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APPLICATION NO. 59788 (AMENDED)  
EXHIBIT NO. (SDG&E - 101)  
WITNESS: R. KORPAN  
DATE: \_\_\_\_\_



**San Diego Gas & Electric**

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**1982 TEST YEAR**

**COST OF CAPITAL AND  
RATE OF RETURN**

**INCLUDING PREPARED TESTIMONY**

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BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE  
STATE OF CALIFORNIA

DECEMBER 1980

8108110736

1 EXHIBIT (SDG&E-1)  
2 COST OF CAPITAL AND RATE OF RETURN  
3 PREPARED DIRECT TESTIMONY OF RICHARD KORPAN

4 1. Q. Mr. Korpan, what is the purpose of your testimony in  
5 this proceeding?

6 A. The purpose of my testimony in this proceeding is to  
7 demonstrate the increased cost of capital in 1982 and  
8 1983 and to substantiate the need for an increase in  
9 the authorized rate of return from the level adopted  
10 in the Company's last General Rate Case Decision  
11 90405 of June 5, 1979.

12 2. Q. Would you please explain how the cost of capital  
13 for Test Year 1982 was calculated?

14 A. The cost of capital for the 1982 Test Year was prepared  
15 using the same methodology included in the first phase  
16 of Application 59788, except that the return on  
17 equity was increased to a level necessary to give  
18 SDG&E the opportunity to progress from its current  
19 financial situation towards a single A bond rating  
20 level by 1984. The ultimate achievement of this goal  
21 will require the completion of SONGS Units 2 and 3  
22 as well as their inclusion in rate base.

23 The cost of long-term debt, preferred stock and  
24 bankers' acceptances were updated to reflect current  
25 assumptions for money costs and happenings subsequent  
26 to the 1981 case. Historical data on the costs of  
27 capital are provided as background information for  
28 the cost estimates through 1983.

In addition, comparisons with the utility

1 industry by credit rating groups, measurements of  
2 market performance, comparisons to other indus-  
3 tries, and other analyses and studies are included  
4 to substantiate the need for continued improvement  
5 in the Company's financial condition.

6 3. Q. Mr. Korpan, in past proceedings, your Company has  
7 compared itself with other electric or combination  
8 companies of similar size for your comparable  
9 earnings test. Why have you chosen a different  
10 approach?

11 A. Given the generally mediocre financial condition  
12 of the utility industry today, particularly for  
13 Companies of comparable financial risk to SDG&E,  
14 it would be ludicrous to measure this Company's  
15 financial results against an average of a score of  
16 companies which are also suffering. Even if their  
17 overall results are somewhat better than SDG&E's,  
18 improvement to that level would be inadequate in  
19 terms of the needs of SDG&E and the industry as a  
20 whole.

21 I have heard the argument that utilities do  
22 not compete with industrials for the same invest-  
23 ment dollar; that utility stocks are usually  
24 purchased strictly for their current dividend and  
25 steady annual dividends growth. Industrial stocks,  
26 on the other hand, are evaluated for their poten-  
27 tial appreciation in market price, with less  
28 emphasis placed on dividends, and therefore have a

1 different purpose in portfolios.

2 It is true that utility stocks are usually  
3 purchased strictly for their dividends and potential  
4 dividend growth. Utility investors are painfully  
5 aware that there has been little appreciation in  
6 stock prices. However, investors insist on a  
7 return consistent with other investment opportuni-  
8 ties and a risk premium consistent with their  
9 perception of the industry. Investors accomplish  
10 this return by valuing common stock to provide a  
11 yield to approximate opportunity costs, plus a  
12 risk premium.

13 This is a symptom of the industry's ills.  
14 Insufficient cash reinvestment year after year  
15 results in investors having to rely solely on  
16 dividends for return. Exclusive reliance strictly  
17 on higher dividends to prop up the Company's stock  
18 price is dangerous. In order to continue dividend  
19 growth, return on equity must increase commensurately  
20 or there will be little earnings left for reinvestment.  
21 The resulting need to bolster common equity balances  
22 by the issuance of larger and larger numbers of  
23 common shares, compounds the dividend problem.

24 The point is, the utility industry must be in  
25 a position to compete with other segments of the  
26 financial marketplace or face an eventual financial  
27 breakdown.

28 4. Q. In general terms, Mr. Korpan, why do you think an

1 increase in the return on equity is necessary?

2 A. An increase in SDG&E's authorized return on equity  
3 is definitely in order in light of (1) the continued  
4 erosion of earnings due to persistently high  
5 inflation, (2) increasing cost of money, and (3)  
6 the levels of rate of return and return on equity  
7 authorized for other California utilities in  
8 recent Commission decisions. As substantiated in  
9 the exhibits filed with SDG&E's Amended Application,  
10 SDG&E's financial results are inferior. With  
11 continuing earnings erosion, particularly under  
12 weak security market conditions, the measurement  
13 of a fair and reasonable return on equity on a  
14 traditional basis is no longer relevant. In order  
15 to finance its construction program at a fair and  
16 reasonable cost, the Company must substantially  
17 improve its financial condition.

18 Expeditious treatment of its request is  
19 essential to the financial wellbeing of SDG&E.  
20 Substantial rate relief must be received by January 1,  
21 1982, in order to reverse the steep decline in  
22 financial condition projected for 1982 at present  
23 rates and in order to finance the necessarily  
24 large construction budget.

25 5. Q. Would you please describe the general financial  
26 results the Company would achieve if its rate  
27 request for 1982 were granted?

28 A. Yes, Table 1 presents the primary statistics

1 relating to the Company's rate request. Total  
2 revenues (Line 1) would increase \$227.5 million  
3 based on the 1982 Test Year, assuming an annualized  
4 increase of \$103.1 million from the 1981 Test Year  
5 in 1982. The total rate of return on rate base  
6 requested is 13.9% (Line 5) compared to the 10.59%  
7 currently authorized in D.90405. The requested  
8 return on equity is 19%, compared to the 14.50%  
9 allowed in D.90405. In view of the Company's poor  
10 quality of earnings (earnings excluding non-cash  
11 credits, such as AFDC), the increases in rate of  
12 return and return on equity are necessary in order  
13 to move toward the goal of improving the Company's  
14 internal cash flow generation. Ultimately, with  
15 regard to cash flow, the Company must be at least  
16 on a comparable basis with the rest of the electric  
17 utility industry. This should be accomplished  
18 after SONGS Units 2 and 3 are in service and  
19 included in rate base.

20 Weighted average rate base (Line 7 on Table 1)  
21 includes about \$16.4 million for the debt and  
22 preferred portions of average Construction Work in  
23 Progress (CWIP) associated with the APS/SDG&E  
24 Interconnection Project, during 1982.

25 Embedded costs (lines 11-13) reflect the  
26 financing assumptions detailed on subsequent  
27 Tables. Higher interest rates will cause embedded  
28 costs to increase through 1982.

1           The common equity ratio (Line 14) is lower than the  
2 Company's goal of reaching 40% (including leases)  
3 in its efforts to achieve a Single A bond rating.

4           This ratio on Line 14 does not reflect outstanding  
5 leases such as Encina 5 in the capital structure,  
6 which are considered debt by most analysts and  
7 investors. The rating agencies, in particular,  
8 include leases as a part of debt in the capital  
9 structure in their analysis of a company's bond  
10 rating level. As a rule, one would subtract about 3%  
11 from the common equity ratio to reflect the effect  
12 of leases for SDG&E. This means that 43% is the  
13 Company's true goal for the proportion of common  
14 equity in the capital structure.

15 6.    Q.   Mr. Korpan, you stated that you propose to increase  
16 the return on equity from 14.50% to 19%. Why an  
17 increase of this magnitude?

18       A.   Rate base in proportion to total assets is becoming  
19 smaller and smaller. This is almost entirely due  
20 to the higher and higher proportion of CWIP the  
21 Company must carry. In 1975, the proportion of  
22 CWIP to rate base was 21%. By 1979 the same ratio  
23 reached 41%, and by the end of 1982, without SONGS  
24 completed and in service, this ratio will reach  
25 58%. At the requested rate of return of 13.9%,  
26 the real rate of return by 1982 will be only 8.80%  
27 in terms of cash return on assets. This means  
28 that the Company will receive no cash compensation

1 for a significant portion of it's capital cost  
2 during 1982. As a consequence, the Company must  
3 earn a significantly higher return to maintain an  
4 acceptable level of cash flow.

5 7. Q. Is the common equity ratio the only financial goal  
6 to be achieved in your efforts to regain the  
7 Single A rating?

8 A. No. As will be discussed further, there are  
9 additional goals which must be reached. Specifically,  
10 they are 3 times pretax interest coverage, 40%  
11 internal generation of capital requirements, and  
12 maintainence of a steady, competitive dividend  
13 growth.

14 The interrelationship of these objectives has  
15 prompted the Company to stress the additional goal  
16 of holding its cash construction expenditures  
17 (exluding AFDC) to 10% of total capitalization or  
18 less. This is not expected to be achieved until  
19 SONGS Units 2 and 3 and the APS/SDG&E Interconnec-  
20 tion Project are completed and in rate base.

21 Lower construction expenditures require a  
22 lower return on rate base over the long run to  
23 achieve the Company's financial goals. The result  
24 would be lower cost to the customer.

25 8. Q. Mr. Korpan, would you please elaborate on the  
26 Company's past financial results?

27 A. Yes. Table 2 depicts dismal financial results  
28 over the last five years. These dismal results



1 reflect accelerating money costs, the cost of  
2 inflation, high customer growth and high capital  
3 needs. The Company's poor quality of earnings is  
4 evidenced by a high proportion of AFDC to earnings  
5 (Table 2, Line 1), a poor before tax interest  
6 coverage (Line 4), and low internal generation of  
7 cash (Line 7).

8 All other parameters are below par, flat, and  
9 without direction, with the exception of the common  
10 equity ratio (Line 9) which increased from 31.2%  
11 in 1975 (Column A) to 37.2% (34% including leases)  
12 in 1979. This improvement was caused by (1) accept-  
13 able earnings results in 1977, which, although  
14 of poor quality, increased retained earnings, and  
15 (2) the Company's efforts to improve the ratio  
16 through the sale of common stock.

17 Poor coverage ratios (Lines 4-6), the prospect  
18 of high interest rates, weak markets and debenture  
19 indenture restrictions, have sometimes limited debt  
20 financings. Improvement in the common stock ratio  
21 reduces the amount of leverage inherent in the  
22 capital structure. By leverage, I mean the combina-  
23 tion of both the amount and cost of debt in the  
24 capital structure. These debt factors can change  
25 separately, or in combination, and affect the relative  
26 amount of leverage in the capital structure. I  
27 term this to mean the double leverage concept  
28 which points out the weighted cost as the most

1 important factor. Reduced leverage decreases the  
2 risk associated with the debt and off-balance  
3 sheet debt (leases) outstanding and, therefore,  
4 improves the prospect of an upgrading. Moreover,  
5 the cost of these common sales below book value  
6 (see Line 13) is expensive to shareholders and  
7 customers alike, as substantiated in subsequent  
8 Tables.

9 9. Q. How would you view these results in terms of  
10 investor needs and expectations?

11 A. The investor view of an investment results from a  
12 combination of his perception of past performance  
13 and future potential. Investors' expectations  
14 were relatively optimistic in the late sixties and  
15 early seventies. Results, as I have discussed, are  
16 less than satisfactory. No wonder, then, that  
17 investors are currently discounting the Company's,  
18 and the utility industry's, securities to account  
19 for a higher risk which they perceive in SDG&E's  
20 financial future. This makes all security issues  
21 more expensive to both SDG&E's customers and  
22 current investors.

23 10. Q. Mr. Korpan, why cannot the Company meet the limita-  
24 tion of 10% cash construction expenditures to  
25 total capitalization?

26 A. The construction program is comprised of essen-  
27 tially five elements: 1) San Onofre Units 2 and  
28 3; 2) connection of new gas and electric customers;

1 3) improvements in system reliability; 4) the  
2 APS/SDG&E Interconnection Project; and 5) the cost  
3 of mandated programs such as conservation, pollution  
4 control, and conversion projects. These components  
5 of the construction program cannot be reduced, while  
6 at the same time, allow SDG&E to meet its customers'  
7 current and future needs, and satisfy regulatory  
8 compliance requirements.

9 Aside from the rising cost of inflation,  
10 utilities are faced with continuous additional  
11 pressures which impact heavily on the use of  
12 capital, including stricter environmental controls  
13 and more complex regulatory restrictions, require-  
14 ments, and restraints. These are positive social  
15 needs, but they do little in terms of financial  
16 results.

17 11. O. Would you please describe the financial results  
18 for SDG&E without rate relief and the results if  
19 the Company is allowed its rate request?

20 A. Table 3 shows the projected decline in the Company's  
21 financial results assuming no rate relief at  
22 present rates. From poor results in 1980, 1981  
23 reflects disastrous results, and 1982 is, of  
24 course, worse. The 1982 Test Year at proposed  
25 rates (Column D) allows some improvement toward  
26 financial results comparable with Single A companies,  
27 but they still remain below the needed levels.

28 For instance, the Company's financial goals

1 include pretax coverage of . . . times, 40% of cash  
2 construction expenditures generated internally and  
3 a common equity ratio of 40% (43% or more excluding  
4 leases). As I mentioned, with the requested relief,  
5 the pretax interest coverage shown on Line 4, Column  
6 D is 2.98X; the percent internal generation is 28.4%;  
7 and, the common equity ratio is 37.32%. Sustained finan-  
8 cial results at these levels would give the Company  
9 optimism for an eventual return to a Single A bond  
10 rating during 1984. Financial results at these  
11 improved, but sub-Single A bond rating levels,  
12 must become a reality (actually earned) in order  
13 to demonstrate healthy progress in the interim.

14 The only way to turn investors' expectations  
15 around and reduce the element of risk perceived by  
16 investors in the Company's securities, is to  
17 improve financial results on a sustained basis.  
18 Return on equity must be improved dramatically to  
19 accomplish this.

20 12. Q. Mr. Korpan, what is the solution to SDG&E's financial  
21 problems?

22 A. As I have mentioned, SDG&E has kept its construction  
23 budget as low as possible, commensurate with its  
24 customers needs and has kept its operating expenses  
25 to a minimum. But, the Company's costs rise with  
26 the economy as in any other company or industry.  
27 This includes the rising cost of money. Return on  
28 equity must improve to change investor expectations

1 about SDG&E's financial future. Investors must  
2 have evidence that SDG&E will be able to increase  
3 dividends at a competitive rate and support them  
4 with earnings. Further, the quality of earnings  
5 in terms of cash flow must also improve. The more  
6 cash generated internally, the less often the  
7 Company will need to go to the financial markets  
8 for cash.

9 13. Q. What specific steps is the Company proposing in  
10 this to Application improve cash flow?

11 A. 1) First, the Company has included the debt and  
12 preferred equity portions of CWIP for the APS/SDG&E  
13 Interconnection Project in rate base. While the  
14 Commission has not, in the past, allowed CWIP in  
15 rate base, the Company feels its current proposal  
16 represents a new perspective. There are two pri-  
17 mary reasons for this: first, the APS/SDG&E  
18 Interconnection Project will have substantial  
19 beneficial impact on customer rates by reducing  
20 reliance on imported fuel oil, and second, omitting  
21 the common equity component of the capital cost  
22 creates an incentive to complete the project as  
23 expeditiously as possible. Including the debt and  
24 preferred equity portions of CWIP in rate base  
25 will help relieve the strain caused by the large  
26 capital budget by compensating SDG&E for a portion  
27 of the carrying costs. This will also improve the  
28 Company's quality of earnings by reducing AFDC,

1 which provides no cash flow, and by improving internal  
2 generation of cash. The energy to be received through  
3 this transmission line will replace high cost, fuel oil-  
4 based generation which will have a beneficial  
5 impact on customer rates.

6 Other state regulatory bodies have recognized  
7 the need to include CWIP in rate base and the  
8 importance of providing adequate returns. This  
9 year, Utah Power and Light was allowed CWIP in  
10 rate base and a 16.8% return on equity.

11 2) The second step for improving cash flow is  
12 the Company's proposal for a customer connection  
13 charge which would substantially reduce construc-  
14 tion expenditures. This reduction in cash needs  
15 would require fewer and smaller financings over  
16 the long run. In addition, a lower level of  
17 general revenue would be necessary for the Company  
18 to achieve Single A financial results. Furthermore,  
19 the connection charge eliminates the need for  
20 current customers to pay for the construction cost  
21 of new customers. This reduction in construction  
22 expenditures would bring the ratio of the 1982  
23 cash budget to total capitalization down from  
24 13.8% to 11.0%, which is much closer to the Company's  
25 10% goal.

26 3) Third, the Company is proposing an attri-  
27 tion allowance, effective January 1, 1983, which  
28 will offset increases in the cost of doing business

1 during that year. The effect of the increase will  
2 be to partially offset the effect of attrition on  
3 internal cash flow and to reduce the negative  
4 effect of attrition on earnings between rate case  
5 years.

6 4) Fourth, costs associated with the CVR  
7 Program, PURPA meters and load management (resi-  
8 dential peak shift program) are treated in this  
9 Application as expense items and are not capitalized.  
10 These items are excluded from rate base and will,  
11 therefore, not earn a return. Programs such as  
12 these have positive social benefits. But because  
13 of SDG&E's current financial condition, these  
14 projects would not be included in the capital  
15 budget if they were not required by governing and  
16 regulating agencies.

