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THE FINANCIAL EFFECTS OF LEASING ON ELECTRIC UTILITY FIRMS

BY

PHILIP L. KINTZELE

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Business Administration in the Graduate School of Business of Indiana University

INDIANA UNIVERSITY
GRADUATE SCHOOL OF BUSINESS

1973

ACCEPTANCE

This dissertation has been accepted in partial fulfillment of the requirements for the Degree of Doctor of Business Administration in the Graduate School of Business of Indiana University.

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PREFACE

Many people were instrumental in the production of this dissertation. Mr. Robert E. Walden, the chairman, spent many hours reviewing preliminary drafts and offering suggestions as well as coordinating the comments of the other members. Mr. John H. Myers provided valuable information on the topic of leases and comments on the general nature of the study. Mr. James E. Suelflow was the resident expert on utility accounting and provided the initial encouragement for the undertaking of the project.

A special extension of my appreciation belongs to the faculty of the Accounting Department of the Graduate School of Business, Indiana University which has provided me over the years with the academic and technical skills to undertake such a study.

The Institute of Public Utilities at Michigan State University provided the financial support for this dissertation. The financial support of the Institute enabled me to devote full time to the dissertation effort.

Mr. James M. Krueger, a fellow accounting D.B.A. candidate, was instrumental in helping program the general model by the "Brute Force" technique. Most of the preliminary drafts and the final manuscript were typed by Mrs. Susan Stombaugh.

Bloomington, Indiana
May 1973

Philip L. Kintzele

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ABSTRACT

The issue of how to treat leases on the financial statements of lessees has been a topic of debate for many years. The treatment accorded leases in the electric utility industry and whether or not to lease are currently topics debated by people concerned with public utility accounting and operating practices.

The purpose of this study is to quantify the effects that leasing has on electric utility firms. Not only are the direct effects of different financing assumptions on the financial statements observed and analyzed, but the effects on rate making and income tax liabilities are also considered. Recommendations regarding the treatment to be accorded leases on the published financial statements and for rate making purposes are made. Recommendations are also made concerning the methods for financing electric utility plant expansion from both a firm and a regulatory point of view.

In order to accomplish the objective of the study, sets of financial statements were generated from a general model. Balance sheets and income statements were produced for five successive one-year periods under seven assumptions. (1) Investment financed by the issuance of common stock. (2) Investment financed by issuance of preferred stock. (3) Investment financed by long-term debt. (4) Investment financed by a non-capitalized lease. (5) Investment financed by a capitalized lease. (6) Investment financed by the issuance of stock

and long-term debt in the existing capital ratio. (7) No new investment.

The results of the generated financial statements were related to data received from a questionnaire that was sent to 190 Class A and Class B electric utilities. A response rate of 70% was attained with 130 utilities responding. The questionnaire was used to determine the magnitude and types of leasing activity presently occurring and that might occur in the future for the electric utility industry.

Based on the results of the generated financial statements, the questionnaire results, and a review of accounting theory as it applies to the lessee treatment of long-term leases, it is recommended that leases should be capitalized for financial statement purposes. The recommendation for rate making treatment is for the non-capitalization of leases. Because the model showed that federal income taxes would vary by only very small amounts due to different treatment of the leases, no recommendation is made for the tax treatment. It is concluded that electric utility firms should include a higher proportion of debt and long-term leases in their plans for financing plant expansion. More debt and substitution of long-term leases for long-term debt appears to be in the best interests of the firms and their customers.

CHAPTER I

INTRODUCTION

Statement of Research Purpose

The issue of the treatment accorded long-term leases on financial statements of firms has been debated for many years. The essence of the discussion on long-term leases is whether or not the property rights acquired should be capitalized and a corresponding liability recorded. While the issue is frequently discussed from both a theoretical and an empirical viewpoint and the pros and cons of both methods explained, the actual quantification of capitalization treatment as opposed to non-capitalization treatment has been virtually ignored. This dissertation will quantify the effects of the treatment accorded long-term leases in the electric utility industry and compare the leasing alternative to other forms of financing capital investment in the industry. The quantification will not only examine the direct effects on the financial statements, but also the effect on the statements after including consequent changes in rates and taxes.

