215,984	125,282	10.78	6.26	58.01	71,082	28.18	3.04	1.88
1975	2,215,890	203,278	146,162	9.17	6.60	71.90	79,967	27.71	2.54	1.88
1976	2,495,383	238,299	154,599	9.55	6.20	64.88	88,611	28.16	2.69	1.88
1977	2,831,287	282,395	179,903	9.97	6.35	63.71	98,390	28.78	2.87	2.00

Columns a, b, c and g in thousands.

Column a consists of year-end par value of common stock, premium on capital stock and earned surplus.

Column d represents the relationship of net earnings after preferred dividends to year-end book value of common stock equity.

Column e represents the relationship of common stock dividends to year-end book value of common stock equity.

SOURCES: Annual Reports to Stockholders.
Company Financial and Statistical Report.

TABLE 9

PACIFIC GAS AND ELECTRIC COMPANY

AVERAGE COMMON EQUITY RATIO
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	35.12%	33.71%	33.71%	39.16%
1974	35.38	33.13	32.66	38.49
1975	35.45	33.40	32.08	37.96
1976	36.07	35.35	33.31	38.94
1977	37.91	37.07	35.00	40.10
5-YR AVERAGE	35.99	34.53	33.35	38.93
INDEX- 1973	100	100	100	100
1974	101	98	97	98
1975	101	99	95	97
1976	103	105	99	99
1977	108	110	104	102
5-YR AVERAGE	102	102	99	99

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 10

PACIFIC GAS AND ELECTRIC COMPANY

EARNINGS RATE ON AVERAGE COMMON EQUITY
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	12.16%	10.73%	11.64%	10.89%
1974	11.39	10.00	10.91	10.51
1975	9.69	10.83	10.76	10.94
1976	10.21	11.84	11.72	11.44
1977	10.66	11.23	12.07	11.96
5-YR AVERAGE	10.82	10.93	11.42	11.15
INDEX- 1973	100	100	100	100
1974	94	93	94	97
1975	80	101	92	100
1976	84	110	101	105
1977	88	105	104	110
5-YR AVERAGE	89	102	98	102

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 11

PACIFIC GAS AND ELECTRIC COMPANY

DIVIDEND PAYOUT RATIO
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	54.87%	70.57%	62.64%	67.31%
1974	57.69	70.70	68.89	68.81
1975	71.52	67.59	71.31	66.92
1976	64.30	64.89	65.02	62.84
1977	63.36	69.03	64.51	60.87
5-YR AVERAGE	62.35	68.56	66.47	65.35
INDEX- 1973	100	100	100	100
1974	105	100	110	102
1975	130	96	114	99
1976	117	92	104	93
1977	115	98	103	90
5-YR AVERAGE	114	97	106	97

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE NO. 12

PACIFIC GAS AND ELECTRIC COMPANY

Flow of Funds

1973 - 1977

$(000)