17 The removal of these costs from the construc-  
18 tion program will further the Company's objective  
19 of reaching a 10% proportion of cash construction  
20 to total capitalization which will in turn make it  
21 easier for the Company to reach its other financial  
22 objectives. Furthermore, the Company has done  
23 well in its conservation efforts and, therefore,  
24 should be rewarded with expense treatment for  
25 those costs.

26 5) Fifth, the Company is proposing a more liberal  
27 method of determining the depreciation lives of  
28 plant in service. Higher depreciation will bring

1 improved cash flow.

2 6) Sixth, the Company is proposing an increase  
3 in the return on equity, over and above the amount  
4 which would otherwise be found appropriate to  
5 compensate for the loss of return on rate base  
6 due to the sale and lease-back of the Encina 5  
7 power plant.

8 14. Q. Mr. Korpan, would you please elaborate more on the  
9 penalties associated with higher risk?

10 A. SDG&E must compete for funds in the securities  
11 markets in order to finance its construction  
12 program. As I mentioned, risk manifests itself in  
13 the return the investor feels is necessary to  
14 safeguard investments.

15 With the higher costs of debt and preferred  
16 stock and saturated market conditions, the diffi-  
17 culties associated with the Company's financing  
18 efforts tend to compound. It is difficult, parti-  
19 cularly for the lower rated utilities, to obtain  
20 30-year debt financing because of the investor's  
21 fear of risk associated with long-term financing.  
22 Interest rates on long-term securities are exhor-  
23 bitant in weak markets, especially for the weaker  
24 rated companies, forcing them to go to shorter  
25 maturities in many cases. If at all possible,  
26 however, it is more prudent to obtain long-term  
27 financing in order to reduce refunding needs and  
28 more closely match the life of the assets with the



1 term of the financing. Shorter maturities mean  
2 higher capital refunding requirements sooner, thus  
3 compounding the Company's financing needs.

4 15. Q. Mr. Korpan, would you describe the current and  
5 projected financial market conditions and how they  
6 affect a Baa/BBB company's ability to finance?

7 A. In 1980, we have seen a period of historically  
8 high interest rates coupled with sharply increased  
9 volumes of new debt securities by both government  
10 and private sectors. In fact, interest rates are  
11 at their highest level since the Civil War when  
12 the country's financial environment was in a  
13 shambles.

14 The projected dollar volume of public debt by  
15 utilities in 1980 is up 47 percent from 1979, and  
16 1981 is expected to attain the 1980 dollar volume.  
17 In addition, the total public debt volume is up 53  
18 percent over 1979 and is expected to increase  
19 further in 1981. This tremendous increase in new  
20 issues, coupled with a 42 percent increase in  
21 incremental government financing, places a strain  
22 on investors' ability to absorb this volume,  
23 particularly issues of the weaker rated entities.

24 The market's inability (or unwillingness) to  
25 absorb BBB securities can be demonstrated by  
26 several events. In late July 1980, both SDG&E and  
27 Portland General Electric sold \$75 million of 30  
28 year bonds. While SDG&E issued at 13-5/8% and had

1 a 100% initial reception, Portland General sold  
2 only two days later with a 25 basis point increase  
3 and had only a 50% initial reception.

4 In September 1980, four BBB utilities attempted  
5 to come to market within two days of each other.  
6 Only the first three, Connecticut Light and Power,  
7 Western Massachusetts Electric, and Alabama Power  
8 were sold. The third issue, Alabama Power, was  
9 sold at 80 basis points more than first issue and  
10 had only a 30% initial reception. The fourth  
11 issue, Pennsylvania Power, was postponed due to  
12 lack of demand and high cost.

13 In addition to the thin markets for BBB  
14 securities, interest rates in 1980 have experienced  
15 two historically high peaks which illustrate that  
16 the first peak in March/April was not a one time  
17 aberration. SDG&E had to issue 30 year bonds at  
18 16% in March 1980 and Alabama Power recently  
19 postponed a 30 year bond issue planned for  
20 December 10, 1980, which would have had a coupon  
21 between 17 and 18%. The anticipated large public  
22 financings planned for 1981, coupled with double-  
23 digit inflation projections, indicate that higher  
24 returns will continue to be required for the same  
25 levels of risk. Institutions in particular have  
26 begun shifting funds away from long-term debt  
27 securities and into equities, due to the large  
28 losses experienced on their debt portfolios.

1                   These factors will serve to necessitate high  
2 rates for SDG&E debt securities and require investors  
3 to demand even higher returns on equity in order to  
4 receive a premium for the additional risk. It  
5 also appears likely that high rates of return for  
6 all securities will be necessary for 1982 and  
7 beyond, even assuming more "normal" markets, since  
8 interest rates have continued to trend upward in  
9 each succeeding cycle.

10 16. Q. Before we continue with a more detailed explana-  
11 tion of your remaining Tables Mr. Korpan, do you  
12 have anything to add with respect to the Company's  
13 need for a higher return?

14 A. Only to sum up the benefits associated with a  
15 higher bond rating. With a higher rating the  
16 Company would benefit from lower rates for its  
17 customers, improved financing flexibility, improved  
18 ability to compete for funds at reasonable rates,  
19 lower cost, and less financing.

20 17. Q. Mr. Korpan, would you elaborate on the various finan-  
21 cial parameters necessary to achieve a Single A rating?

22 A. The most important parameter is the return on  
23 equity. Return on equity is closely associated  
24 with the other financial parameters, such as  
25 coverages, internal generation of cash, common equity  
26 ratio, and dividend growth, which must be improved  
27 in order to give SDG&E the opportunity to achieve  
28 a Single A bond rating.

1           The first, interest coverage, is the most  
2           important of the key financial parameters which  
3           investors, securities analysts, and rating agencies  
4           use to evaluate the financial viability of a  
5           company. Coverage is the ratio of earnings to  
6           interest and is stated as a multiple of the amount  
7           of interest a company pays in a year. Interest  
8           coverage represents the margin of safety - the  
9           ability to pay debt obligations - available to  
10          holders of long-term securities.

11           Table 4 shows before tax interest coverages  
12          on a historical and projected basis for Moody's,  
13          the First Mortgage Indenture, and the Debenture  
14          Indentures. The trend of Moody's before tax  
15          coverage (Column B) has declined since 1976 (Lines 2  
16          through 5). This critical indicator will continue  
17          to decline in 1980-1982, as shown on Lines 6-8,  
18          unless substantial rate relief is granted in a  
19          timely manner, in this case, by January 1, 1982.  
20          Moody's before tax coverage at proposed rates on  
21          Line 9 is projected to be 2.98 times, and the  
22          after tax coverage is estimated at 2.31 times,  
23          which is well below the 2.7 times coverage found  
24          reasonable in Decision 90405.

25           In comparison to other utilities in the  
26          industry, SDG&E's interest coverage has been below  
27          or at the level of the average of the lowest  
28          investment grade category since 1974. Chart 1

1 compares the pretax coverage experienced by the  
2 electric utility industry for the years 1974-1975  
3 using the Utility Compustat II data base. This is  
4 the same pretax coverage computation used in Table 4,  
5 Column B.

6 As you can see, the average pretax coverage  
7 for straight Single A companies is between 2.8  
8 and 3.0 times since 1976. 1974 and 1975 were  
9 particularly difficult years for the industry as  
10 the data suggests. Based on this data, the Company  
11 has established a financial goal of 3 times coverage  
12 as the level necessary to be maintained on a sus-  
13 tained basis. This would provide the Company with  
14 the opportunity to improve to an investment grade of  
15 Single A. Interest coverage can be improved through  
16 higher earnings, less leverage, and lower interest  
17 rates. As one of the most closely watched financial  
18 measures, the importance of interest coverage  
19 cannot be understated.

20 18. Q. Will you also elaborate on internal generation of  
21 cash which you also mentioned as important in  
22 obtaining a Single A rating?

23 A. Yes. Internal generation of cash is a parameter  
24 that the rating agencies consider crucial. The  
25 more cash generated internally, the less pressure  
26 there is on outside financing. This is particularly  
27 important when construction dollars are large in  
28 proportion to total capitalization. Lower outside

1 financing requirements, in turn, lessen the need  
2 for constant rate increases to compensate for the  
3 increased cost of capital.

4 Table 5 shows historical and projected capital  
5 expenditures and external and internal sources of  
6 funds. Since 1975, SDG&E has averaged only 16%  
7 internal generation. This distinct lack of cash  
8 flow has placed considerable pressure on financing  
9 the Company's cash construction program shown in  
10 Column C.

11 The Company has not exceeded a level higher  
12 than 20% from 1975 to date, and, at present rates,  
13 the Company will not be able to fund all of its  
14 day-to-day operations internally, let alone finance  
15 its construction. This is evidenced by a negative  
16 31% internal generation in 1981 and a negative 73%  
17 internal generation in 1982, at present rates.

18 At proposed rates, the requested rate increase  
19 is expected to provide internal generation of cash  
20 of 28% as shown on Line 10, Column F.

21 This compares to an acceptable level of 40%,  
22 as shown on Line 11, Column F. The percentage of  
23 internal generation which would result from approval  
24 of the Company's full rate request for 1982, is below  
25 the optimum level. However, it is acceptable  
26 given the anticipated completion of SONGS Units 2  
27 and 3. With SONGS Units 2 and 3 in rate base and  
28 earning an acceptable return, the Company should

1 be able to generate sufficient cash flow to fully  
2 achieve its financial goals by 1984. Retirements  
3 (Column B) are not included in the computation of  
4 the percentage, although to include them is the  
5 accepted methodology of the investment community.  
6 The amount of retirements in 1982, about \$53  
7 million (Line 5), are higher than normal and are  
8 thus excluded.

9 19. Q. Mr. Korpan, how does SDG&E compare with other  
10 companies in the industry with respect to internal  
11 generation of cash needs?

12 A. Chart 2 compares percent internal generation of  
13 cash for the electric utility industry with SDG&E.  
14 As I mentioned earlier, percent internal generation  
15 for SDG&E has averaged about 16% since 1974. This  
16 compares to a 47% average for straight AA rated  
17 companies and a 42% average for straight single A  
18 companies for the same period. Even straight BBB  
19 companies have averaged 30% over that time frame,  
20 which is almost twice the result for SDG&E.

21 20. Q. Can you point to any specific reasons for SDG&E's  
22 inordinately low performance during that time?

23 A. Yes. The primary causes for the low results are  
24 high construction budgets, the accelerating cost  
25 of money (interest rates on short-term debt in  
26 particular) and insufficient revenues to cover  
27 associated costs, all of which results in insuffi-  
28 cient cash flow. Furthermore, insufficient cash

1 is also significantly impaired by two regulatory  
2 accounting methods used in California which disguise  
3 the lack of cash flow as part of earnings  
4 levels. The two methods are flow through tax  
5 accounting and the use of AFDC.

6 I should emphasize here that the Commission  
7 has taken several important regulatory steps to  
8 combat the negative effects of inflation and an  
9 unstable energy situation in order to give utilities  
10 in California a better opportunity to earn their  
11 allowed return on equity. Improved ECAC procedures  
12 and the Regulatory Lag Plan are examples. However,  
13 we have much farther to go.

14 Security analysts are fully aware of the  
15 problems and take into consideration earnings  
16 levels for companies which use flow through tax  
17 accounting and AFDC in making comparisons with  
18 companies which normalize income taxes and include  
19 CWIP in rate base. Using analyst language, those  
20 companies which normalize taxes and/or include all or  
21 a part of CWIP in rate base, generally have a  
22 better "quality" of earnings. This means that the  
23 cash flows for those companies more closely approxi-  
24 mate their earnings levels.

25 There are two key indicators which are used  
26 by utility industry security analysts to evaluate  
27 earnings levels for flow through and AFDC companies.  
28 They are the effective tax rate and percent of AFDC



1 to earnings. For instance, SDG&E's effective tax  
2 rate has averaged 3% since 1974. This compares to  
3 17% for flow through companies and 33% for companies  
4 which normalize income taxes. SDG&E's percent of  
5 AFDC to earnings has averaged 40% since 1974 in  
6 the face of its high level of construction expen-  
7 ditures. This compares to 36% for the rest of the  
8 industry during that time.

9 Another way to measure the effect of flow  
10 through tax accounting is to compare the average  
11 interest coverage and percent internal generation  
12 for those companies which follow this practice  
13 against those which normalize income taxes.

14 Charts 3 and 4 clearly indicate the financial  
15 advantages of normalizing companies which fare  
16 better than flow through companies over the 1974-  
17 1979 time frame. It is easily seen that SDG&E is  
18 well below the industry average.

19 21. Q. Mr. Korpan, what financial advantages are enjoyed  
20 by companies with higher proportions of their cash  
21 needs generated internally?

22 A. As I have discussed before, companies with better  
23 cash flow can finance in smaller amounts or less  
24 often, or both. This means lesser reliance on  
25 short-term debt, and the added ability to be more  
26 flexible as to the timing, amount, and type of  
27 securities in order to obtain permanent financing  
28 at the lowest rates possible. Further, the Company

1 has on occasion been required to finance securities  
2 at shorter maturities than desired. Thus, its  
3 capitalization turnover rate will be relatively  
4 high in the future. For instance, \$220 million of  
5 long-term debt will have to be refunded over the  
6 next decade. This amounts to 30% of the total  
7 long-term debt now outstanding. This relationship  
8 would seem appropriate at face value. However,  
9 brief analysis reveals that 30% is extraordinarily  
10 high. The proportion should be much lower given  
11 SDG&E's heavy debt financing in recent years.

12 For various reasons, the Commission has not  
13 adopted CWIP in rate base or normalized income  
14 taxes; therefore, it is even more important that  
15 the return on equity be correspondingly higher for  
16 SDG&E to reap the benefits of improved internal  
17 cash generation.

18 22. Q. Would you please elaborate on the common equity  
19 ratio which is the third financial parameter you  
20 mentioned as important in connection with achieving  
21 a single A bond rating?

22 A. Yes. The common equity ratio is important in  
23 terms of a margin of safety for the Company's  
24 bondholders. Too much debt in the capital structure  
25 is an indication that a company is over-leveraged.  
26 This is particularly important during these times  
27 of high interest rates, especially for a BBB  
28 rated company which must pay relatively high

1 interest rates in any event. Chart 5 compares the  
2 common equity ratio for SDG&E with the electric  
3 industry by bond rating groups from 1974-1979.  
4 The Company has improved its ratio dramatically  
5 since 1974. This was accomplished through the  
6 sale of more than 15 million shares of common  
7 stock from 1974 through 1979 representing a dilution  
8 of more than 100%. The Company sold another 4.5  
9 million shares in 1980 and plans to sell approximately  
10 11 million more in 1981 and 1982. This represents  
11 an additional dilution of 35% for the years 1980  
12 through 1982.

13 The causes for this need are several fold.  
14 The Company must continue to provide adequate  
15 protection for its debt securities holders in the  
16 face of the prospect of further dilution of common  
17 stock and the prospect of selling at prices well  
18 below book value. The Company is continuing to  
19 strive for a 40% common equity ratio including  
20 leases. Adequate protection means reduced leverage  
21 which involves both the amount and cost of debt.  
22 SDG&E should be able to improve its equity ratio  
23 with a balanced contribution of earnings and  
24 common stock sales at reasonable prices. SDG&E's  
25 goal is to accomplish this in the future through  
26 more competitive earnings results.

27 23. Q. Mr. Korpan, can you quantify SDG&E's historical  
28 and projected financings for the years 1975 - 1982?

1 A. Yes. Table 6 depicts SDG&E's financings since  
2 1974 and projected financings for 1980 - 1982.  
3 SDG&E has issued \$219 million of common stock over  
4 the last five years. This amounts to 29% of  
5 long-term financing over that time. Over the next  
6 three years (1980-1982) SDG&E must issue another  
7 \$194 million, about 37% of total financing. All  
8 of these issues will be below book value, even at  
9 proposed rates.

10 Table 6 also illustrates a disconcerting  
11 problem facing SDG&E which is its high reliance on  
12 short-term debt. Since 1974, short-term balances  
13 have increased by \$124 million. They are  
14 expected to increase another \$145 million, at  
15 proposed rates, by the end of 1982. One additional  
16 financial parameter which rating agencies watch  
17 closely is the proportion of short-term debt to  
18 total capitalization. Over-reliance on short-term  
19 debt reduces the Company's options because of maximum  
20 limits on short-term debt. The reduced financial  
21 flexibility can force the Company to market under  
22 unfavorable conditions. Rating agencies set a  
23 rule of thumb proportion of 5%. The Company's  
24 ratio of short-term debt to total capitalization  
25 was 11% at the end of 1979 and is expected to be  
26 16% at the end of 1982 at proposed rates.

27 In view of the high anticipated cost of money  
28

1 over the next four years, and in view of the  
2 magnitude of financings SDG&E will find necessary  
3 during that time, the Company must be able to  
4 compete in the market place for funds. This  
5 requires returns on equity at levels high enough  
6 to attract funds which would otherwise be invested  
7 in other industries.

8 24. Q. Mr. Korpan, would you comment on the fourth finan-  
9 cial objective necessary to achieve a single A bond  
10 rating, adequate dividend growth?

11 A. Yes. It is imperative to maintain some level of  
12 dividend growth in order to keep the Company's  
13 common stock price at a competitive level with  
14 other companies in the industry, and, just as  
15 importantly, to improve its competitive level with  
16 other industries.