The quantification of the effects coupled with an understanding of the theoretical issues involved will supply the necessary inputs for a recommendation as to the treatment that should be given leases. This study should also be of interest to regulatory commissions and electric utilities for their respective policy making and investment decision making processes.

Background of the Leasing Issue

Not only has the capitalization of long-term leases been an issue for the business community as a whole, but the topic has been of interest to those connected with the electric utility industry for some time also. Donald C. Cook expressed opposition to the capitalization of leases in 1963.[1] Although his article was not specifically directed at the electric utility industry, it could be assumed he was very much against the capitalization of long-term leases in the electric utility industry because at the time he was president of American Electric Power Company and is presently chairman of the board and president. During the past decade the electric utility industry has experienced a period of an extremely rapid increase in demand for electricity. The financing of the needed additions to generating capacity have pushed many firms to the hilt in attempting to come up with the money capital. Over the past few years there has been some indication that leasing may become a viable alternative to ownership for utilities that are expanding their plant and equipment.

Since Mr. Cook's article appeared over a decade ago, more has been said against the capitalization of leases in the public utility industry. Robert O. Whitman felt that the capitalization of leases would result in lower returns for investors and higher rates for customers of the firms.[2] Although Mr. Whitman's conclusions are debatable, he did point out that utilities are different from most other industries in that they are regulated. Because utilities are allowed to charge rates that are a function

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[1]Donald C. Cook, "The Case Against Capitalizating Leases," Harvard Business Review, January, 1963.

[2]Robert O. Whitman, "Accounting Issues in the Capitalization of Leases," Public Utilities Fornightly, September 30, 1971.

of a specified return on their rate base, the issue of whether a lease is an asset included in the rate base makes the capitalization question take on greater significance.

Whether or not a long-term lease is an asset is a vital question to be answered in the process of making recommendations for the treatment of leases. For purposes of this study "assets" are defined as Sprouse and Moonitz did in their work "A Tentative Set of Broad Accounting Principles for Business Enterprises." "Assets represent expected future economic benefits, rights to which have been acquired by the enterprise as a result of some current or past transaction."[3]

Statement of the Methodology

A survey of the current and projected leasing activity in the electric utility industry is made to determine the magnitude of leasing. Broad coverage is achieved by the use of questionnaires mailed to all Class A and Class B electric utilities. The recipients of the questionnaires are asked to supply information regarding the types of assets being leased and details as to the payment structure and duration of leases so that the lease can be classified as a "financing" lease or an "operating" lease. Although the results from the questionnaire are not used as direct inputs into the model described below, responses to the questionnaire aided in the recommendations made regarding treatment to be accorded leases.

A general model is constructed to generate income statements and balance sheets for a five-year period. Financial statements are generated under different assumptions as to the method of financing

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[3]Robert T. Sprouse and Maurice Moonitz, Accounting Research Study No. 3, p. 20.

an expansion of the utility firm's plant and equipment. Common stock, preferred stock, long-term debt, and leasing are each used separately to finance the expansion. Another assumption is that the expansion is financed by issuing stock and long-term debt in the ratio that the model assumes initially existed. When leasing is used to acquire the plant and equipment, statements are generated for both capitalization and non-capitalization treatment of the lease. A set of statements is also generated under the assumption that no expansion of plant and equipment occurs. The resulting financial statements are compared to observe the effects of varying the methods of financing.

The various financing methods also affect total operating revenues that the utility firms are allowed to collect through rates charged their customers. Federal income tax liabilities will vary with the financing method used. Because the amount of plant expansion is equal in all cases where expansion occurred, the differing results are caused totally by the financing method used and the rate making and tax treatment that accompanies the specific financing method. The results of the generated financial statements along with the information obtained in the questionnaire are used to make recommendations for financial statement, rate making, and income tax treatment. Finally, recommendations on the financing of plant expansion are made to electric utility firms and regulatory commissions.