	1973	1974	1975	1976	1977	5 Year Total	Percent of Total
Sources of Funds							
From Operations							
Net Income	$243,607	$ 261,237	$251,579	$ 301,984	$ 356,298	$1,414,705	31.10%
Depreciation	168,074	177,031	189,325	203,865	212,751	951,046	20.90
Gain on Bonds Purchased for For Sinking Fund	(10,100)	(20,039)	(15,106)	-	-	(45,245)	(1.00)
Allowance For Funds Used During Construction	(44,133)	(57,598)	(70,351)	(60,559)	(75,827)	(308,468)	(6.80)
Other (Net)	(3,646)	(5,625)	(2,052)	(12,107)	(12,689)	(36,119)	(.80)
Total Funds From Operations	353,802	355,006	353,395	433,183	480,533	1,975,919	43.40
From Financing							
Common Stock Sold-Net Proceeds	102,991	92,592	149,348	187,770	225,638	758,339	16.70
Preferred Stock Sold-Net Proceeds	54,535	81,904	92,983	105,894	106,223	441,539	9.70
Mortgage Bonds Sold-Net Proceeds	295,762	462,745	172,394	172,804	198,393	1,302,098	28.60
Utility Plant Sold and Salvaged	12,110	16,641	3,647	-	-	32,398	.70
Advance Collection of Energy Costs	-	-	-	-	11,432	11,432	.30
Other Changes - Net	(491)	5,667	7,656	(718)	12,675	24,789	.60
Total Funds From Financing	464,907	659,549	426,028	465,750	554,361	2,570,595	56.60
Total Source of Funds	$818,709	$1,014,555	$779,423	$898,933	$1,034,894	$4,546,514	100.00%
Application of Funds							
Capital Expenditures	$565,539	$645,660	$630,589	$599,278	690,324	3,131,390	68.90%
Allowance For Funds Used During Construction	(44,133)	(57,598)	(70,351)	(60,559)	(75,827)	(308,468)	6.80
Funds Used For Capital Expenditures	521,406	588,062	560,238	538,719	614,497	2,822,922	62.10
Mortgage Bonds Purchased For Sinking Fund	21,618	32,728	30,293	37,446	33,261	155,346	3.40
Mortgage Bonds Retired	-	109,101	2,000	38,387	47,156	196,644	4.30
Dividends-Preferred and Common	149,691	169,350	193,370	216,155	252,255	980,821	21.60
Fuel Oil Inventory Change	-	-	59,108	(26,704)	36,909	69,313	1.50
Energy Costs Recoverable	-	-	-	275,855	9,375	285,230	6.30
Changes in Other Working Capital Items	125,994	115,314	(65,586)	(180,925)	41,441	36,238	.80
Total Application of Funds	$818,709	$1,014,555	$779,423	$898,933	$1,034,894	$4,546,514	100.00%

POOR ORIGINAL

TABLE NO. 13

PACIFIC GAS AND ELECTRIC COMPANY

Capital Structure
1968 - 1977

Year	Debt 1/		Preferred Stock		Common Equity		Total Capital	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
1968	$1,855,573	53.31%	$350,250	10.06 %	$1,275,195	36.63%	$3,481,018	100.00%
1969	1,980,750	53.98	350,250	9.55	1,338,502	36.47	3,669,502	100.00
1970	2,157,611	54.33	367,924	9.27	1,445,542	36.40	3,971,077	100.00
1971	2,315,048	53.82	464,951	10.81	1,521,527	35.37	4,301,526	100.00
1972	2,458,693	53.06	564,951	12.19	1,610,025	34.75	4,633,669	100.00
1973	2,669,193	52.38	614,951	12.07	1,811,467	35.55	5,095,611	100.00
1974	2,9[illegible]1,021	52.46	689,951	12.18	2,002,850	35.36	5,663,822	100.00
1975	3,213,831	51.78	777,451	12.52	2,215,890	35.70	6,207,172	100.00
1976	3,448,980	50.56	877,451	12.86	2,495,383	36.58	6,821,814	100.00
1977	3,386,130	47.06	977,451	13.59	2,831,287	39.35	7,194,868	100.00
10-Year Average		52.27		11.51		36.22		100.00

Dollars in Thousands.

1/ Includes currently maturing long-term debt and short-term debt for capital purposes.

SOURCES: Moody's Public Utility Manual.
Annual Reports to the Commission.

TABLE 14

PACIFIC GAS AND ELECTRIC COMPANY

EARNINGS RATE ON AVERAGE TOTAL CAPITAL
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	7.83%	7.61%	8.08%	7.94%
1974	7.99	7.71	8.19	8.11
1975	7.66	8.16	8.34	8.42
1976	8.04	8.66	8.80	8.83
1977	8.56	8.65	9.11	9.25
5-YR AVERAGE	8.02	8.16	8.50	8.51
INDEX- 1973	100	100	100	100
1974	102	101	101	102
1975	98	107	103	106
1976	103	114	109	111
1977	109	114	113	116
5-YR AVERAGE	102	107	105	107