17 Public utilities have not provided the returns  
18 earned by other industries. A prudent, consistent  
19 policy of dividend growth is necessary simply to  
20 compete. Chart 6 compares percent dividend growth  
21 per share for SDG&E, the S&P 400, and the electric  
22 industry for the years 1974 - 1979.

23 The S&P 400 represents a cross section of  
24 industries across the nation which as a group has  
25 not only increased its dividend rate dramatically  
26 since 1974, it has approximated the rate of inflation  
27 during that time.

28 The straight BBB companies have shown improve-

1                   ment in 1979, but as a group have been inconsistent.  
2                   The high dividend growth for BBB rated companies in  
3                   the last few years reflects pressure to sell common  
4                   stock competitively.

5                   The straight AA and A companies are the most  
6                   indicative of industry dividend results since most  
7                   of the companies fall into those two categories.  
8                   Dividend increases have continued steadily over  
9                   the time frame but have lagged far behind general  
10                  inflation and other industries as exemplified by  
11                  the S&P 400 results. SDG&E has attempted to stay  
12                  in line with the electric industry since 1977 when  
13                  the annual dividend rate was increased from \$1.20  
14                  to \$1.36 per year. The data shown on Chart 6  
15                  reflects dividends declared so that the full  
16                  effect of that increase was not felt until 1978.

17 25. Q. Mr. Korpan, what is dividend coverage?

18           A. Dividend coverage is a parameter used by security  
19           analysts to measure common dividend protection.  
20           The calculation is similar to interest coverage  
21           except that depreciation and AFDC are removed from  
22           earnings before finding a multiple of dividends  
23           paid.

24                  As shown by Table 7, SDG&E has  
25                  experienced a decline in dividend coverage  
26                  compared to the rest of the electric industry.  
27                  Low dividend coverage increases investor's per-  
28                  ception of the risk associated with an invest-

1 ment in SDG&E common stock, requiring a higher  
2 dividend yield to accommodate this risk in propor-  
3 tion to the industry as a whole. In other words,  
4 low dividend coverage indicates an impaired ability  
5 to pay future dividends.

6 26. Q. Are dividend increases the only way to raise  
7 common stock prices?

8 A. No. Improved earnings would improve investor  
9 expectations about the financial future of the  
10 Company. This would bring the risk premium por-  
11 tion of the yield downward and thereby increase  
12 the price of the stock. Of course, both approaches,  
13 higher dividends and better earnings, are used by  
14 utilities whenever possible. I am convinced that  
15 the market price of SDG&E's stock would be even  
16 worse today if the Company had not also reduced  
17 leverage and construction expenditures, in addition  
18 to increasing its dividend.

19 Without adequate earnings, however, stock  
20 must be sold at any price to bolster common equity  
21 because of insufficient retained earnings. Without  
22 growth in market value, that is, when dividend  
23 increases only are available for return on invest-  
24 ment, a company's dividend payments increase  
25 rapidly because a larger number of shares must be  
26 issued to make up for the loss of retained earnings  
27 and to make up for a lower price per share. This  
28 often results in poor dividend coverage. Further,

1 the Company cannot expect to continue dividend  
2 increases indefinitely under these circumstances.  
3 The payout ratio, the proportion of dividends to  
4 earnings, has been unusually high in recent years  
5 due to inadequate earnings. Without sufficient  
6 rate relief in 1982 the payout ratio will be  
7 negative. This means the Company will, for all  
8 intents and purposes, be required to borrow to pay  
9 dividends and part of expenses as well.

10 27. Q. What quantifiable measures did you use to determine  
11 that the Company's common stock price is too low?

12 A. There are two basic measures to indicate whether a  
13 common price is higher or lower than it should be.  
14 The first is the relationship between the market  
15 price and book value, called the market to book  
16 ratio. If the ratio is below one, then investor  
17 expectations are interpreted to be pessimistic as  
18 to future results. Sales of common stock below  
19 book value are damaging to both investors and  
20 customers. Low stock prices require the sale of  
21 more stock to obtain the necessary proceeds and  
22 higher dividend requirements which lowers the  
23 amount of funds available to be reinvested in  
24 operations. Investors are aware that a portion of  
25 their equity share of the Company is diluted as  
26 sales below book continue. Therefore, new share-  
27 holders further discount market value knowing the  
28 risk to their investment. Conversely, higher



1 common stock prices avail the Company of additional  
2 cash per share, therefore, lowering the total necessary  
3 dividend payments by lowering the number of shares  
4 needed to be sold.

5 Success feeds upon itself. Better earnings  
6 and a strong dividend policy will move up the  
7 price, making it less costly and less difficult to  
8 finance the Company's construction program.

9 28. Q. How does the Company compare to the utility industry  
10 and other industries in terms of market to book  
11 value?

12 A. Chart 7 compares market to book values since 1974  
13 between SDG&E, the utility industry by bond rating  
14 groups and the S&P 400. The S&P 400 has averaged  
15 better than one since 1974. Public utilities have  
16 fared worse in general, although the higher rated  
17 companies have fared better than the lower rated  
18 companies. This reflects the lower perceived  
19 element of risk in the higher rated companies.  
20 SDG&E's market to book ratio has generally held up  
21 well in recent years mainly because a portion of  
22 SDG&E's dividends are a return of capital for tax  
23 purposes (not currently taxable). In other words,  
24 SDG&E's price is supported by poor financial  
25 performance. A financially healthy company would  
26 have no return of capital.

27 29. Q. Mr. Korpan, is there a way to quantify the cost to  
28 the Company's customers of selling below book

1 value?

2 A. Yes, Tables 8 and 9 show the derivation of the  
3 reduction in revenue requirements assuming the  
4 sale of common stock at book value given the same  
5 proceeds from each sale. The proceeds to the  
6 Company (Line 3) are divided by the book value at  
7 the end of the month prior to the sale (Line 5) to  
8 derive the number of shares needed to accomplish a  
9 sale at book value. This result is then subtracted  
10 from the actual amount of shares sold to arrive at  
11 the decrease in shares needed to be sold at book.

12 The total number of shares needed for the  
13 sales at below book value, given the same proceeds  
14 (Table 8, Line 8), multiplied by the dividend rate  
15 in 1982 (Line 9), provides the dividend savings  
16 with sales at book value. To achieve the same  
17 cash flow to the Company (i.e., given the same  
18 internal generation) the Company would have been  
19 able to reduce rates by \$18.8 million on an annual  
20 basis in 1982 (Line 12) after grossing up for taxes.  
21 For the sake of simplicity, this illustration fails  
22 to account for the cumulative effect of the lower  
23 number of shares needed to be issued if sold at  
24 book value. Table 9 illustrates the savings on an  
25 annual basis for the projected common stock sales  
26 through 1982 using the same methodology. Revenues  
27 could be reduced by another \$7.3 million given  
28 sales at book value.

1 30. Q. Mr. Korpan, how can SDG&E mitigate its financial  
2 difficulties in the future?

3 A. As I've mentioned, the Company has taken several  
4 steps to alleviate insufficient earnings and cash  
5 flow. The primary solution, however, is to increase  
6 the return on equity to a level sufficient to  
7 improve interest coverage, the percent internal  
8 generation of cash, the common equity ratio, and  
9 dividend coverage.

10 Return on equity is the earnings measure  
11 which provides investors and analysts with insight  
12 into the dividend and earnings growth potential  
13 for any investor owned company. Historical returns  
14 are the primary basis for investors' expectations  
15 for future earnings and dividends.

16 31. Q. Mr. Korpan, does SDG&E usually earn its allowed  
17 return on equity?

18 A. No. Table 10 sets forth the returns authorized by  
19 the PUC from 1975-1979 (Column B), the actual  
20 returns using the matrix method (Column C) and the  
21 financial return on equity (Column D). The financial  
22 return on equity is the ratio of common stock  
23 earnings (net income after deducting preferred  
24 dividend requirements) to the average of common  
25 equity at the beginning and the end of the year.  
26 SDG&E has not been able to earn its authorized  
27 return on equity (Column C) in any year except 1977.  
28

1           However, it should be noted that 1977 was just as  
2           weak as any of the other years in terms of quality  
3           of earnings and cash flow.

4           Financial return on equity, Column D, has  
5           declined steeply during the last two years in  
6           spite of rate relief during the middle of 1979.

7           1980 earnings will experience a further  
8           decline due to low sales, higher prices for goods  
9           and services, and a much higher than anticipated  
10          cost of money. Furthermore, approximately 219% of  
11          1980 as expected earnings is AFDC, which reflects  
12          an impossibly low quality of earnings.

13          Return on equity at proposed rates (Line 9)  
14          is at or exceeds 19% on both a ratemaking and finan-  
15          cial basis. Due to the Company's poor quality of  
16          earnings caused by high amounts of AFDC and tax  
17          flow through ratemaking policies, the financial  
18          return on equity must be increased to a higher  
19          level in order to bring cash flow in line on a  
20          comparative basis with other companies in the  
21          industry.

22          As I mentioned before, the fact that CWIP is  
23          generally not included in rate base requires a  
24          higher ratemaking return on equity in order to  
25          achieve the necessary cash flow. If rate base  
26          includes all or part of CWIP, a lower rate of  
27          return and return on equity would be necessary to  
28          achieve the same financial results.

1 32. Q. How does SDG&E's return on equity compare with  
2 other utilities and industries?

3 A. Chart 8 compares financial return on equity for  
4 SDG&E and the electric utility industry by bond  
5 rating groups with return on equity for the S&P 400.

6 The S&P 400 earned returns in excess of 14%  
7 in every year with the exception of 1975, and  
8 reaches a high of 16.7% in 1979.

9 The electric industry categorized by bond  
10 rating groups have had generally little improvement  
11 since 1974. The industry therefore has fallen  
12 further behind other investment categories.

13 Electric industry returns have not kept up with  
14 inflation, thus we can only expect investors to  
15 view electric industry securities as less attrac-  
16 tive than other industries in the competition for  
17 funds.

18 The returns for SDG&E are even less impressive  
19 than the electric industry as a whole through 1979  
20 and are expected to fare worse in 1980. Returns  
21 in 1981 and 1982 are obviously unacceptable at  
22 present rates.

23 The return on equity for 1982 of 19% is at  
24 the level necessary to achieve the interest coverage  
25 and internal generation necessary for the Company  
26 to progress toward comparability with Single A  
27 companies. In order for SDG&E and the industry to  
28 successfully compete for funds, returns must be

1 increased to a level commensurate with other  
2 industries.

3 33. Q. How does SDG&E compare to other California utilities  
4 in terms of growth and associated risk?

5 A. SDG&E's financial risk is greater than that associated  
6 with SCE and PGandE because it is a much smaller  
7 company with a faster growth rate.

8 SDG&E has been faced with the financial  
9 difficulties associated with its very high customer  
10 growth over the last ten years, particularly compared  
11 to the larger utilities in California.

12 Table 11 compares the annual growth rates of  
13 SDG&E, SCE, and PGandE from 1969-1979. In every  
14 category, except total operating expense for PGandE,  
15 SDG&E has grown at a faster rate than both companies.  
16 The 43% growth in AFDC for SDG&E (Line 7) compares  
17 to 21% for SCE and 33% for PGandE. This is indicative  
18 of the poor quality of earnings for SDG&E compared  
19 to the larger utilities. Without AFDC the Company's  
20 financial return on equity would have been about  
21 3% lower compared to a 1% decrease for the others.

22 SDG&E's electric and gas sales and customers  
23 (lines 13-15) have grown at a substantially higher  
24 rate than those of the other companies. This  
25 rapid growth, which has occurred in coincidence with  
26 a highly inflationary economy, has burdened SDG&E  
27 with a relatively higher financial risk in terms  
28 of building and paying for the facilities to meet

1 the higher demand.

2 Lines 5 and 6 show the utilities' growth  
3 rates for operating revenues and expenses. Operating  
4 expenses have grown faster than operating revenues  
5 by an annual rate of at least one percentage point  
6 over the last ten years for all three companies.

7 SDG&E must achieve a higher return to accommodate  
8 the financial strain of a higher rate of growth.

9 34. Q. Mr. Korpan, what other methods have you used to  
10 analyze the reasonableness of the 19% return on  
11 equity requested for the 1982 Test Year?

12 A. One approach I used is based on the historical and  
13 projected rise in the embedded cost of debt. This  
14 approach is shown on Table 12.

15 It is generally considered that, in the  
16 mid-to-late sixties (1965-1969), public utilities  
17 were financially healthy and inflation did not  
18 pose a serious problem. During this period the  
19 inflation rate averaged 3.4%. For the years 1965-  
20 1969, some of SDG&E's key financial measures  
21 averaged as follows: return on equity, 11.78%;  
22 market to book ratio, 1.69 times; before tax  
23 coverage, 4.62 times; and embedded cost of debt,  
24 4.27%. Because of the relative financial stability  
25 during this period, the years 1965-1969 were used  
26 as the base period for the analysis.

27 Debt holders have required higher returns as  
28 reflected in SDG&E's increasing embedded cost of

1 debt. It is reasonable, therefore, to assume that  
2 equity holders will at the very least require the  
3 same increases for their investment.

4 Column C shows the difference between the  
5 average embedded cost of debt for the period  
6 1965-1969 (4.27%) and the historical and projected  
7 increases in the embedded cost of debt for the  
8 period 1970-1983. This calculated difference is  
9 then added to the average return on equity for the  
10 period 1965-1969 (11.78%), Column A. An adjusted  
11 rate of return is made by adding Columns A and C  
12 and is shown in Column D. In 1982, for example,  
13 the adjusted return is in the 18% range, which is  
14 a conservative estimate. Equity holders bear more  
15 risk than debt holders.

16 Also, the additional equity needed could be  
17 illustrated using the matrix method for calculating  
18 interest coverage. It has been shown that the  
19 rise in the cost of equity capital must be propor-  
20 tionally higher than the rise in the cost of debt  
21 to maintain the same level of interest coverage.

22 I also investigated the relationship of the  
23 authorized return and embedded cost of debt from  
24 the Company's 1979 Test Year Decision to our 1982  
25 Test Year results. Lines 1 and 3, Column B, Table 19,  
26 reference the Company's 14.5% authorized return on  
27 equity and the 8.10% embedded cost of debt. The  
28 projected embedded cost of debt for 1982 is 10.57%,



1 as shown in Column B, Table 12. On this basis the  
2 embedded cost of debt is projected to increase by  
3 30.5%. A 30.5% increase in our authorized return  
4 on equity of 14.5% indicates a needed return on  
5 equity of approximately 19% for 1982.

6 35. Q. What return on equity is necessary to achieve the  
7 2.7X interest coverage assumed in Decision 90405?

8 A. A 22.18% return on equity, using the matrix method,  
9 is necessary to achieve the 2.7X after tax coverage  
10 assumed in Decision 90405 as depicted by Table 13.  
11 The 19% return on equity requested in this pro-  
12 ceeding provides a much lower 2.49X after tax  
13 coverage. This confirms that the requested 19%  
14 return is insufficient in itself to achieve the  
15 Company's goals, and is acceptable only in view of  
16 prospects for future improvement.

17 36. Q. How did you determine the dividend and interest  
18 rates for new preferred stock, long-term, and  
19 bankers' acceptances for your embedded cost projec-  
20 tions?

21 A. Cost of new preferred stock, new long-term debt  
22 and bankers' acceptances are based on projections  
23 for 1982 published by Data Resources, Inc. (DRI),  
24 a nationally known forecasting service. The money  
25 rate assumptions used here are based on forecasts  
26 included in DRI's monthly publication entitled  
27 "The Data Resources Review of the U.S. Economy",  
28 December 1982.

1           The interest rates on new long-term debt are  
2 based on DRI's AA bond projections. I added 100  
3 basis points to the projections to accommodate the  
4 higher risk associated with SDG&E's BBB bond  
5 rating. For new preferred stock I added 12.5 basis  
6 points to the cost of new debt to accommodate the  
7 slightly higher cost of preferred stock.

8           For bankers' acceptances I added 75 basis  
9 points to DRI's 3-month prime commercial paper  
10 rate projections, once again, to accommodate the  
11 higher risk associated with SDG&E's lower credit  
12 rating.

13           I should mention that the new money rate pro-  
14 jections used in the embedded cost estimates  
15 described in more detail later in my testimony  
16 could be conservative. At about the time of this  
17 Application, short-term money rates exceed 20% and  
18 the costs of new longterm debt and preferred stock  
19 for triple BBB companies exceed 17%.

20           Money rates have now reached these levels for the  
21 second time this year. There are no real answers as to  
22 how long these conditions will last or as to how often  
23 these conditions will recur.

24 37. Q. Would you explain how you determined the embedded  
25 cost of preferred stock?

26 A. Table 14 lists the recorded cost of preferred  
27 stock for 1979 and 1980 through 1981 as expected. The  
28 embedded cost of preferred stock for 1979 was

1 8.20% shown on Line 15, Column E. This is very  
2 close to the 8.21% adopted in D. 90405. No pre-  
3 ferred stock is planned to be issued in 1980.

4 In 1981, the Company tentatively plans to  
5 issue \$25 million of \$14.375 Series preference  
6 stock. The issuance of this series raises the  
7 projected embedded cost of preferred capital stock  
8 from the 1979 level of 8.20% to 8.85% in 1980  
9 (Line 19, Column E).

10 In 1982, the Company tentatively plans to  
11 issue another \$30 million of \$14.750 Series pre-  
12 ference stock raising the projected embedded cost  
13 to 9.52% at the end of the year (Line 21, Column E).