Organization of the Dissertation

The dissertation is organized into seven chapters. Chapter II is a description of how leases can be treated for financial statement

rate making, and federal income tax purposes. The questionnaire and the results of the survey on leasing are discussed and analyzed in Chapter III. Comments that appear on the questionnaire as responses to the more "open ended" questions are discussed as well as the item totals for other questions. The general model is the topic of Chapter IV. The assumptions that are common to all financing assumptions are explained in detail. Assumptions that are specific to the financing assumption are also discussed. Chapter V deals with the results of the generated financial statements. Changes that involve significant items appearing on the financial statements are examined. Rate making effects and federal income tax effects are inspected. A direct comparison of all aspects of the non-capitalized lease versus the capitalized lease is made. The recommendations for the treatment to be accorded leases for financial statement, rate making, and federal income tax treatment are the topic of Chapter VI. Recommendations on the financing of utility firms' investment in plant from a firm's and a regulatory commission's standpoint are discussed in Chapter VII. Chapter VIII is a general summary of the dissertation and the conclusions that can be drawn from the study.

CHAPTER II

DESCRIPTION OF THE TREATMENT OF LEASES

The purpose of this chapter is to discuss how leases could be treated for financial statement purposes, for rate making purposes, and for determination of federal income tax liability. This chapter is basically descriptive; a deeper theoretical analysis of the reasons for the various treatments will be given later when the recommended treatment of leases is discussed.

Rental expense treatment is the method most commonly used for the treatment of leases on the financial statements. Financial statements appearing in the annual reports of most firms which are lessees in a leasing contract merely show lease payments as rental expenses for the period involved. Each period's cash outlay is reported as an expense. The only recognition given to commitments for future payments is in the footnotes to the financial statements. This is the case whether the commitments are for use of property, acquisition of services, or a combination of the two. In effect, the entire commitment is ignored with respect to the capitalization of the commitment.

Capitalization of the lease is the other method which can be used to report a lease agreement on the financial statements if the provisions of the Accounting Principles Board Opinion No. 5 are followed. Opinion No. 5 states that leases should be treated as the equivalent of a purchase of property if the lessee acquires a material equity in the property. A material equity arises if payments are significantly in excess of normal rental pay-

ments during the initial contract period and significantly less than normal rental payments for a renewal period extended at the lessee's option. If the lessee and lessor are related, which suggests a transaction not at arm's length, a material equity will arise. "Bargain purchases" by the lessee which are provided for in the contract also create a material equity. When leases are capitalized, the commitment should be recognized as a liability at its discounted value and the property recorded as an asset for the same amount. Care must be taken to separate the amount to be allocated between services contracted for and property rights acquired so as not to capitalize amounts to be allocated to contracted services.[1]

The amount recognized as the asset and related liability will depend upon the payment structure as well as the discount rate that is chosen. A lump sum payment made at the time the lease was signed would be recorded at the nominal dollar value. On the other hand payments to be made in installments over a future time period would be discounted before recording an amount as an asset and liability.

The capitalization or non-capitalization of a lease has a great effect on the balance sheet in the case of the long-term debt account. If a lease is capitalized, the firm's long-term debt rises by an equal amount. The firm's debt-equity ratio is always higher when the lease is capitalized. The percentage of assets pledged as security would also rise whenever leases are capitalized. Even the current ratio will fall if the current portion of the lease related long-term debt is placed

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[1]Accounting Principles Board, "Reporting of Leases in Financial Statements of Lessee," Opinion No. 5 (New York, AICPA, September 1964), p. 30

into the current liabilities section of the balance sheet. Any firm's balance sheet will appear less favorable by traditional standards on the surface with a given lease capitalized as opposed to not capitalizing the lease.

The effects of lease treatment on the income statement are not nearly as different as in the case of the balance sheet. When lease payments are treated as rental payments, they would be charged against revenue through a single account such as building rental expense, or leased equipment rental. If a lease were capitalized, the charge against revenue would come in the form of charges to an amortization account and charges to an interest expense account. When a lease is capitalized and then amortized, the net income will differ from that resulting from the rental treatment of the same lease. If the capitalized lease were amortized at an accelerated rate, net income would differ to an even greater extent. The amount shown in inventory accounts of manufactured products may vary because of the treatment accorded leases via the charges applied to the product inventoried versus the charges made to the period that are all expensed currently. When leases are capitalized not all of the leasing charge would be allocated to the product through an overhead application rate. The amount charged as interest expense would be a period charge and never get into the product inventory accounts. This last point is relatively insignificant for electric utilities that do not produce an inventoriable product.