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 15

PACIFIC GAS AND ELECTRIC COMPANY

AVERAGE NET PLANT INVESTMENT
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	4,752,811	2,150,708	2,069,198	615,540
1974	5,170,284	2,353,358	2,324,954	645,774
1975	5,615,863	2,478,045	2,582,663	669,406
1976	6,011,538	2,570,764	2,825,257	697,172
1977	6,412,509	2,708,502	3,086,288	730,035
5-YR AVERAGE	5,592,601	2,452,275	2,577,672	671,586
INDEX- 1973	100	100	100	100
1974	109	109	112	105
1975	118	115	125	109
1976	126	120	137	113
1977	135	126	149	119
5-YR AVERAGE	118	114	125	109

DOLLARS IN THOUSANDS

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 16

PACIFIC GAS AND ELECTRIC COMPANY

OPERATING REVENUES
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	1,490,156	726,027	625,457	412,847
1974	1,726,755	946,370	797,556	474,807
1975	2,233,371	1,081,682	946,862	574,336
1976	2,646,728	1,209,290	1,066,821	675,770
1977	3,505,541	1,328,764	1,242,582	816,584
5-YR AVERAGE	2,320,510	1,058,427	935,856	590,869
INDEX- 1973	100	100	100	100
1974	116	130	128	115
1975	150	149	151	139
1976	178	167	171	164
1977	235	183	199	198
5-YR AVERAGE	156	146	150	143

DOLLARS IN THOUSANDS

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 17

PACIFIC GAS AND ELECTRIC COMPANY

OPERATING EXPENSES
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	1,172,636	599,643	490,288	363,283
1974	1,396,146	801,059	643,263	421,004
1975	1,886,118	905,585	772,433	515,968
1976	2,242,858	1,014,276	871,108	609,218
1977	3,061,328	1,123,096	1,019,990	747,819
5-YR AVERAGE	1,951,817	888,731	759,416	531,458
INDEX- 1973	100	100	100	100
1974	119	134	131	116
1975	161	151	158	142
1976	191	169	178	168
1977	261	187	208	206
5-YR AVERAGE	166	148	155	146

DOLLARS IN THOUSANDS

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 18

PACIFIC GAS AND ELECTRIC COMPANY

OPERATING RATIOS
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	78.69%	82.12%	77.49%	88.80%
1974	80.85	84.13	80.15	89.37
1975	84.45	83.34	80.84	90.41
1976	84.74	83.43	80.75	91.00
1977	87.33	84.24	81.24	92.13
5-YR AVERAGE	83.21	83.45	80.09	90.34
INDEX- 1973	100	100	100	100
1974	103	102	103	101
1975	107	101	104	102
1976	108	102	104	102
1977	111	103	105	104
5-YR AVERAGE	106	102	103	102

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

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TABLE 19

PACIFIC GAS AND ELECTRIC COMPANY

NET OPERATING INCOME
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	317,520	126,384	135,168	49,564
1974	330,609	145,311	154,293	53,803
1975	347,253	176,097	174,429	58,368
1976	403,870	195,014	195,712	66,552
1977	444,213	205,668	222,592	68,764
5-YR AVERAGE	368,693	169,695	176,439	59,410
INDEX- 1973	100	100	100	100
1974	104	115	114	109
1975	109	139	129	118
1976	127	154	145	134
1977	140	163	165	139
5-YR AVERAGE	116	134	131	120

DOLLARS IN THOUSANDS

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 20

PACIFIC GAS AND ELECTRIC COMPANY

RATIO: OPERATING REVENUES TO AVERAGE NPI
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	31.35%	34.71%	[illegible].78%	73.13%
1974	33.40	39.82	33.57	78.11
1975	39.77	43.33	35.79	92.55
1976	44.03	46.78	37.14	102.99
1977	54.67	49.41	40.19	122.98
5-YR AVERAGE	40.64	42.81	35.29	93.95
INDEX- 1973	100	100	100	100
1974	107	115	113	107
1975	127	125	120	127
1976	140	135	125	141
1977	174	142	135	168
5-YR AVERAGE	130	123	119	128