14 38. Q. Mr. Korpan, would you please explain how you  
15 arrived at the embedded cost of long-term debt?

16 A. Table 15 lists the embedded cost of long-term debt  
17 for December 31, 1979 recorded. There is no  
18 change in methodology in these calculations from  
19 previous general rate cases. The embedded cost of  
20 long-term debt for 1979 was 8.49% as shown on Line  
21 29, Column E. This is substantially above the  
22 8.10% cost adopted in D. 90405. The primary  
23 reason for the increase was the 14.85% rate incurred  
24 on the Foreign Term loans which were issued in  
25 1979.

26 As far as 1980 is concerned (Table 16), SDG&E  
27 issued two series of First Mortgage Bonds in the  
28 amounts of \$50 million (Series S) in March, and

1 \$75 million (Series T) in August. The cost of  
2 these issues are 16% and 13-5/8%, respectively.  
3 The Company also repaid \$30 million of the Foreign  
4 Term loans during 1980 (Line 6).

5 The embedded cost of long-term debt projected  
6 for year end 1980 is 9.18% as shown on Line 13,  
7 Column E.

8 In 1981, assuming receipt of the rate increase  
9 requested, SDG&E anticipates only one \$75 million  
10 sale of bonds. The rate of this Series U is  
11 assumed to be 14.125%. The projected embedded  
12 cost of debt for year end 1981 is projected to be  
13 9.66% (Line 22, Column E).

14 Table 17 lists the long-term debt financing  
15 activity assumed in 1982. The Company plans two  
16 \$75 million bond issues, Series V & W, at coupon  
17 rates of 14.625% and 15.250%, respectively. The  
18 Company will also retire its Series O & D bonds  
19 totaling \$52 million during the year. The pro-  
20 jected embedded cost of long-term debt at the end  
21 of 1982 is 10.57% (Line 13, Column E).

22 39. Q. Would you describe how you derived the capitaliza-  
23 tion ratios for common equity, preferred stock,  
24 long-term debt, and Bankers' Acceptances?

25 A. Yes. Table 18 shows the Company's historical  
26 capital structure from 1975 through 1979 and  
27 projected capital structure for 1980-82. The  
28 proportion of Common Equity shows the same improve-

1                   ment shown on Chart 5. Note the continuing increase  
2                   in Bankers' Acceptances in proportion to total  
3                   capitalization shown in Column I, Table 18.

4                   Tables 19 and 20 list the Company's rates of  
5                   return as authorized in Decision 90405, 1979  
6                   actual results, 1980 and 1981 as expected results  
7                   (present rates) and 1982 Test Year at present and  
8                   proposed rates.

9                   Despite the fact that all sales of common  
10                  stock have been below book value since 1972, SDG&E  
11                  continues to issue substantial amounts of common  
12                  equity. These issues are necessary to finance the  
13                  Company's ongoing construction program.

14                 Specific issues of common stock, both historical  
15                 and projected, are shown on Tables 8 & 9.

16                 The common equity ratio for 1979 recorded,  
17                 shown in Table 19, is 37.20% (Line 7, Column A),  
18                 compared to the 38.09% adopted in D. 90405.

19                 The major reason for this shortfall is the fact  
20                 that the final decision came in the middle of  
21                 1979. Thus, the full impact of the increase in  
22                 rates authorized was not experienced until mid-  
23                 1980.

24                 Substantial increases in the cost of money  
25                 and escalating expenses are projected to erode  
26                 this ratio even further. Consequently, the common  
27                 equity ratio calculated for the 1980 as expected  
28                 is actually below that adopted for 1979 (Line 13,

1 Column A).

2 The common equity ratio for 1981 as expected  
3 will further erode and the common equity ratio  
4 will drop to an obviously unacceptable 24.2%  
5 (Table 20, Line 1, Column A) in 1982 without rate  
6 relief in 1981 and 1982.

7 SDG&E believes that the ratio of preferred  
8 stock should be in the 12% range and is, therefore,  
9 managing to that level. The major reason for this  
10 policy is an attempt to reduce the amount of risk  
11 inherent in the capital structure. SDG&E  
12 plans preferred stock issues in 1981 and 1982 as  
13 I discussed.

14 As Table 19 demonstrates at Line 9, Column A,  
15 the ratio of long-term debt for 1979 recorded was  
16 44.00%. This is compared to the 44.99% level  
17 adopted in D. 90405. The major reason for the  
18 decline is the fact that \$150 million in debt  
19 projected to be sold was cut back to \$65 million  
20 due to an adverse financial condition (i.e.,  
21 insufficient debenture indenture coverage) in the  
22 latter half of 1979. By the end of 1982, the debt  
23 ratio is projected to be 43.26%. As in the case  
24 of common equity, this ratio is lower than adopted  
25 in D. 90405 because of the tremendous increase in  
26 the proportion of Bankers' Acceptances in the  
27 capital structure.

28 As shown on Table 20, Line 3, Column A, the

1 debt ratio is projected to increase to 52.32% at  
2 present rates, leaving the Company with a negative  
3 matrix interest coverage of 0.56X. Even at proposed  
4 rates, coverage would be only 2.49X.

5 In D. 90405 the Commission adopted a 10% cost  
6 of Bankers' Acceptances and a 2.76% proportion in  
7 the capital structure (Table 19, Line 4, Columns  
8 B&A). The impact of higher-than-anticipated costs  
9 of fuel not only causes cash flow problems but  
10 also skews the cost of capital and the rate of  
11 return. Therefore, the percentage of Bankers'  
12 Acceptances in the 1981 capital structure is 6.67%  
13 (Table 19, Line 16, Column A) and the cost of  
14 those acceptances is assumed to be 13.50%. The  
15 resulting weighted cost is 62 basis points higher  
16 than the level adopted in D. 90405.

17 At the end of 1982, the proportion of Bankers'  
18 Acceptances in the capital structure is 8.00% at  
19 present rates (Table 20, Line 4, Column A) and  
20 6.62% at proposed rates (Line 10, Column A). At  
21 the end of 1982, the weighted cost of Bankers'  
22 Acceptances is projected to be 74 basis points  
23 higher than authorized in 1979.

24 40. Q. What is the purpose of Table 21?

25 A. Table 21 tests the sensitivity of the rate of  
26 return to various returns on equity. Note that a  
27 50 basis point change in return on equity equates  
28 to an 18-19 basis point change in rate of return.

1 As a rule of thumb, the relationship is about 2.5  
2 to one. Also note that matrix interest coverage  
3 changes about 0.03X for every 50 basis point  
4 change in return on equity. As I mentioned, the  
5 return on equity must exceed 22% in order to  
6 achieve the 2.7X coverage found reasonable by the  
7 Commission in D.90405.

8 41. Q. Mr. Korpan, are there any other specific comments  
9 you would like to make with respect to rate of  
10 return?

11 A. Yes, in 1978 the Company sold and leased back its  
12 Encina 5 power plant facility for approximately  
13 \$130 million. The Company found it necessary to  
14 pursue an alternative source of financing in the  
15 face of debenture indenture coverage restrictions.

16 In fact, the Commission addressed this trans-  
17 action in its Decision 90405, for the 1979 Test  
18 Year. In the discussion of rate of return on  
19 Page 67, the Commission said the following regarding  
20 rate of return and rate base treatments:

21 "The Commission recognizes also that such a  
22 transaction removes a substantial capital  
23 investment from utility ownership and therefore  
24 from rate base treatment. We do not believe  
25 that a company should be penalized because it  
26 is denied future earnings on rate base as a  
27 result of an action which was clearly beneficial  
28 to all parties. We therefore, recognize in  
setting SDG&E's return on common equity the  
need to provide additional earnings to compensate  
for this loss."

The 1982 average depreciated rate base would  
have included \$105 million for Encina 5 if it had



1           been allowed in the 1982 Test Year. At the Company's  
2           requested rate of return of 13.9% in this proceeding,  
3           an additional \$31 million in revenues would be  
4           required using a 2.1X gross up factor.

5           In my opinion, a fair and equitable compensa-  
6           tion to SDG&E for this loss would be a one-third  
7           share of the lost revenue or about \$10 million.  
8           This equates to about \$4.75 million in net operating  
9           income which requires an additional 0.34% rate of  
10          return and 0.91% in additional return on equity  
11          using a 1982 weighted average rate base of \$1,386  
12          million. These amounts should be added to the  
13          rate of return and return on equity the Commission  
14          finds fair and reasonable for the 1982 Test Year.  
15          The Commission should also add the appropriate  
16          amounts to the rate of return and return on equity  
17          for the 1983 attrition allowance.

18       42. Q. Mr. Korpan, would you explain the financial ramifi-  
19              cations of the connection charge which the Company  
20              is proposing in this Application?

21           A. Yes. SDG&E's construction program is one reason  
22              for it's financial difficulties. As I have explained  
23              before, a smaller construction program will make  
24              it more feasible to achieve Single A results  
25              without additional expense to the ratepayer. As  
26              I have already testified at length, the Company's  
27              construction program is composed of elements which  
28              are needed to maintain the Company's ability to

1 serve, plus the undertaking of mandated programs.

2 As discussed in more detail in the connection  
3 charge Exhibit (SDG&E-120), the construction  
4 program would be much lower except for the cost of  
5 current and anticipated customer additions. The  
6 Company is proposing to partially mitigate the  
7 financial burden of customer additions on its  
8 present customers by charging new customers for  
9 the overall cost of placing them in service.

10 Through this means, the Company will still  
11 have the opportunity to eventually achieve Single A  
12 results and achieve lower rates for its general  
13 customers at the same time. The cumulative effect  
14 of the benefit of lower financing needs will  
15 further reduce the amount and cost of future  
16 financings, lowering rates even further.

17 I must emphasize that SDG&E does not expect  
18 to achieve Single A results through the connection  
19 charge during 1982 or 1983. The cumulative benefits  
20 of lower construction costs, combined with the  
21 inclusion of SONGS Units 2 and 3 in rate base when  
22 complete and in service, should bring the Company  
23 to the level of Single A results during 1984.  
24 This is assuming that the Company is authorized  
25 realistic returns and is able to earn them in the  
26 interim.

27 43. Q. Would you explain Tables 1-A, 1-B, and 1-C included  
28

1 in the connection charge Exhibit (SDG&E-102)?

2 A. Yes. These tables show the effect of the connection  
3 charge for 1982 at proposed rates and the effect  
4 of the connection charge on the 1983 attrition  
5 allowance. As discussed in the attrition allowance  
6 Exhibit (SDG&E-119), the 1983 data reflected in all  
7 exhibits is for informational purposes only and  
8 does not reflect the Company's proposed procedures  
9 and methodologies reflected therein.

10 Table 1-A compares the primary ratemaking para-  
11 meters (set forth at proposed rates), to the data  
12 which would be included in SDG&E's submittal if  
13 connection charges were incorporated.

14 As shown in Line 3, the requested annual base  
15 revenue increase without connection charges would  
16 exceed the requested annual increase with connection  
17 charges by about \$32 million in 1982 (Column E); and  
18 the requested annual base revenue increase without  
19 connection charges would exceed the requested annual  
20 increase with connection charges by about \$16 million  
21 in 1983 under the attrition allowance proposal  
22 (Column H). Base revenues are the amount charged  
23 to customers for energy usage, i.e., the amount  
24 associated with the customers' bills.

25 As reflected on Lines 4-6, the revenue request  
26 changes for all departments because the resulting  
27 rate of return is maintained the same for each.

28 Since the Company's cash needs in relation to

1 cash construction expenditures are lower with the  
2 connection charge, the necessary rate of return and  
3 return on equity (Lines 7 and 8) are reduced by 1.21%  
4 and 3.13% (Column E), respectively. The 1983 rates  
5 of return and return on equity are reduced in about  
6 the same magnitude (Column H).

7 Embedded costs (Lines 13-15) do not change in  
8 1982 because the difference in cash flow, with and  
9 without connection charges, does not necessitate a  
10 revision of the financing plan for 1982.

11 Note, however, the slight decrease in embedded  
12 cost in 1983 (Lines 13 and 14, Column H) as the  
13 need for financing decreases. These financial  
14 benefits will grow in later years as the cumulative  
15 effect of the connection charge increases, impacting  
16 favorably both the Company and its customers.

17 Table 1-B compares earnings and capitalization  
18 data at 1982 Test Year proposed rates, with and  
19 without connection charges, and, for informational  
20 purposes, the 1983 attrition allowance with and  
21 without connection charges. To achieve the bene-  
22 ficial impact of reduced internal cash flow needs  
23 with connection charges, the Company would be able  
24 to trade off significant decreases in the returns  
25 on equity (Lines 2 & 3) and interest coverages  
26 (Lines 4-6). Internal generation as a percent of  
27 cash construction expenditures (Line 7) remains at  
28 28.4% for 1982.

1 For 1983, ratemaking return on equity (Line 3)  
2 is held to 1982 levels. Internal generation  
3 (Line 7) decreases accordingly.

4 Construction as a percent of capitalization  
5 (Line 8) would decrease to a more favorable 11%  
6 (Column B), and would also improve for 1983.

7 I must repeat that financial results are not  
8 at Single A levels. If these returns are earned,  
9 however, the Company stands an excellent chance of  
10 achieving Single A results in 1984, with SONGS Units  
11 2 and 3 in rate base and earning a return. Table 1-C  
12 (Line 14) shows the return on rate base with (12.69%)  
13 and without (13.90%) the connection charge in 1982,  
14 and with (12.90%) and without (14.31%) the connection  
15 charge in 1983 under the attrition allowance proposal.

16 44. Q. Mr. Korpan, would you please summarize your testi-  
17 mony and its overall financial implications?

18 A. Yes. The thrust of my testimony is to substantiate  
19 that SDG&E must earn a 19% return on equity in  
20 order to achieve satisfactory improvement in  
21 SDG&E's financial results. This is necessary in  
22 order to give SDG&E the opportunity to achieve  
23 Single A performance during 1984, which is  
24 predicated on the completion of SONGS Units 2 & 3  
25 on a timely basis and their inclusion in rate base  
26 and earning a return.

27 SDG&E has rarely earned its authorized rate  
28 of return over the last 5 years and is not expected

1 to earn its authorized rate of return in 1980 or  
2 in 1981.

3 The Company must substantially improve its  
4 financial results in order to competitively finance  
5 a high, largely inflexible construction budget  
6 which is beset by inflation and socially needed,  
7 but nonproductive programs.

8 Improved financial results involves the improve-  
9 ment of several key financial parameters with  
10 eventual attainment of Single A results in the  
11 face of exorbitant interest rates. They are:  
12 interest coverage (3X), percent internal generation  
13 of cash construction (40%), common equity ratio  
14 (43%), sustained dividend growth, and a lower  
15 proportion of cash construction to total capitaliza-  
16 tion (10%).

17 Cash flow has been a particular problem for  
18 SDG&E due to a combination of insufficient financial  
19 results and accounting practices which have deteriorated  
20 SDG&E's quality of earnings. This deterioration  
21 has caused poor acceptance of SDG&E's securities  
22 in the marketplace. The poor reception is compounded  
23 by overwhelming competition from the rest of the  
24 industry, industrial companies, and government  
25 securities which have saturated the securities  
26 market.

27 As a BBB rated company, SDG&E cannot hope to  
28 compete effectively except under the most favorable

1 market conditions. Higher returns and improved  
2 cash flow will allow the Company to offer securities  
3 less often and in smaller amounts, and thus improve  
4 its acceptance in the marketplace. Improved acceptance  
5 through lower perceived risk and fewer financings  
6 will improve the market to book ratio which would  
7 reduce costs for the Company's customers and  
8 shareholders alike.

9 This Commission has accomplished much to give  
10 the Company the opportunity to earn a fair and  
11 reasonable rate of return, but much more needs to  
12 be done. Examples are (1) the inclusion of the  
13 debt and preferred equity portions of the APS/SDG&E  
14 Interconnection Project in rate base, (2) approval of  
15 the connection charge proposal, (3) approval of  
16 the 1983 attrition allowance, (4) expense treatment  
17 for mandated conservation and load management  
18 programs, (5) approval of liberalized depreciation  
19 lives, and (6) approval of a return on equity  
20 which compensates SDG&E for the loss of future  
21 earnings on the Encina 5 capital investment.

22 The final solution, however, is a substantial  
23 increase in the authorized return on equity for  
24 SDG&E sufficient to attract funds at a reasonable  
25 cost in tomorrow's adverse financial marketplace.  
26 I am certain that the Commission will see the provi-  
27 dence of this request and respond accordingly.

1 45. Q. Mr. Korpan, does that conclude your Prepared Direct  
2 Testimony?  
3 A. Yes.  
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COST OF CAPITAL AND  
RATE OF RETURN

INTRODUCTION

The following tables set forth the cost of capital for San Diego Gas & Electric for the 1982 Test Year. Information is provided on the capital structure and the costs of the capital elements as recorded in 1979 and projected for 1980 As Expected, 1981 As Expected, and 1982 Test Year.

Historical data on the costs of capital are provided as background information for the cost estimates through 1982. In addition, comparisons with the utility industry by credit rating groups, measurements of market performance, comparisons to other industries, and other analyses and studies are included to substantiate the need for continued improvement in the Company's financial condition.

A composite cost of capital is established in the exhibit. The requested rate relief is \$227 million. Realization of the requested rate relief in an expedited manner is essential to progress toward attainment of the Company's primary financial objective of regaining its Single "A" bond rating.