Although the financial statements of a firm, particularly the balance sheet, will look very different depending upon the treatment accorded leases, many have suggested that people analyzing financial state-

ments are able to make adjustments so as to be able to compare similar firms that treat leases differently. Footnotes to the financial statements and statements filed with the Securities and Exchange Commission are often purported to supply analysts with sufficient information. Because reporting practices differ from firm to firm, it does not seem very feasible to assume that an analyst could make good comparisons in all or even most cases by inspecting the notes to the financial statements and Securities and Exchange Commission reports. The effects of lease treatment on the financial statements are more than superficial; it appears that non-uniform treatment of a given type of lease could often lead to differences in opinion about the financial condition of one firm over another firm.

The Federal Power Commission has set out specific disclosure rules in addition to the required disclosures about leases on financial statements for public reporting purposes with respect to the financial reports it receives from firms. The specific rules regarding leases are set forth in Order No. 461 which was issued November 24, 1972 and effective January 1, 1972.

All electric companies must report details of all leases with annual charges of $25,000 or more. Leases with an annual charge of $250,000 or more must be reported with even more comprehensive detail. Forms are provided which specify the required information. The details of the lease are not reported annually but only when initiated and thereafter when amended or every five years whichever occurs first.[2]

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[2]Federal Power Commission, "Order Amending FPC Annual Report Forms No. 1 and No. 2," Order No. 461 (Washington, D.C.: Federal Power Commission, November 24, 1972), pp. 1-6.

Rate Making Treatment

Electric utilities are a regulated industry and must comply with the accounting regulations laid down by the various commissions that have control over them. This causes electric utilities to have financial statements that look somewhat different from those of other firms.

EXHIBIT 1

TYPICAL CONDENSED INCOME STATEMENT OF AN ELECTRIC UTILITY

Operating Revenues	$50,000	
Operating Expenses and Maintenance	$27,000	
Depreciation and Amortization Expense	4,700	
Federal Income Taxes	2,400	
Other Taxes	4,900	
Deferred Income Taxes	220	
Total Operating Expenses	$39,220	
Total Operating Income	10,780	← The Line
Interest Charged to Construction	1,000	
Other Income (Net)	350	
Interest on Long-term Debt	(4,000)	
Other Interest Charges	(500)	
Net Income	$ 7,630	

Exhibit 1 shows a condensed income statement of a hypothetical electric utility firm. The statement format and account titles are those used in reporting to the Federal Power Commission. Financial statements in annual reports frequently contain different account titles and vary the format to some degree. There is one peculiarity of public utility accounting that is relevant to the question of the treatment of leases. Because the position on the income statement where charges are deducted from revenue makes a difference, varying treatment accorded leases will affect the positioning of charges on the income statement and consequently the determination of operating revenues. The often mentioned phrase "the line" refers to the line

on the income statement that divides expenses charged against customers from charges to investors. Expenses that are considered "above the line" include wages, rent, materials, depreciation, and taxes of all types. Practically all operating expenses are considered "above the line" as long as they are not excessive in the eyes of the regulatory commission and involve utility activity. "The line" mentioned above refers to the line that divides total operating expenses and total operating income. All expenses charged to accounts above "the line" are fully recoverable in the rates charged customers. Any expenses that cannot be charged to accounts "above the line" must be charged below the line and are not recovered out of income available for security holders. Interest charges of all types, expenses of a non-utility nature, and "above the line" type expenses which are excessive in the regulatory commission's opinion are the most common "below the line" charges.