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE 21

PACIFIC GAS AND ELECTRIC COMPANY

RATIO OF NET OPR. INCOME TO AVERAGE NPI
TREND AND 5-YEAR AVERAGES
1973 - 1977

YEAR	PACIFIC GAS AND ELECTRIC COMPANY	10 COMBINATION GAS & ELECTRIC UTILITIES	10 ELECTRIC UTILITIES	10 GAS UTILITIES
1973	6.68%	6.17%	6.69%	7.82%
1974	6.39	6.26	6.66	7.98
1975	6.18	7.11	6.79	8.56
1976	6.72	7.60	7.06	8.91
1977	6.93	7.64	7.45	9.20
5-YR AVERAGE	6.58	6.95	6.93	8.49
INDEX- 1973	100	100	100	100
1974	96	101	100	102
1975	93	115	102	109
1976	101	123	106	114
1977	104	124	111	118
5-YR AVERAGE	99	113	104	109

SOURCES: 5-YEAR STUDIES, RATE OF RETURN UNIT.
MOODY'S PUBLIC UTILITY MANUAL.
ANNUAL REPORTS TO STOCKHOLDERS.
ANNUAL REPORTS TO CALIFORNIA PUBLIC UTILITIES COMMISSION.

TABLE NO. 22

PACIFIC GAS AND ELECTRIC COMPANY

Determination of Rates of Return Required to Recover Imbedded Costs of Long-Term Debt and Preferred Stock at Various Assumed Rates of Return on Common Equity - Average Years 1980 and 1981

1980	Capital Ratio 1/	Cost Factors 2/	Assumed Earnings Rates on Common Equity: 12.80%	13.00%	13.20%	13.40%	13.50%	13.60%	13.80%	14.00%
			Weighted Cost Totals							
Long-Term Debt	46.02%	7.63%	3.51	3.51	3.51	3.51	3.51	3.51	3.51	3.51
Preferred Stock	14.47	7.87	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Common Equity	39.51		5.06	5.14	5.22	5.29	5.33	5.37	5.45	5.53
Total	100.00		9.71	9.79	9.87	9.94	9.98	10.02	10.10	10.18
1981										
Long-Term Debt	45.74	7.77	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55
Preferred Stock	14.58	7.96	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Common Equity	39.68		5.08	5.16	5.24	5.32	5.36	5.40	5.48	5.56
Total	100.00		9.79	9.87	9.95	10.03	10.07	10.11	10.19	10.27

1/ Capital Ratios Estimated on an Average Year Basis.

2/ Average Year Cost Factors. Table No. 5 and Table No. 7 Develop Respective Year-End Cost Factors.

TABLE NO. 23

PACIFIC GAS AND ELECTRIC COMPANY

Recommended Rate of Return
Average Year 1980

Components	Capital Ratios (a)	Cost Factors (b)	Weighted Cost (c)
Long-Term Debt	46.02%	7.63%	3.51%
Preferred Stock	14.47	7.87	1.14
Common Equity	39.51	13.40	5.29
Total	100.00%		9.94%

Average Year 1981

Components	Capital Ratios (a)	Cost Factors (b)	Weighted Cost (c)
Long-Term Debt	45.74%	7.77%	3.55%
Preferred Stock	14.58	7.96	1.16
Common Equity	39.68	13.40	5.32
Total	100.00%		10.03%

APPENDIX

PACIFIC GAS AND ELECTRIC COMPANY

List of Companies Used in Study

Combination Companies (10)
Gas and Electric

Baltimore Gas & Electric Company
Consolidated Edison Co. of New York, Inc.
Consumers Power Company
Long Island Lighting Company
Niagara Mohawk Power Corporation
Northern Indiana Public Service Company
Northern States Power Company
Philadelphia Electric Company
Public Service Electric & Gas Company
Wisconsin Electric Power Company

Electric Utilities (10)

Carolina Power and Light Company
Commonwealth Edison Company
Detroit Edison Company
Duke Power Company
Florida Power & Light Company
Houston Industries, Incorporated
Ohio Edison Company
Pennsylvania Power & Light Company
Potomac Electric Power Company
Southern California Edison Company

Gas Utilities (10)

Atlanta Gas Light Company
Brooklyn Union Gas Company
Columbia Gas System, Incorporated
Consolidated Natural Gas Company
The Gas Service Company
Laclede Gas Company
National Fuel Gas Company
NICOR Inc.
Pacific Lighting Corporation
Washington Gas Light Company