Note: Projected data in these exhibits are based on the following:

1. Data at present rates exclude rate relief in 1981,
2. Proposed rates for 1982 include estimated rate relief in 1981 in the amount of \$100 million. This is necessary in order to avoid unrealistic skewing of certain financial data for 1982.

TABLE 1  
1982 TEST YEAR RATE REQUEST SUMMARY  
(Millions of Dollars)

<u>LINE NO.</u>	<u>TITLE</u>		
1.	Total Revenue Increase	\$	227.5
2.	Electric	\$	200.9
3.	Gas	\$	26.4
4.	Steam	\$	0.2
5.	Composite Rate of Return		13.90%
6.	Rate-making Return on Equity		19.00%
7.	Weighted Average Rate Base	\$	1,386.0
8.	Electric	\$	1,213.8
9.	Gas	\$	171.7
10.	Steam	\$	0.5
	<u>EMBEDDED COSTS:</u>		
11.	Preferred Stock		9.52%
12.	Long-Term Debt		10.57%
13.	Bankers' Acceptances		15.41%
	<u>CAPITALIZATION RATIOS:</u>		
14.	Common Equity		37.32%
15.	Preferred Stock		12.80%
16.	Long-Term Debt		43.26%
17.	Bankers' Acceptances		<u>6.62%</u>
18.	Total		100.00%

TABLE 2  
SAN DIEGO GAS & ELECTRIC  
EARNINGS AND CAPITALIZATION DATA  
1975 - 1979

LINE NO.	TITLE	RECORDED DATA				
		1975 (A)	1976 (B)	1977 (C)	1978 (D)	1979 (E)
1.	AFDC % Earnings	52%	36%	44%	44%	48%
2.	Financial Return on Equity(1)	5.9%	12.9%	13.0%	11.3%	10.3%
3.	Ratemaking Return on Equity	4.3%	12.1%	14.6%	12.7%	11.0%
4.	Before Tax Interest Coverage	1.66X	2.38X	2.21X	2.25X	2.18X
5.	Debenture Indenture Coverage	1.66X	2.53X	2.20X	2.42X	2.37X
6.	Matrix Interest Coverage	1.63X	2.32X	2.49X	2.51X	2.23X
7.	% Internal Generation(2)	15.0%	19.6%	16.8%	14.6%	15.3%
8.	Construction % Capitalization	15.1%	17.5%	17.2%	16.4%	14.7%
	<u>CAPITALIZATION RATIOS</u>					
9.	Common Equity	31.2%	32.2%	32.8%	37.2%	37.2%
10.	Preferred Stock	15.1%	15.8%	15.7%	16.6%	14.7%
11.	Bankers' Acceptances	3.7%	3.0%	3.8%	1.8%	4.1%
12.	Long-Term Debt	50.0%	49.0%	47.7%	44.4%	44.0%
13.	Market to Book Ratio	68%	87%	89%	85%	76%

(1) Simple average.

(2) Percent internal generation of cash construction.

Source: 1979 Annual Report and Statistical Supplement.

TABLE 3  
 SAN DIEGO GAS & ELECTRIC  
 PROJECTED EARNINGS AND CAPITALIZATION DATA  
 1980-1982

LINE NO.	TITLE	1980 AS EXPECTED (A)	1981 AS EXPECTED (B)	1982 TEST YEAR PRESENT RATES (C)	1982 TEST YEAR PROPOSED RATES (D)
1.	AFDC % Earnings	-	-	-	51%
2.	Financial Return on Equity	3.23%	(2.57%)	(26.89%)	19.87%
3.	Ratemaking Return on Equity	2.22%	(12.84%)	(49.60%)	19.00%
4.	Before Tax Interest Coverage	1.39X	1.05X	0.33X	2.98X
5.	Debenture Indenture Coverage	1.83X	0.87X	(0.15X)	3.61X
6.	Matrix Interest Coverage	2.19X	2.08X	1.74X	2.49X
7.	% Internal Generation <sup>(1)</sup>	(11.1%)	(31.4%)	(72.8%)	28.4%
8.	Construction % Capitalization	11.6%	13.1%	16.9%	13.8%
<u>Capitalization Ratios</u>					
9.	Common Equity	34.77%	32.19%	24.20%	37.32%
10.	Preferred Stock	13.07%	13.89%	15.48%	12.80%
11.	Long-Term Debt	45.26%	47.25%	52.32%	43.26%
12.	Bankers' Acceptances	6.90%	6.67%	8.00%	6.62%
13.	Market to Book Ratio	79%	103%	153%	82%

(1) Percent internal generation of cash construction.

TABLE 4  
 SAN DIEGO GAS & ELECTRIC  
 HISTORICAL AND PROJECTED INTEREST  
 COVERAGE RATIOS  
1975-1979 RECORDED, 1980-1982 PROJECTED

LINE NO.	RECORDED (A)	MOODY'S TIMES INTEREST EARNED		CONTRACTUAL REQUIREMENTS	
		BEFORE TAX (B)	AFTER TAX (C)	1ST MORT. INDENTURE (D) (2.5 Min)	DEBENTURE INDENTURE (E) (2.0 Min)
1.	1975	1.66X	1.76X	2.33X	1.66X
2.	1976	2.38X	2.25X	2.98X	2.53X
3.	1977	2.20X	2.22X	2.83X	2.20X
4.	1978	2.25X	2.17X	3.79X	2.42X
5.	1979	2.18X	2.11X	4.66X	2.37X
<u>PROJECTED PERIOD WITHOUT RATE RELIEF</u>					
6.	1980 <sup>(1)</sup>	1.39X	1.39X	3.17X	1.83X
7.	1981 <sup>(1)</sup>	1.05X	1.06X	1.88X	0.87X
8.	1982 <sup>(2)</sup>	0.33X	0.33X	0.80X	(0.15X)
<u>TEST YEAR AT PROPOSED RATES</u>					
9.	1982	2.98X	2.31X	5.24X	3.61X
10.	Rating Agency Guideline	3.00X			

(1) As Expected.

(2) Test Year at Present Rates.



CHART 1

SAN DIEGO GAS & ELECTRIC  
 PRETAX INTEREST COVERAGE COMPARISON  
 INDUSTRY BOND RATING GROUPS VS SDGE

- A = STRAIGHT AA/AA
- B = STRAIGHT A/A
- C = STRAIGHT BAA/BBB
- D = SDGE HISTORICAL

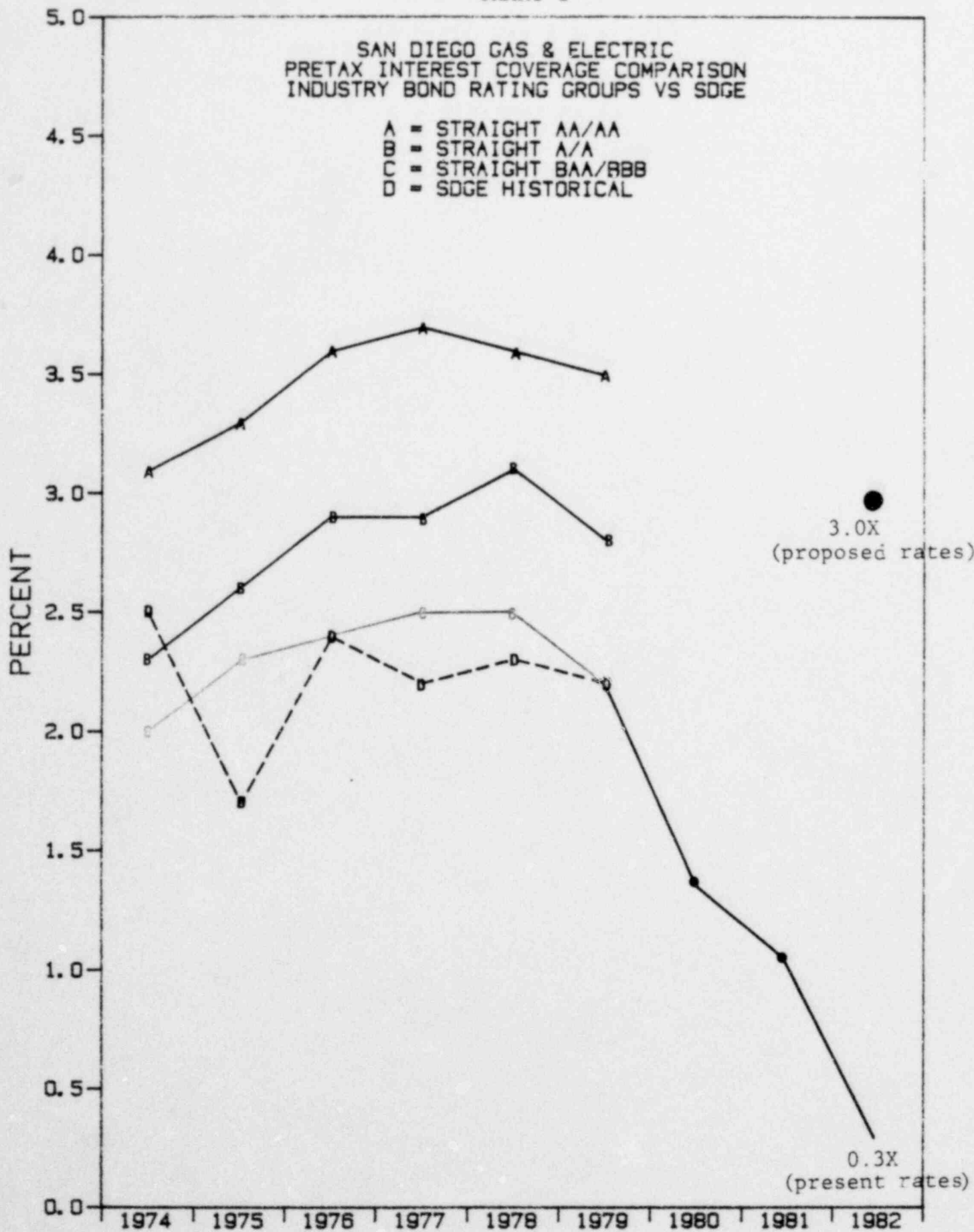


TABLE 5  
 SAN DIEGO GAS & ELECTRIC  
 CAPITAL EXPENDITURES & SOURCES OF FUNDS  
 1975-1979 HISTORICAL & 1980-1982 PROJECTED

LINE NO.	YEAR RECORDED PERIOD (A)	CAPITAL EXPENDITURES (Millions of Dollars)			SOURCES OF FUNDS	
		MANDATORY REFUNDINGS (B)	CONSTRUCTION(1) EXPENDITURES (C)	TOTAL (D)	PERCENT EXTERNAL (E)	PERCENT(2) INTERNAL (F)
1.	1975	\$ 1	\$128	\$129	87%	13%
2.	1976	1	170	171	80	20
3.	1977	2	199	201	83	17
4.	1978	13	207	220	85	15
5.	1979	53	205	258	85	15
6.	Average	14	182	196	84	16
7.	1980 As Expected	3(3)	177	180	111	(11)
8.	1981 As Expected	3	210	213	131	(31)
	1982 Test Year:					
9.	At Present Rates	54	269	323	173	(73)
10.	At Proposed Rates	54	269	323	72	28
11.	Rating Agency Guideline - Single A				60	40

(1) Exclusive of AFDC.

(2) Percent internal generation of cash construction.

(3) This does not include \$30.0M<sup>2</sup> of variable interest rate foreign term loans which were voluntarily refunded in July, August, and September of 1980.