The rate making treatment accorded leases, capitalization or non-capitalization, determines the position on the income statement where the charges against revenue are made. This is the reason "the line" is of vital interest in the treatment accorded leases for rate making purposes. Unless leases are given special treatment, the total lease payment in the uncapitalized case would be charged against revenue as "above the line" expenses. In the case of a lease being capitalized the charge would be split between "above the line" and "below the line" since a portion of the charge would be in the form of depreciation which is an "above the line" charge and the other portion in the form of interest which is a "below the line" charge. Depreciation is considered an operating expense and classified as "above the line" as any other

operating expense. The portion of the annual payment that is implied as interest would be considered a payment for the use of money capital and charged "below the line" as is the case for all interest paid by utility firms.

The treatment given leases for rate making purposes would also be important when considering the question of what is included in the rate base. Utility plant less accumulated depreciation plus working capital is a general definition of the rate base. Although some commissions use historical acquisition cost while others adjust the historical figures to reproduction cost or fair value, the concept of using a net utility plant figure with minor adjustments is used as a major input by the commissions for determining rates charged customers as a whole.

If leases are not to be capitalized for rate making purposes, the lease would not be part of the rate base and the firm would not be allowed to earn a return on it. The capitalization of the lease for rate making purposes would cause the lease to be part of the rate base and allow the firm to earn a return on it.

In summary then, the capitalization of a lease as opposed to the non-capitalization of a lease may have effects both for rate increases and for rate decreases. When the capitalized lease is placed in the rate base, rates would tend to increase because there exists a larger rate base. Capitalizing a lease also has the tendency of reducing rates since part of the annual charge would be "below the line" and chargeable to investors as opposed to customers. The net effects of leasing on rates are discussed later with the results of the generated financial statements.

Federal Income Tax Treatment

If the lease is to be treated by the Internal Revenue Service as an agreement for the rental use of property, the tax treatment is simple and direct. The tax treatment may be independent of rate making treatment which in turn may be independent of financial statement treatment. The lessee taxpayer is allowed to deduct the full amount of the rent paid or accrued that is applicable to the period under consideration. Payments that are made which represent rent paid in advance are set up as prepaid items and apportioned over the applicable time period.

A lease is not always considered a contract to pay rent in which case the federal income tax treatment accorded leases is very straightforward. Revenue Ruling 55-540 is a guide used by the Internal Revenue Service for determining the federal income tax treatment of leases of equipment used in the trade or business of a lessee. The ruling describes five types of lease agreements that are typical cases for possible capitalization treatment by the Internal Revenue Service. Three of the five types of agreements are relevant to the discussions that involve public utility lease agreements which are subject to capitalization.

> (c) Agreements providing for a "rental" over a comparatively short period of time in relation to the life of the equipment. The agreed "rental" payments fully cover the normal purchase price plus interest. Title usually passes to the lessee upon the payment of a stated amount of "rental" or on termination of the agreement upon the payment of an amount which when added to the "rental" paid approximates the normal purchase price of the equipment plus interest.
>
> (d) Agreements which provide for the payment of rental for a short original term in relation to the expected life of the equipment, with provision for continued use over substantially all of the remaining useful life of the equipment. During the initial term of the agreement, the

"rental" approximates the normal purchase price of the equipment, plus interest, while the "rentals" during the remaining term or renewal period or periods are insignificant when compared to the initial rental. These agreements may or may not provide for an option to acquire legal title to the equipment upon the termination of the initial period or at any stated time thereafter.

(e) Agreements similar to the arrangement in (d) above, but with the added factor that the manufacturer of the equipment purports to sell it to a credit or finance company, which either takes an assignment of such an existing agreement with the user or itself later enters into such an agreement with the user. In some instances, the lessor may be a trustee acting for, or on behalf of the original vendor.[3]

If the Internal Revenue Service is to consider the lease agreement as the sale of an asset to the lessee, it must determine whether the lessee has acquired, or will acquire title to or an equity in the property. This is done by classifying the agreement as a lease which is currently expensed or a conditional sales contract which is capitalized. There is no general rule for determining whether an agreement is a lease or a conditional sales contract. Every case must be examined in light of the particular facts involved and the intent of the parties involved must be determined. If one or more of the following are present, the agreement would tend to be looked upon as a conditional sales contract as opposed to a lease.

a) Portions of the periodic payments are made specifically applicable to an equity to be acquired by the lessee.

b) The lessee will acquire title upon the payment of a stated amount of "rentals" which under the contract he is required to make.

c) The total amount which the lessee is required to pay for a relatively short period of use constitutes an inordinately large proportion of the total sum required to be paid to secure the transfer of the title.

d) The agreed "rental" payments materially exceed the current fair rental value. This may be indicative that the payments include an element other than compensation for the use of property.