CHART 2

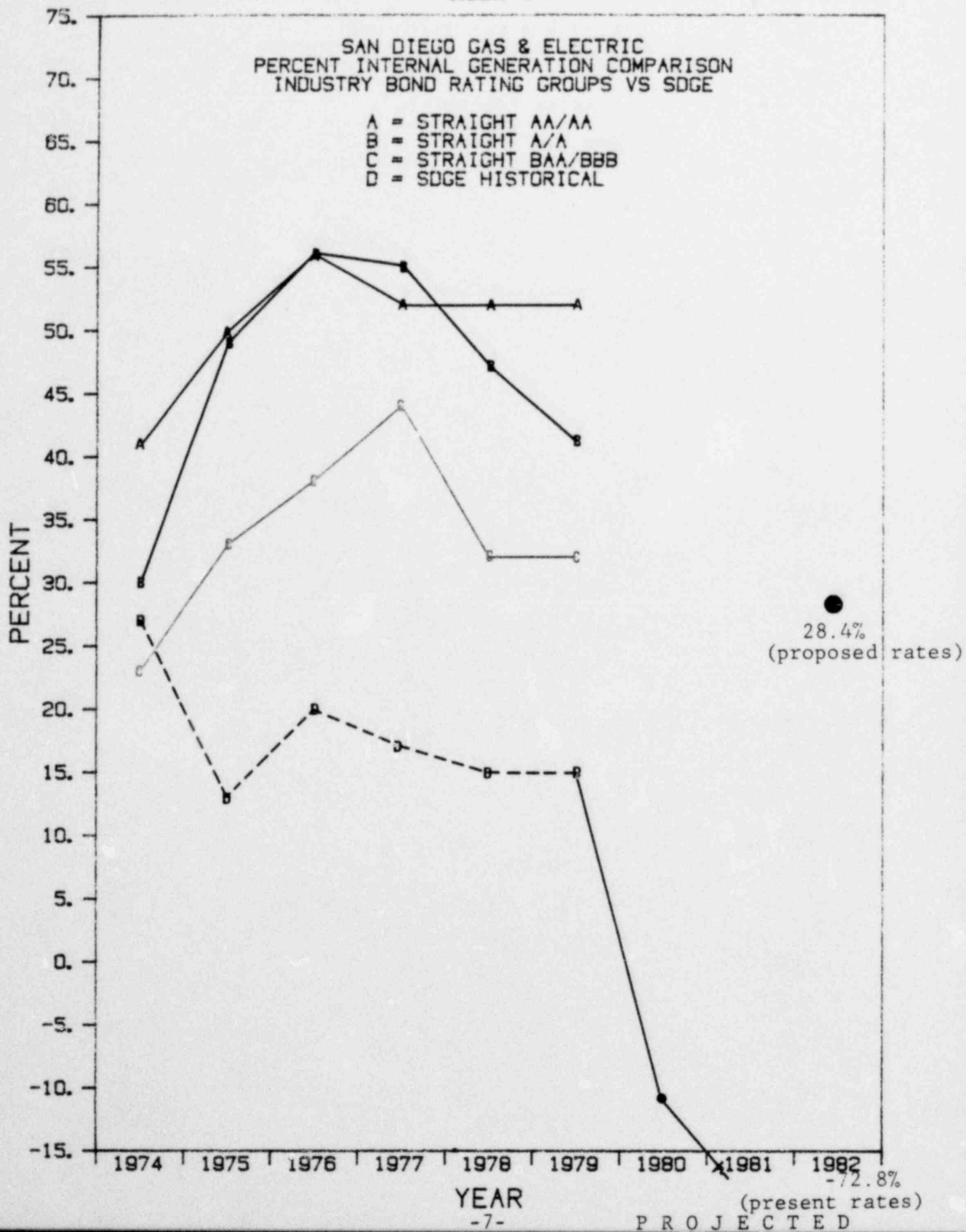


CHART 3

SAN DIEGO GAS & ELECTRIC  
PRETAX INTEREST COVERAGE COMPARISON  
INDUSTRY VS SDGE

- A = FLOW THROUGH
- B = NORMALIZED
- C = SDGE HISTORICAL

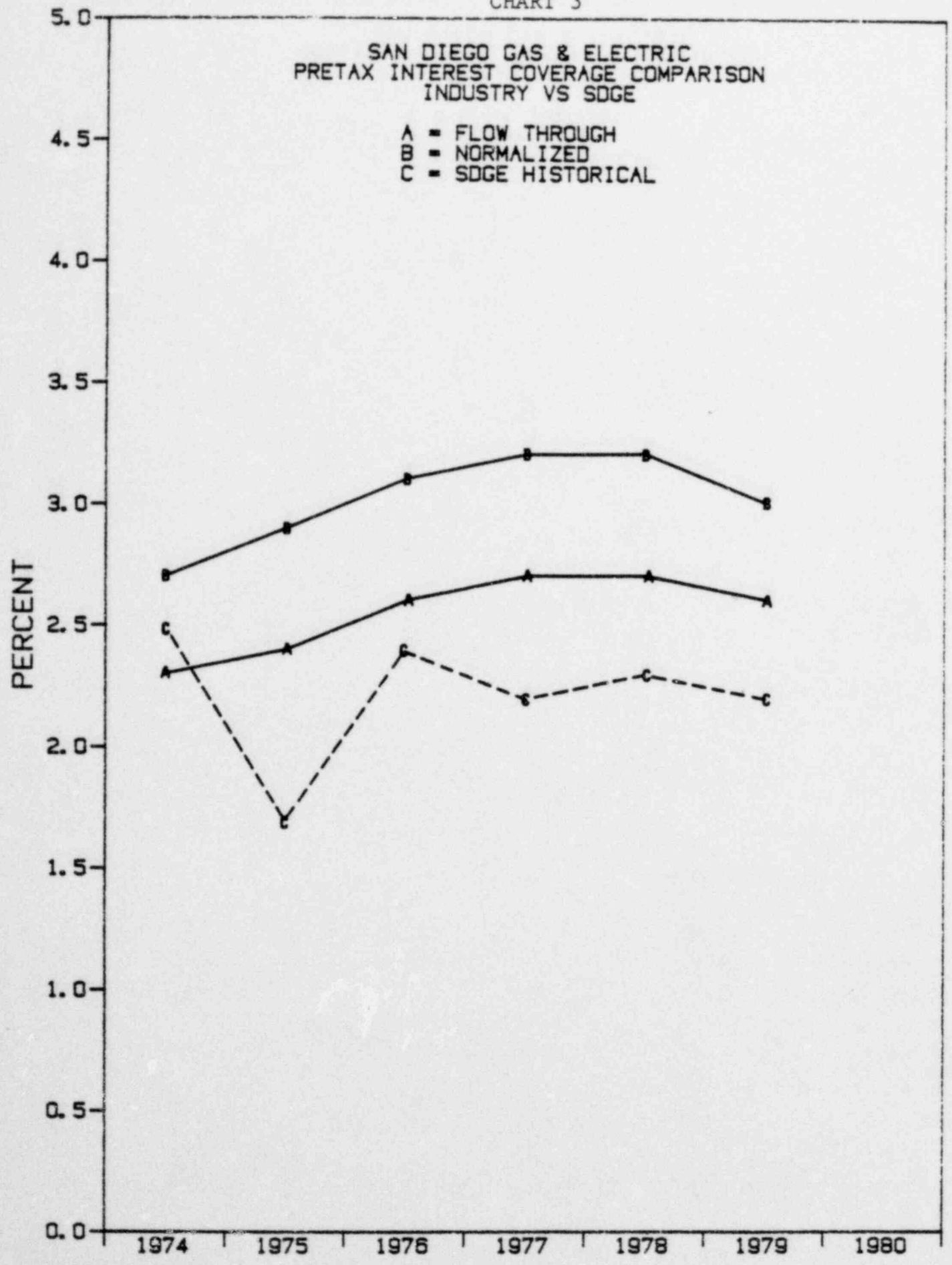


CHART 4

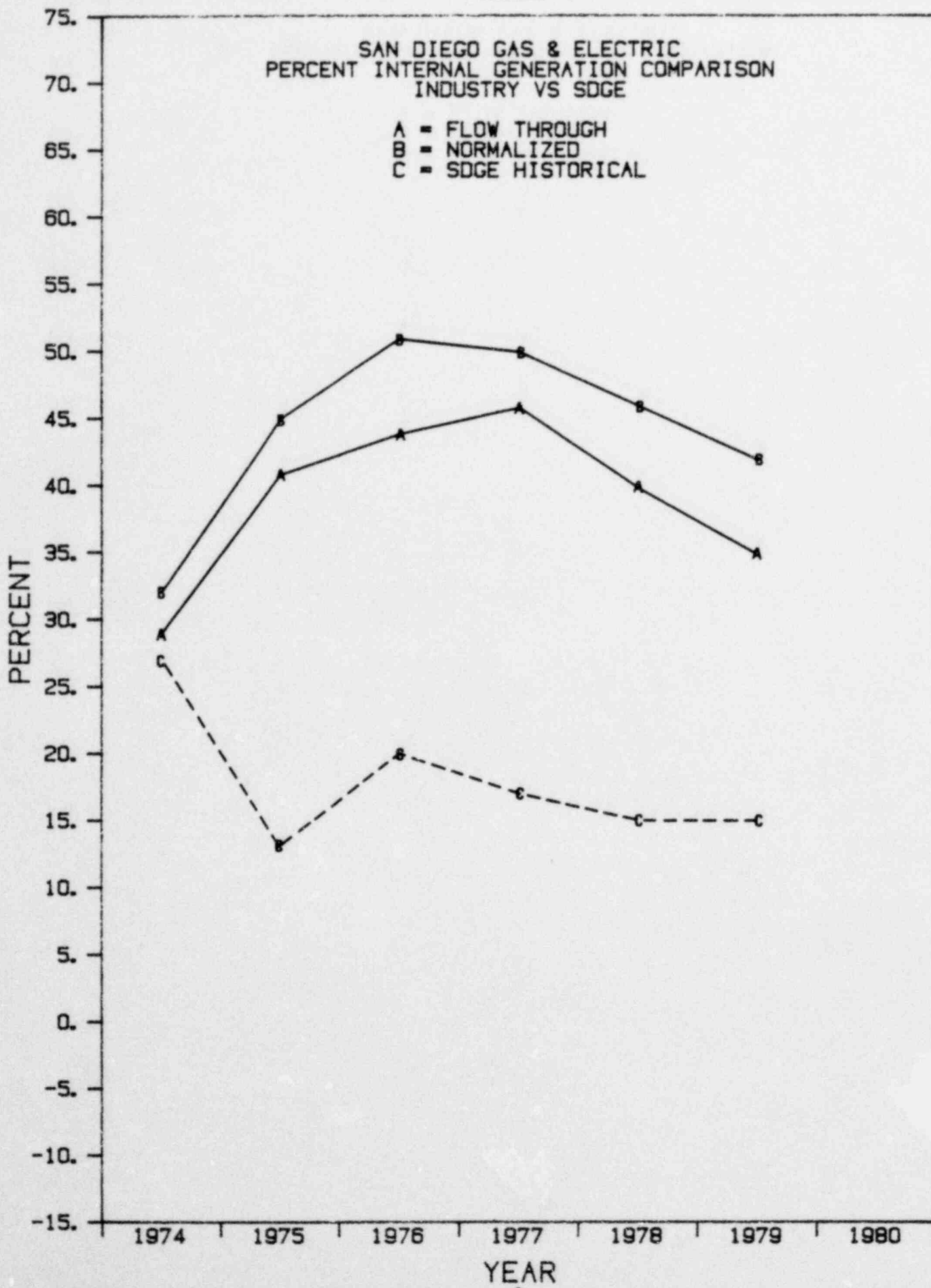


CHART 5

SAN DIEGO GAS & ELECTRIC  
COMMON EQUITY RATIO COMPARISON  
INDUSTRY BOND RATING GROUPS VS SDGE

- A = STRAIGHT AA/AA
- B = STRAIGHT A/A
- C = STRAIGHT BAA/BBB
- D = SDGE HISTORICAL

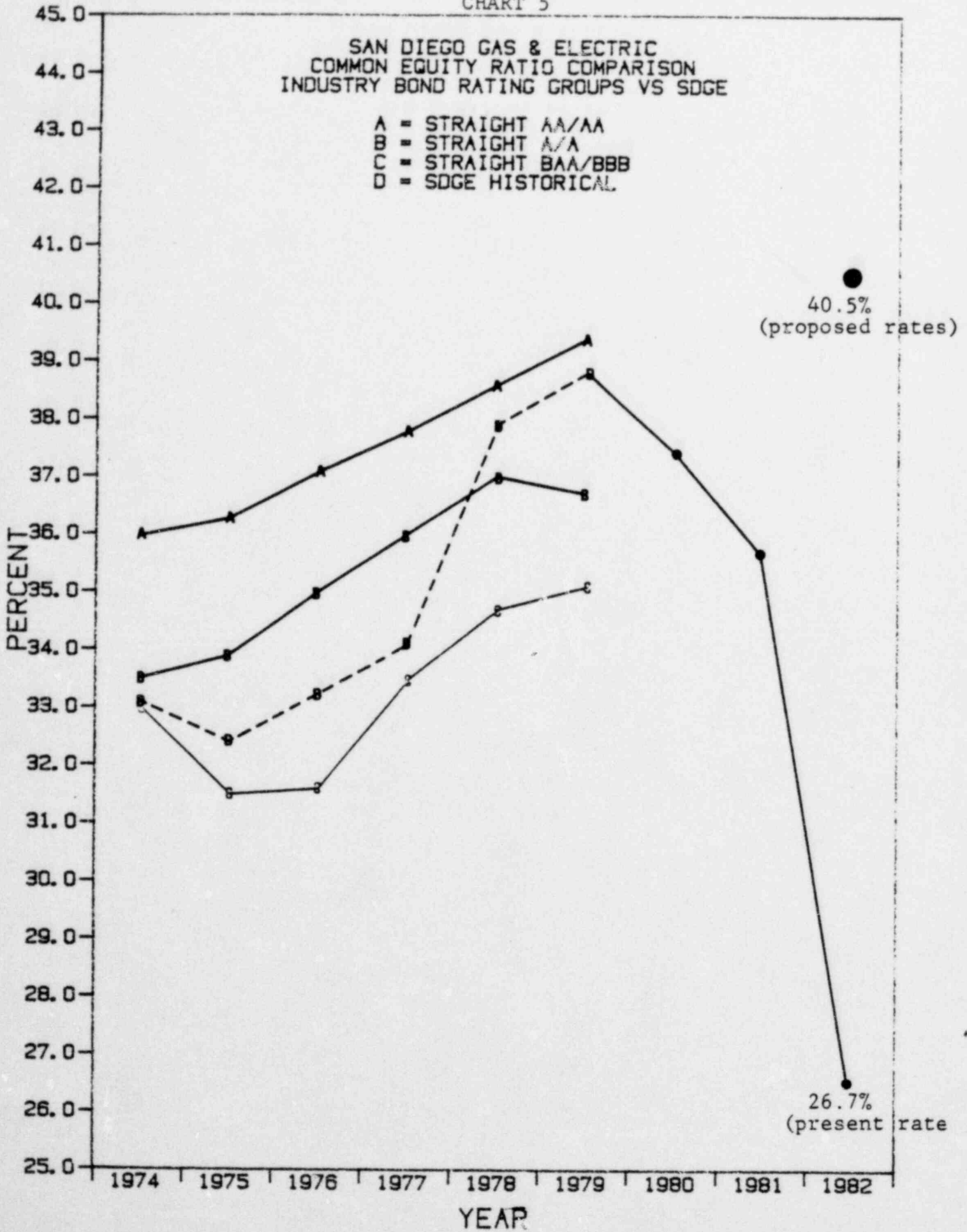


TABLE 6  
 SAN DIEGO GAS & ELECTRIC  
 FINANCINGS REQUIRED  
 1975-1979 HISTORICAL & 1980-1982 PROJECTED  
 (Dollars in Millions)

LINE NO.	YEAR (A)	LONG-TERM FUNDS			SHORT-TERM FUNDS				
		LONG-TERM DEBT (B)	PREFERRED STOCK (C)	COMMON STOCK (D)	TOTAL (E)	BANK LOANS (F)	COMMERCIAL PAPER (G)	BANKERS' ACCEPTANCES (H)	TOTAL (I)
<u>RECORDED PERIOD</u>									
1.	1975	\$ 62	\$ -	\$ 15	\$ 77	\$ 12	\$ 5	\$ 33	\$ 50
2.	1976	54	26	30	110	15	10	(3)	22
3.	1977	94	30	50	174	(27)	22	16	11
4.	1978	186(1)	26	72	284	-	(46)	(23)	(69)
5.	1979	70	-	52	122	-	74	36	110
6.	1980 As Expected	100 <sup>(2)</sup>	-	66	166	-	(35)	53	18
7.	1981 As Expected	75	25	65	165	15	140	2	157
1982 Test Year:									
8.	At Present Rates	150	30	79	259	324	7	24	355
9.	At Proposed Rates	150	30	79	259	-	55	24	79

(1) Includes \$131.6M<sup>2</sup> from sale of Encina 5.

(2) This amount is net of \$30.0M<sup>2</sup> of variable interest rate foreign term loans which were voluntarily refunded in July, August, and September of 1980.

CHART 6

SAN DIEGO GAS & ELECTRIC  
DIVIDEND GROWTH COMPARISON  
S&P 400 AND INDUSTRY BOND RATING GROUPS VS SDGE

- A - STRAIGHT AA/AAA
- B - STRAIGHT A/A
- C - STRAIGHT BAA/BBB
- D - SDGE HISTORICAL
- E - S&P 400

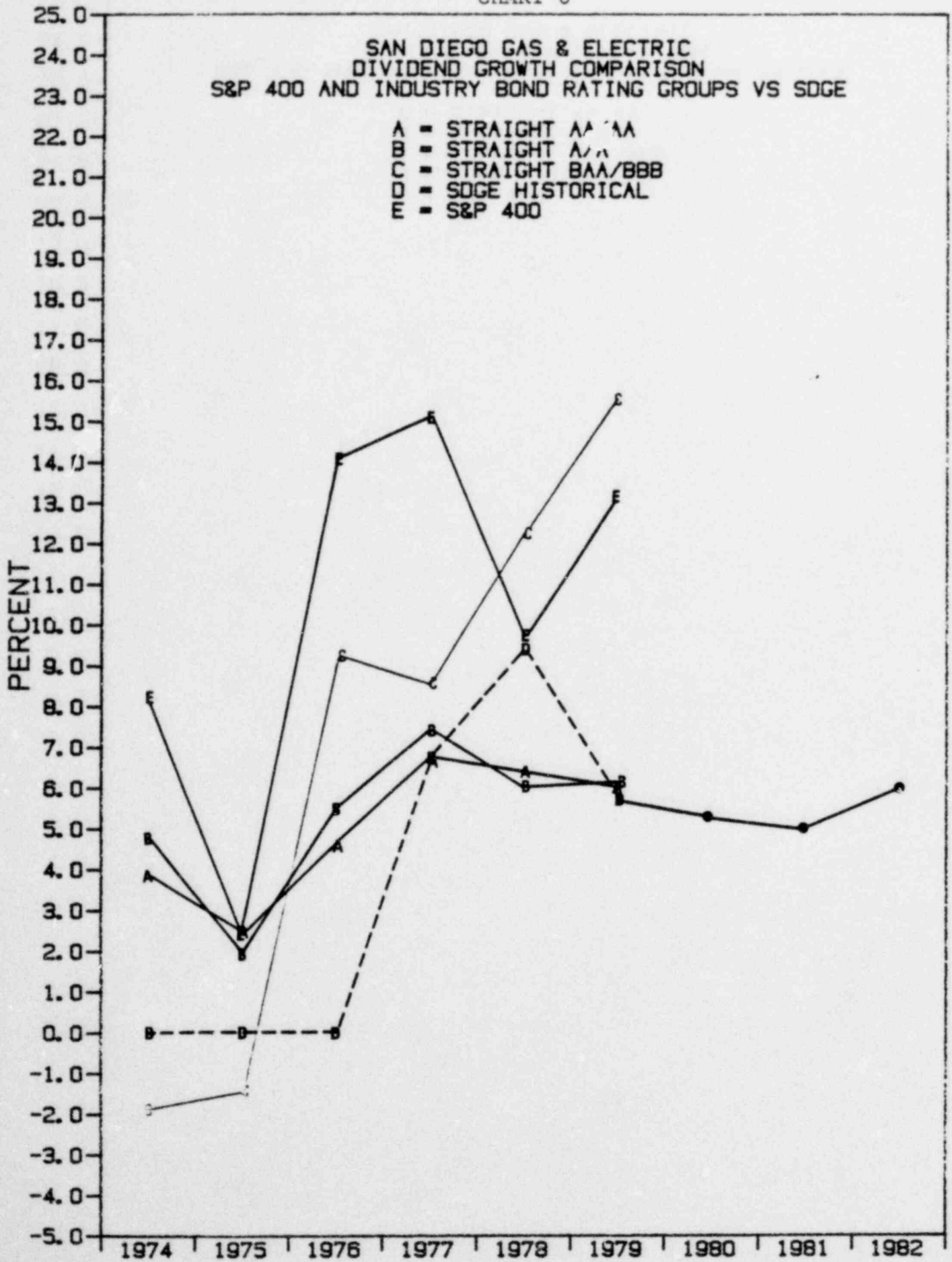




TABLE 7  
 DIVIDEND COVERAGE COMPARISON BETWEEN  
 ELECTRIC INDUSTRY AND SDG&E  
 1971 - 1979

<u>LINE NO.</u>	<u>YEAR</u> (A)	<u>INDUSTRY</u> (B)	<u>SDG&amp;E</u> (C)
1.	1979	2.6X	1.4X
2.	1978	2.8	1.9
3.	1977	2.9	1.0
4.	1976	3.2	3.3
5.	1975	2.9	1.8
6.	1974	2.6	3.0
7.	1973	2.7	2.8
8.	1972	2.8	3.2
9.	1971	2.5	3.3

Source: Salomon Brothers Stock Research Industry Analysis,  
 June 16, 1980.

CHART 7

SAN DIEGO GAS & ELECTRIC  
 MARKET TO BOOK RATIO COMPARISON  
 S&P 400 AND INDUSTRY BOND RATING GROUPS VS SDGE

- A = STRAIGHT AA/AA
- B = STRAIGHT A/A
- C = STRAIGHT BAA/BBB
- D = SDGE HISTORICAL
- E = S&P 400

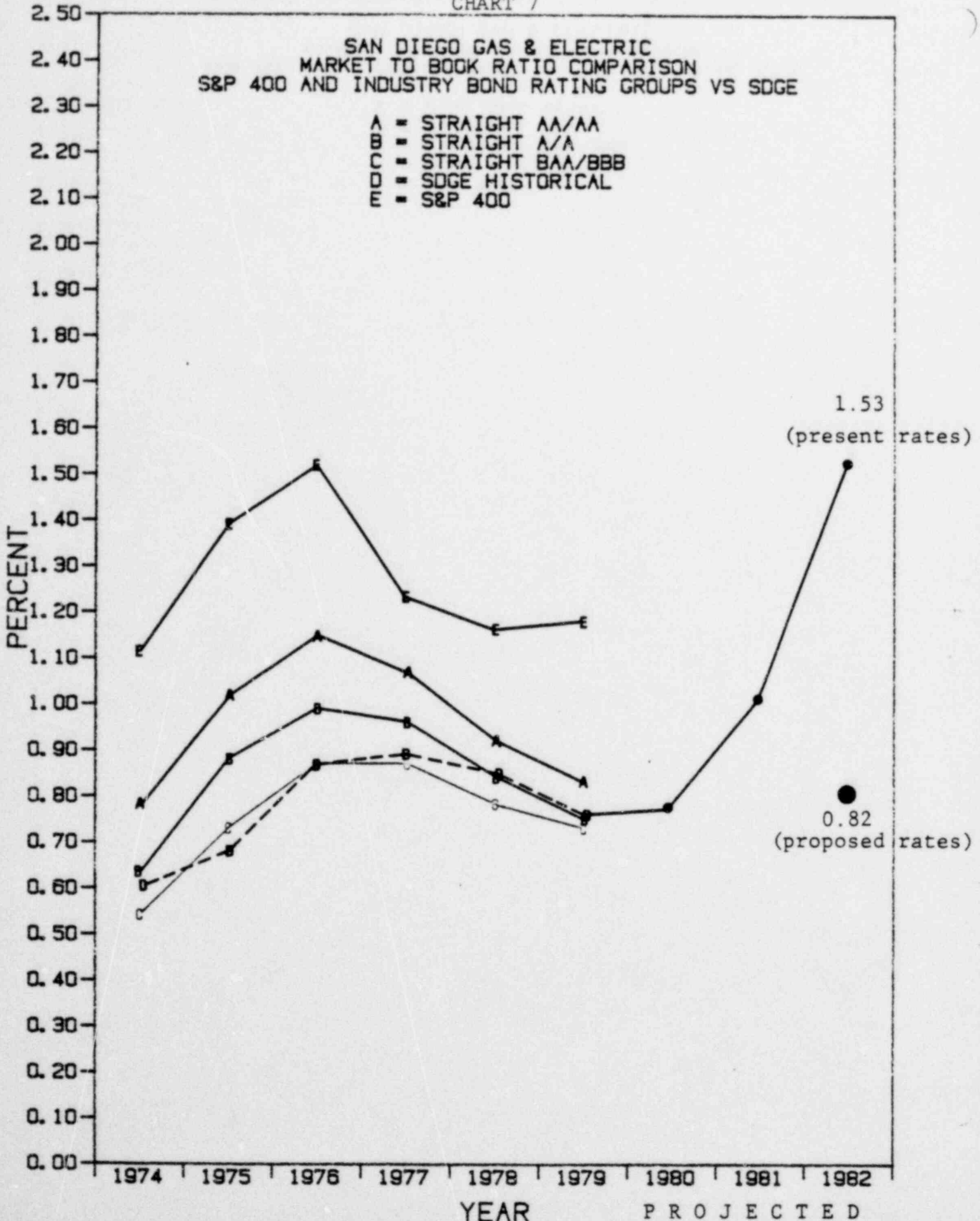


TABLE 8  
SAN DIEGO GAS & ELECTRIC  
COMMON STOCK ISSUES  
COST OF SALES BELOW BOOK VALUE

1973 - March, 1980  
(Dollars in Thousands Except  
Per Share Amounts)

LINE NO.	COLUMN	1973 (A)	1974 (B)	1975 (C)	1976 (D)	1977 (E)	1978 (F)	1978 (G)	1979 (H)	1980 (I)
1.	Date of Sale	12/04/73	11/19/74	05/06/75	07/15/76	10/18/77	05/18/78	12/05/78	07/24/79	03/27/80
2.	Number of Shares (Thousands)	2,000	2,000	1,500	2,000	3,000	2,500	2,000	3,000	2,500
3.	Proceeds to Company (Thousands)	\$26,810	\$21,630	\$15,570	\$26,000	\$45,270	\$36,325	\$28,960	\$43,500	\$27,100
4.	Proceeds Per Share	\$13.405	\$10.815	\$10.38	\$13.00	\$15.09	\$14.53	\$14.48	\$14.50	\$10.84
5.	Book Value Per Share	\$17.89 11/30/73	\$18.19 10/31/74	\$16.84 04/30/75	\$17.01 06/30/76	\$17.49 08/31/77	\$17.73 05/31/78	\$17.86 11/30/78	\$17.25 06/30/79	\$17.22 02/28/80
6.	Ratio of Proceeds to Company Per Share to Book Value Per Share	74.9%	59.4%	61.6%	76.4%	86.3%	82.0%	81.1%	84.1%	63.8%
7.	Decrease in Shares if Sold at Book Value (Thousands)	501	811	575	471	412	451	378	478	904
8.	Total Extra Shares Sold	4,981								
9.	Times 1982 Dividend Rate	\$1.80								
10.	Total Loss of Cash Flow	\$8,966								
11.	Times Gross Up factor	2.1								
12.	Annual Cost to Customers	\$18,828								

Source: Prospectuses of respective issues.  
SDG&E operating reports.

TABLE 8

TABLE 9  
 SAN DIEGO GAS & ELECTRIC  
 COMMON STOCK ISSUES  
 PROJECTED COST OF SALES BELOW BOOK VALUE  
 (Dollars in Thousands Except  
 Per Share Amounts)

LINE NO.	1980 (A)	1981 (B)	1981 (C)	1982 (D)	1982 (E)
1. Month of Sale	September	April	October	March	October
2. Number of Shares (Thousands)	2000	2000	2000	3000	2000
3. Proceeds to Company	\$27,020	\$26,500	\$26,750	\$39,375	\$26,250
4. Proceeds Per Share	\$13.51	\$13.25	\$13.38	\$13.13	\$13.13
5. Book Value Per Share	\$16.64	\$15.73	\$15.84	\$15.85	\$16.54
6. Ratio of Proceeds to Company to Book Value Per Share (%)	81.2%	84.2%	84.4%	82.8%	79.4%
7. Decrease in Shares if Sold at Book Value (Thousands)	376	315	311	516	413
8. Total Extra Shares Sold			1,931		
9. Times 1982 Dividend Rate			\$1.80		
10. Total Loss of Cash Flow			\$3,476		
11. Times Gross Up Factor			2.1		
12. Annual Cost to Customers			<u>\$7,299</u>		

TABLE 10  
 SAN DIEGO GAS & ELECTRIC  
 HISTORICAL AND PROJECTED RETURN ON EQUITY  
 (1975-79 HISTORICAL AND 1980-82 PROJECTED)

HISTORICAL

<u>LINE NO.</u>	<u>YEAR</u> (A)	<u>RATEMAKING</u> <u>RETURN ON EQUITY</u> (Authorized) (B)	<u>RATEMAKING</u> <u>RETURN ON EQUITY</u> (Actual) (C)	<u>FINANCIAL</u> <u>RETURN ON EQUITY</u> (Actual) (D)
1.	1975	12.38%	4.07%	5.93%
2.	1976	12.38	12.06	12.92
3.	1977	13.03	14.58	12.99
4.	1978	13.03	12.66	11.35
5.	1979	14.50	11.00	10.28

PRESENT RATES

6.	1980 As Expected		2.22	3.23
7.	1981 As Expected		(12.84)	(2.57)
8.	1982 Test Year		(49.60)	(26.89)

PROPOSED RATES

9.	1982 Test Year		19.00%	19.87%
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CHART 8

SAN DIEGO GAS & ELECTRIC  
 RETURN ON AVERAGE EQUITY COMPARISON  
 S&P 400 AND INDUSTRY BOND RATING GROUPS VS SDGE

- A = STRAIGHT AA/AA
- B = STRAIGHT A/A
- C = STRAIGHT BAA/BBB
- D = SDGE HISTORICAL
- E = S&P 400

● 19.9%  
 (proposed rates)

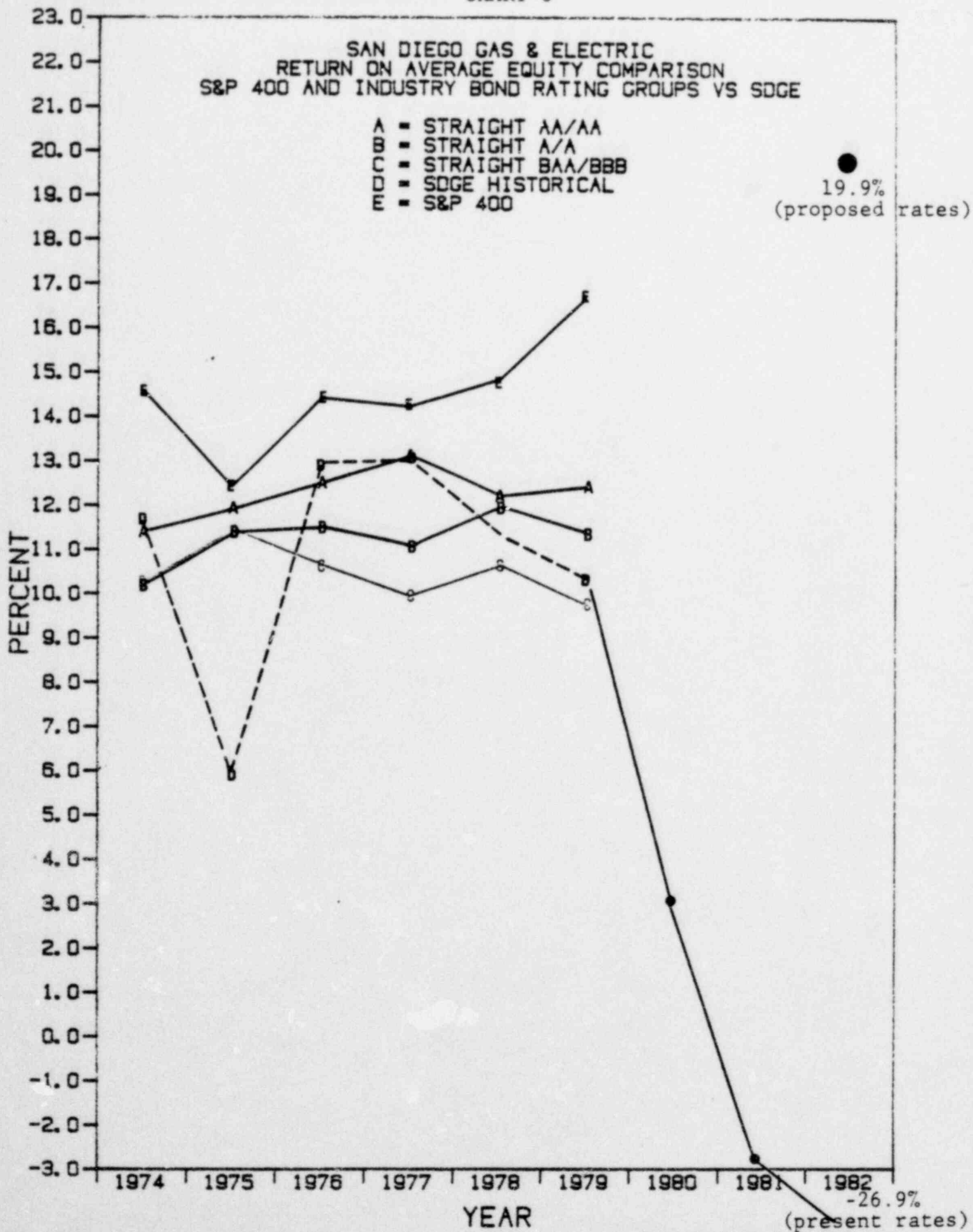


TABLE 11  
FINANCIAL DATA  
CALIFORNIA UTILITIES COMPARISON  
GROWTH RATES 1969-1979

<u>LINE NO.</u>	<u>SDG&amp;E GROWTH RATE</u>	<u>SCE GROWTH RATE</u>	<u>PG&amp;E GROWTH RATE</u>	
1.	NET UTILITY PLANT (Excluding CWIP)	8.6%	5.0%	4.6%
2.	CONSTRUCTION WORK IN PROGRESS	45.2%	17.5%	28.3%
3.	TOTAL ASSETS	15.1%	8.8%	9.7%
4.	TOTAL CAPITALIZATION	14.4%	8.0%	8.4%
5.	TOTAL OPERATING REVENUES	18.2%	14.8%	15.2%
6.	TOTAL OPERATING EXPENSES	19.2%	16.3%	21.8%
7.	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	43.2%	21.1%	33.4%
8.	AFDC AS A % OF COMMON EARNINGS	29.0%	8.2%	22.1%
9.	TOTAL INTEREST CHARGES	20.3%	11.6%	13.1%
10.	EMBEDDED COST OF DEBT	6.2%	4.2%	5.4%
11.	EMBEDDED COST OF PREFERRED	6.0%	3.9%	4.0%
12.	AVG. SHARES OUTSTANDING	11.3%	4.7%	5.8%
13.	ELECTRIC SALES - Kwh	6.3%	3.4%	4.0%
14.	GAS SALES - Therms	1.7%	-	(0.1%)
15.	TOTAL CUSTOMERS	4.4%	2.6%	2.7%
16.	PEAK LOAD - Kw	5.2%	4.8%	4.3%

Source: Annual reports and statistical supplements of respective companies.

TABLE 12

SAN DIEGO GAS & ELECTRIC  
 RETURN ON EQUITY - EMBEDDED COST ANALYSIS  
 1970-1979 RECORDED 1980-1983 ESTIMATED

LINE NO.	YEAR	AVERAGE RETURN ON COMMON EQUITY (1965-1969)	Y/E EMBEDDED COST OF DEBT	ADJ. (B) - 4.27% <sup>(1)</sup>	ADJUSTED RETURN ON EQUITY (A) + (C)
		(A)	(B)	(C)	(D)
1.	1970	11.78%	5.45%	1.18%	12.96%
2.	1971	11.78	5.88	1.61	13.39
3.	1972	11.78	6.04	1.77	13.55
4.	1973	11.78	6.37	2.10	13.88
5.	1974	11.78	6.82	2.55	14.33
6.	1975	11.78	7.18	2.91	14.69
7.	1976	11.78	7.47	3.20	14.98
8.	1977	11.78	7.67	3.40	15.18
9.	1978	11.78	7.92	3.65	15.43
10.	1979	11.78	8.49	4.22	16.00
11.	1980E	11.78	9.19	4.92	16.70
12.	1981E	11.78	9.66	5.39	17.17
13.	1982E	11.78	10.57	6.30	18.08
14.	1983E	11.78	11.13	6.86	18.64

(1) Average of SDG&E's embedded cost of debt 1965-1969.



TABLE 13  
 SAN DIEGO GAS & ELECTRIC  
 COMPUTATION OF RETURN ON EQUITY  
 NECESSARY TO ATTAIN 2.7X INTEREST COVERAGE  
 1982 PROPOSED RATES

<u>LINE NO.</u>	<u>CAPITALIZATION RATIOS</u> (A)	<u>COST FACTORS</u> (B)	<u>WEIGHTED COSTS</u> (C)
<u>PER FILING:</u>			
1. Common Equity	37.32%	19.00%	7.09%
2. Preferred Stock	12.80	9.52	1.22
3. Long-Term Debt	43.26	10.57	4.57
4. Bankers' Acceptances	<u>6.62</u>	15.41	<u>1.02</u>
5. Total	100.00%		13.90%
6. COVERAGE:			2.49X
<u>3X COVERAGE:</u>			
7. Common Equity	37.32%	<u>22.18%</u>	<u>8.28%</u>
8. Preferred Stock	12.80	9.52	1.22
9. Long-Term Debt	43.26	10.57	4.57
10. Bankers' Acceptances	<u>6.62</u>	15.41	<u>1.02</u>
11. Total	100.00%		15.09%
12. COVERAGE:			2.70X

A return on equity of 22.18% is required to attain a 2.70X interest coverage ratio.

TABLE 14  
 SAN DIEGO GAS & ELECTRIC  
 EMBEDDED COST OF PREFERRED CAPITAL STOCK  
 RECORDED 1979 AND PROJECTED 1980-1982  
 (Thousands of Dollars)

LINE NO.	TITLE	AMOUNT (A)	NET COST OF ISSUE (B)	PROCEEDS OF SALE (Cols. A-B) (C)	ANNUAL DIVIDEND (D)	EFFECTIVE COST (%) (Cols. D, C) (E)
<u>Cumulative Preferred Stock</u>						
1.	5.00% Series	\$ 7,500.0	\$( 196.2)	\$ 7,696.2	\$ 375.0	4.87%
2.	4.50% Series	6,000.0	-	6,000.0	270.0	4.50
3.	4.40% Series	6,500.0	( 103.5)	6,603.5	286.0	4.33
4.	4.60% Series	7,500.0	53.3	7,446.7	345.0	4.63
5.	Total Preferred Stock	<u>27,500.0</u>	<u>( 246.4)</u>	<u>27,746.4</u>	<u>1,276.0</u>	<u>4.60</u>
<u>Preferred Stock (Cumulative)</u>						
6.	\$9.84 Series	16,000.0	314.6	15,685.4	1,574.4	10.04
7.	\$7.80 Series	20,000.0	321.7	19,678.3	1,560.0	7.93
8.	\$7.20 Series	15,000.0	222.6	14,777.4	1,080.0	7.31
9.	\$7.325 Series	30,000.0	116.6	29,883.4	2,197.5	7.35
10.	\$8.25 Series	25,000.0	100.6	24,899.4	2,062.5	8.28
11.	\$2.68 Series	25,000.0	(1,215.9)	26,215.9	2,680.0	10.22
12.	\$9.125 Series	30,000.0	191.7	29,808.3	2,737.5	9.18
13.	\$2.475 Series	25,000.0	(1,359.2)	26,359.2	2,475.0	9.39
14.	Total Preference Stock	<u>186,000.0</u>	<u>(1,307.3)</u>	<u>187,307.3</u>	<u>16,366.9</u>	<u>8.74</u>
15.	Total 12/31/79	213,500.0	(1,553.7)	215,053.7	17,642.9	8.20
<u>PROJECTED CHANGES DURING 1980-1982: (1)</u>						
16.	No Issue in 1980	-	-	-	-	-
17.	Projected 12/31/80	213,500.0	(1,553.7)	215,053.7	17,642.9	8.20
18.	\$14.375 Series	25,000.0	187.5	24,812.5	3,593.8	14.48
19.	Projected 12/31/81	238,500.0	(1,366.2)	239,866.2	21,236.7	8.85%
20.	\$14.750 Series	30,000.0	225.0	29,775.0	4,425.0	14.86%
21.	Projected 12/31/82	<u>\$268,500.0</u>	<u>\$(1,141.2)</u>	<u>\$269,641.2</u>	<u>\$25,661.7</u>	<u>9.52%</u>

(1) Projected changes are issues of preference stock (cumulative).