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[3]The Law of Federal Income Taxation 1954-57 Rulings (Chicago: Callaghan & Company, 1958), pp. 154-155.

> e) The property may be acquired under a purchase option at a price which is nominal in relation to the value of the property at the time when the option may be exercised, as determined at the time of entering into the original agreement, or which is a relatively small amount when compared with the total payments which are required to be made.
>
> f) Some portion of the periodic payments is specifically designated as interest or is otherwise readily recognizable as the equivalent of interest.[4]

The factor of the transfer of title does not determine the income tax treatment given the lease agreement. That is to say if the lessee would acquire title, the lessee is not automatically presumed to have purchased the asset. On the other hand, non-acquisition of title does not exempt the lessee from being a purchaser for income tax purposes. An analogous situation applies to the recording of a conditional sales contract with a county or state.

If the agreement is determined to be a sale by the Internal Revenue Service the amounts paid to the vendor or other party collecting payments shall be considered as payments for the purchase of the asset. When part of the payment is determined to be interest or a charge for something other than the cost of the asset, that part of the payment is deductible as a current expense for income tax purposes. Amounts that are deemed to be payments for the purchase of an asset are charged against revenue over the life of the asset by means of appropriate depreciation methods.

The annual charge against revenue for income tax purposes can vary depending upon whether an agreement is considered a lease or a purchase by the Internal Revenue Service. The charge would be limited to the actual payment or accrued payment in the case of lease treatment but not to exceed a pro-rata portion in the case of prepayments. The total

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[4] Ibid., p. 156.

annual charge in the case of purchase treatment by the lessee could exceed the amount of the payment if the lessee uses an accelerated method of depreciation for income tax purposes.

Summary

The treatment accorded lease agreements on the financial statements of an electric utility firm can be either of the nature of a rental expense or of depreciation and interest charges stemming from a capitalization treatment. Both the assets and liabilities sections of the balance sheet are affected by the manner in which leases are treated. As a consequence traditional balance sheet ratios such as the debt/equity ratio and current ratio are affected.

Rate making procedures are also touched by the treatment given leases. The rental expense method results in charges for the lease being considered as totally "above the line." If the lease is capitalized charges are split into depreciation (an "above the line" charge) and interest expense (a "below the line" charge). This affects the rates charged customers because "below the line" charges are not recoverable in the determination of operating revenues allowed.

Federal income tax determination varies with the different manners of treating leases. Although the position of the charge against revenue is not relevant here as it was in the rate making case, the total charge in any given year may vary if accelerated methods of depreciation are used.

The decision to capitalize or not to capitalize can be made independently in each of the three cases. The treatment that is accorded leases in all of the three areas could possibly have an effect on the

magnitude of investment in the electric utility industry as well as on only the methods of financing the investment in plant and equipment.

CHAPTER III

THE QUESTIONNAIRE AND THE RESULTS OF THE SURVEY

Use of the Questionnaire

The use of a questionnaire was determined to be the most practical method of obtaining a broad coverage of firms. The purpose of the questionnaire was to gather data on the leasing activities of privately-owned electric utility firms.

The questionnaire underwent several changes before it reached the form that was sent out. Discussion with members of the writer's dissertation committee as well as correspondence and personal interviews with people from the electric utility industry, public accounting firms, and the Federal Power Commission all contributed to the final form of the questionnaire. Two electric utilities which were known to have signed long term leasing contracts of a financing nature were sent the questionnaire before it reached the form used for mailing to the other firms. The responses and recommendations received from this pre-test aided in the design of the final questionnaire used. A copy of the questionnaire as sent to the firms is illustrated in Appendix B. A list of the people and organizations involved with the construction and pre-test of the questionnaire is contained in Appendix C.