TABLE 15  
 SAN DIEGO GAS & ELECTRIC  
 EMBEDDED COST OF LONG-TERM DEBT  
 RECORDED DECEMBER 31, 1979

(Thousands of Dollars)

LINE NO.	TITLE	PRINCIPAL AMOUNT (A)	ANNUAL INTEREST PAYMENT (B)	AMORT. OF PREM., DISC. & EXPENSE (C)	TOTAL ANNUAL EXPENSE (Cols. B&C) (D)	EFFECTIVE COST (%) (Cols. D/A) (E)
<u>FIRST MORTGAGE BONDS</u>						
1.	3½% Series "D", Due 4/1/82	\$ 12,000.0	\$ 390.0	\$ (2.8)	\$ 387.2	3.23%
2.	2-7/8% Series "E", Due 4/1/84	17,000.0	488.8	11.7	500.5	2.94
3.	3½% Series "F", Due 10/1/85	18,000.0	585.0	8.1	593.1	3.30
4.	4-7/8% Series "G", Due 10/1/87	12,000.0	585.0	3.5	588.5	4.90
5.	4-5/8% Series "H", Due 10/1/90	30,000.0	1,387.5	10.1	1,397.6	4.66
6.	5½% Series "I", Due 3/1/97	25,000.0	1,375.0	(4.5)	1,370.5	5.48
7.	7% Series "J", Due 12/1/98	35,000.0	2,450.0	12.0	2,462.9	7.04
8.	8-3/4% Series "K", Due 2/1/00	40,000.0	3,500.0	5.0	3,505.0	8.76
9.	8% Series "L", Due 9/1/01	45,000.0	3,600.0	12.6	3,612.6	8.03
10.	8-3/8% Series "M", Due 1/1/04	75,000.0	6,281.2	30.0	6,312.1	8.42
11.	10.7% Series "O", Due 5/1/82	40,000.0	4,280.0	85.1	4,365.1	10.91
12.	10% Series "P", Due 7/15/06	45,000.0	4,500.0	20.1	4,520.1	10.04
13.	8-3/4% Series "Q", Due 3/15/07	50,000.0	4,375.0	38.1	4,413.1	8.83
14.	9-3/4% Series "R", Due 5/1/08	50,000.0	4,875.0	21.0	4,896.0	9.79
15.	Total First Mortgage Bonds	<u>494,000.0</u>	<u>38,672.5</u>	<u>250.0</u>	<u>38,922.5</u>	<u>7.88</u>
<u>SINKING FUND DEBENTURES</u>						
16.	4-5/8%, Due 1/15/84	9,000.0	416.3	5.8	422.1	4.69
17.	4½%, Due 9/1/94	15,600.0	702.0	7.1	709.1	4.55
18.	Total Sinking Fund Debentures	<u>24,600.0</u>	<u>1,118.3</u>	<u>12.9</u>	<u>1,131.2</u>	<u>4.60</u>
<u>OTHER LONG-TERM DEBT</u>						
19.	Foreign Term Loans (Variable)	65,000.0	9,644.8	8.5	9,653.3	14.85
20.	Pollution Control Bonds (6-3/8%)	9,575.0	610.4	11.0	621.4	6.49
21.	Pollution Control Bonds (7.2%)	5,700.0	410.4	8.3	418.7	7.35
22.	Term Loan (8-3/4%)	40,000.0	3,500.0	16.0	3,516.0	8.79
23.	Sundesert Properties (7.85%)	4,876.9	382.6	-	382.6	7.85
24.	N.M. Rothchild & Sons, Ltd., Promissory Notes (5.5%)	3,142.3	290.5 <sup>(1)</sup>	11.3	301.8	9.60
25.	General Electric (½ of Prime)	152.0	11.6	-	11.6	7.63
26.	W.D. Cannon (7.49%)	239.1	17.9	-	17.9	7.50
27.	Other (7.72%) <sup>(2)</sup>	145.1	11.2	-	10.7	7.37
28.	Total Other Long-Term Debt	<u>128,830.4</u>	<u>14,879.4</u>	<u>55.1</u>	<u>14,934.5</u>	<u>11.59</u>
29.	TOTAL LONG-TERM DEBT	<u>\$647,430.4</u>	<u>\$54,670.2</u>	<u>\$318.0</u>	<u>\$54,988.2</u>	<u>8.49%</u>

(1) Outstanding amount in pounds x 5.5% x Dec. 31, 1979 exchange rate (\$2,232/pound).

(2) Various amounts at various interest rates and maturities.

TABLE 16  
SAN DIEGO GAS & ELECTRIC  
PROJECTED EMBEDDED COST OF LONG-TERM DEBT  
1980 and 1981

(Thousands of Dollars)

LINE NO.	TITLE	PRINCIPAL AMOUNT (A)	ANNUAL INTEREST PAYMENT (B)	AMORT. OF PREM., DISC. & EXPENSE (C)	TOTAL ANNUAL EXPENSE (Cols. B+C) (D)	EFFECTIVE COST (%) (Cols. D/A) (E)
1.	EFFECTIVE DECEMBER 31, 1979	\$647,430.4	\$54,670.2	\$318.0	\$54,988.2	8.49%
	PROJECTED CHANGES DURING 1980:					
	First Mortgage Bonds:					
2.	16% Series "S", Due 3/10	50,000.0	8,000.0	22.3	8,022.3	16.05
3.	13 5/8% Series "T", Due 8/10	75,000.0	10,218.8	27.7	10,246.5	13.66
	Sinking Fund Debentures:					
4.	4 5/8% Retired	( 375.0)	( 17.3)	(0.2)	( 17.5)	( 4.67)
5.	4 1/2% Retired	( 400.0)	( 18.0)	(0.2)	( 18.2)	( 4.55)
	Other Long-Term Debt:					
6.	Foreign Term Loan	(30,000.0)	( 4,467.9)	-	(4,467.9)	(14.89)
7.	Sundesert Properties	( 1,206.5)	( 92.5)	-	( 92.5)	( 7.67)
8.	N.M. Rothschild & Sons, Ltd., Prom. Notes	( 812.4)	( 72.6)	-	( 72.6)	( 8.94)
9.	Foreign Term Loan (Variable)(1)	-	( 714.4)	-	( 714.4)	-
10.	General Electric	( 152.0)	( 11.6)	-	( 11.6)	( 7.63)
11.	W.D. Cannon	( 63.8)	( 4.8)	-	( 4.8)	( 7.52)
12.	Other	( 48.5)	( 3.9)	-	( 3.9)	( 8.04)
13.	Projected December 31, 1980	739,372.2	67,486.0	367.6	67,853.6	9.18
	PROJECTED CHANGES DURING 1981:					
	First Mortgage Bonds:					
14.	11 5/8% Series "U", Due 10/11	75,000.0	10,593.8	36.0	10,629.8	14.17
	Sinking Fund Debentures:					
15.	4 5/8% Retired	( 375.0)	( 17.3)	(0.2)	( 17.5)	( 4.67)
16.	4 1/2% Retired	( 400.0)	( 18.0)	(0.2)	( 18.2)	( 4.55)
	Other Long-Term Debt:					
17.	Foreign Term Loan (Variable)(2)	-	87.5	-	87.5	-
18.	Sundesert Properties	( 1,206.5)	( 92.5)	-	( 92.5)	( 7.67)
19.	N.M. Rothschild & Sons, Ltd., Prom. Notes	( 786.8)	( 72.6)	-	( 72.6)	( 9.23)
20.	W.D. Cannon	( 63.8)	( 4.8)	-	( 4.8)	( 7.52)
21.	Other	( 48.5)	( 3.9)	-	( 3.9)	( 8.04)
22.	Projected December 31, 1981	\$811,491.6	\$77,958.2	\$403.2	\$78,361.4	9.66%

(1) Adjustment intended to reflect a projected decrease in the foreign term loan's variable interest rate from 14.791% to 12.75% percent.

(2) Adjustment intended to reflect a projected increase in the foreign term loan's variable interest rate from 12.75% to 13.00%.

TABLE 17  
SAN DIEGO GAS & ELECTRIC  
PROJECTED EMBEDDED COST OF LONG-TERM DEBT  
1982

(Thousands of Dollars)

LINE NO.	TITLE	PRINCIPAL AMOUNT (A)	ANNUAL INTEREST PAYMENT (B)	AMORT. OF PREM. DISC. & EXPENSE (C)	TOTAL ANNUAL EXPENSE (Cols. B+C) (D)	EFFECTIVE COST (%) (Cols. D/A) (E)
1.	PROJECTED DECEMBER 31, 1981	\$811,491.6	\$77,958.2	\$403.2	\$78,361.4	9.66%
	PROJECTED CHANGES DURING 1982:					
	First Mortgage Bonds:					
2.	14 5/8% Series "V", Due 5/12	75,000.0	10,968.8	36.0	11,004.8	14.67
3.	15 1/4% Series "W", Due 10/12	75,000.0	11,437.5	36.0	11,473.5	15.30
4.	3 1/4% Series "D", Retired	(12,000.0)	( 390.0)	2.8	( 387.2)	( 3.23)
5.	10.7% Series "O", Retired	(40,000.0)	(4,280.0)	(84.7)	(4,364.7)	(10.91)
	Sinking Fund Debentures:					
6.	4 5/8% Retired	( 375.0)	( 17.3)	( 0.2)	( 17.5)	( 4.67)
7.	4 1/2% Retired	( 400.0)	( 18.0)	( 0.2)	( 18.2)	( 4.55)
	Other Long-Term Debt:					
8.	Sundesert Properties	( 643.8)	( 48.3)	-	( 48.3)	( 7.50)
9.	N.M. Rothschilds & Sons Ltd., Prom. Notes	( 774.4)	( 72.6)	-	( 72.6)	( 9.38)
10.	W.P. Cannon	( 63.8)	( 4.8)	-	( 4.8)	( 7.52)
11.	Other	( 29.6)	( 1.9)	-	( 1.9)	( 6.42)
12.	Projected December 31, 1982	<u>\$907,205.0</u>	<u>\$95,531.6</u>	<u>\$392.9</u>	<u>\$95,924.5</u>	<u>10.57%</u>

TABLE 18  
 SAN DIEGO GAS & ELECTRIC  
 CAPITAL STRUCTURE<sup>(1)</sup>  
 1975-1979 RECORDED - 1980-1982 PROJECTED  
 (Dollars in Millions)

LINE NO.	YEAR	MILLIONS					PERCENT			
		LONG-TERM DEBT (A)	PREFERRED STOCK (B)	COMMON EQUITY (C)	BANKERS' ACCEPTANCES (D)	TOTAL (E)	LONG-TERM DEBT (F)	PREFERRED STOCK (G)	COMMON EQUITY (H)	BANKERS' ACCEPTANCES (I)
<u>RECORDED</u>										
1.	1975	\$440.5	\$133.5	\$274.8	\$33.1	881.9	49.9%	15.1%	31.2%	3.8%
2.	1976	491.0	158.5	322.5	30.5	1,002.5	49.0	15.8	32.2	3.0
3.	1977	572.6	188.5	393.2	46.2	1,200.5	47.7	15.7	32.8	3.8
4.	1978	573.1	213.5	480.4	23.6	1,290.6	44.4	16.6	37.2	1.8
5.	1979	640.1	213.5	541.2	60.0	1,454.8	44.0	14.7	37.2	4.1
6.	1980 As Expected	739.4	213.5	568.0	12.7	1,633.6	45.2	13.1	34.8	6.9
7.	1981 As Expected	811.5	238.5	552.9	114.4	1,717.3	47.2	13.9	32.2	6.7
1982 Test Year:										
8.	At Present Rates	907.2	268.5	419.6	138.8	1,734.1	52.3	15.5	24.2	8.0
9.	At Proposed Rates	907.2	268.5	782.5	138.8	2,097.0	43.3	12.8	37.3	6.6
10.	Rating agency guideline-Single A.								43.0	

(1) Excludes leases.

TABLE 19  
 SAN DIEGO GAS & ELECTRIC  
 1979 AUTHORIZED RATE OF RETURN  
VS. 1979 RECORDED, 1980-1981 AS EXPECTED

<u>LINE NO.</u>	<u>CAPITAL RATIOS</u> (A)	<u>COST FACTORS</u> (B)	<u>WEIGHTED COST</u> (C)	
<u>1979 AUTHORIZED</u> <sup>(1)</sup>				
1.	Common Equity	38.09%	14.50%	5.52%
2.	Preferred Stock	14.16	8.21	1.16
3.	Long-Term Debt	44.99	8.10	3.64
4.	Bankers' Acceptances	<u>2.76</u>	10.00	<u>0.27</u>
5.	Total	100.00%		10.59%
6.	Coverage			2.71X
<u>1979 RECORDED</u>				
7.	Common Equity	37.20%	10.97%	4.08%
8.	Preferred Stock	14.68	8.20	1.21
9.	Long-Term Debt	44.00	8.49	3.74
10.	Bankers' Acceptances	<u>4.12</u>	12.45	<u>0.51</u>
11.	Total	100.00%		9.54%
12.	Coverage			2.24X
<u>1980 AS EXPECTED</u>				
13.	Common Equity	34.77%	2.21%	0.77%
14.	Preferred Stock	13.07	8.20	1.07
15.	Long-Term Debt	45.26	9.19	4.16
16.	Bankers' Acceptances	<u>6.90</u>	13.99	<u>0.97</u>
17.	Total	100.00%		6.97%
18.	Coverage			1.36X
<u>1981 AS EXPECTED</u>				
19.	Common Equity	32.19%	(12.83%)	(4.13%)
20.	Preferred Stock	13.89	8.85	1.23
21.	Long-Term Debt	47.25	9.66	4.56
22.	Bankers' Acceptances	<u>6.67</u>	13.50	<u>0.90</u>
23.	Total	100.00%		2.56%
24.	Coverage			0.47X

(1) Per Decision 90405.

TABLE 20  
SAN DIEGO GAS & ELECTRIC  
RATE OF RETURN  
1982 TEST YEAR PRESENT AND PROPOSED RATES

<u>LINE NO.</u>	<u>CAPITAL RATIOS</u> (A)	<u>COST FACTORS</u> (B)	<u>WEIGHTED COST</u> (C)	
<u>1982 Test Year Present Rates</u>				
1.	Common Equity	24.20%	(49.55%)	(11.99%)
2.	Preferred Stock	15.48	9.52	1.47
3.	Long-Term Debt	52.32	10.57	5.53
4.	Bankers' Acceptances	8.00	15.41	1.23
5.	Total	100.00%		(3.76%)
6.	Coverage			(0.56X)
<u>1982 Test Year Proposed Rates</u>				
7.	Common Equity	37.32%	19.00%	7.09%
8.	Preferred Stock	12.80	9.52	1.22
9.	Long-Term Debt	43.26	10.57	4.57
10.	Bankers' Acceptances	6.62	15.41	1.02
11.	Total	100.00%		13.90%
12.	Coverage			2.49X



TABLE 21  
 SAN DIEGO GAS & ELECTRIC  
 COST OF CAPITAL AT VARIOUS RETURNS ON EQUITY  
 1982 PROPOSED RATES

LINE NO.	CAPITALIZATION RATIOS (A)	RATES (B)	WEIGHTED COSTS (C)	CAPITALIZATION RATIOS (D)	RATES (E)	WEIGHTED COSTS (F)
1. Common Equity	37.32%	<u>18.00%</u>	6.72%	37.32%	<u>18.50%</u>	6.90%
2. Preferred Stock	12.80	9.52	1.22	12.80	9.52	1.22
3. Long-Term Debt	43.26	10.57	4.57	43.26	10.57	4.57
4. Bankers' Acceptances	6.62	15.41	<u>1.02</u>	6.62	15.41	<u>1.02</u>
5. Rate of Return			13.53%			13.71%
6. Coverage			2.42X			2.45X
7. Common Equity	37.32%	<u>19.00%</u>	7.09%	37.32%	<u>19.50%</u>	7.28%
8. Preferred Stock	12.80	9.52	1.22	12.80	9.52	1.22
9. Long-Term Debt	43.26	10.57	4.57	43.26	10.57	4.57
10. Bankers' Acceptances	6.62	15.41	<u>1.02</u>	6.62	15.41	<u>1.02</u>
11. Rate of Return			13.90%			14.09%
12. Coverage			2.49X			2.52X