Firms Receiving the Questionnaire

The questionnaire was mailed to 190 Class A and Class B electric utilities listed in the Statistics of Privately-Owned Electric Utilities

in the United States, 1970.[1] Because all Class A and Class B firms received the questionnaire, it is believed that any bias that could result by choosing only a sample from this population was avoided. Firms having less than $1,000,000 in annual operating revenues were not included as recipients of the questionnaire because of their relatively small size. Since it was assumed these few very small firms were unlikely to do any significant amount of long-term leasing, it was felt that their absence from the population would not detract from the results of the study. This assumption appeared valid because the small Class B firms that responded did virtually no leasing. Statistics of Privately-Owned Electric Utilities in the United States, 1970 states that Class A and Class B comprise almost 100 percent of the privately owned electric utilities.

Each of the questionnaires was addressed to the chief financial officer of the firms surveyed. The recipient was either the controller, treasurer, or financial vice-president, depending upon the specific firm. Names and addresses of the persons involved were taken from Poor's Register of Corporations.[2] Appendix D contains a listing of these names and addresses.

On October 6, 1972, questionnaires were sent to each of the 190 privately-owned electric utility firms referred to above. A cover letter, reproduced in Appendix B, accompanied the questionnaire. The cover letter stressed the point that all responses would be kept confidential as to the

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[1] The Federal Power Commission in its Statistics of Privately-Owned Electric Utilities in the United States, 1970 (Washington, D.C.: U.S. Government Printing Office) defines a Class A electric utility as having annual electric operating revenues of $2,500,000 or more, and a Class B electric utility is defined as having annual electric operating revenues of $1,000,000 or more but less than $2,500,000.

[2] Poor's Register of Corporations, Directors, and Executives (New York: Standard and Poor's Corporation, 1972).

firm's identity. Each firm that returned a completed questionnaire was promised a summary of the results of the survey. This latter measure was used in the hope of inducing a high response rate from the firms solicited. By November 27, 1972, 89 firms or 46 percent of the 190 firms had responded to the request. On that same day a mailing of a second request to the remaining 101 firms was accomplished. A follow-up cover letter accompanied the second request questionnaire. A copy of the follow-up letter is also contained in Appendix B. An additional 44 firms responded after the second request was mailed out. Total responses came to 133, which is 70% of the population surveyed. Included in the total of 133 firms were two firms that responded by letter only and one firm that returned the questionnaire citing cost constraints as the reason for not completing it.

The size distribution of the firms responding appeared to be rather uniform. Less than ten firms that serve large metropolitan areas (population of more than one million) failed to respond. The majority of firms that did not respond were small in terms of operating revenue. As a general rule, the small firms that did respond were engaged in very little leasing of a financing nature.

The care with which the firms responded to items in the questionnaire varied considerably. On one extreme are found firms which answered every applicable question with even more detail than requested. On the other hand, there were some firms which failed to answer questions which were applicable to all firms. Because of the incomplete answers on some questionnaires, totals in the tables that follow will not always equal the total number of firms responding.

Questionnaire Item Totals and Analysis

Question number one asked if the firm has been a lessee in any leasing agreement during the past five years. Of the 132 firms responding, 93 replied "yes" and 39 replied "no". There seems to be no doubt that many of the firms that were leasing were simply involved with short-term operating type leases; these leases are never considered candidates for capitalization and therefore are not relevant to this study.

Question 2 attempted to discover the types of assets that electric utilities were leasing. Table 1 contains a listing of assets that the firms are leasing and the number of firms leasing each type of asset.

TABLE 1

Types of Assets Being Leased by Electric Utilities

Type of Asset	Number of Firms Leasing
Office Equipment	21
Motor Vehicles	43
Aircraft	5
Railroad Cars	5
Construction Equipment	4
Computer Equipment	66
Nuclear Fuel	12
Pollution Control Equipment	7
Generating Equipment	17
Buildings	46
Land	6
Other	28
Total	260

Analysis of the individual questionnaires indicates almost without exception that certain types of assets have become popular items for leasing in the past few years. Railroad cars, generating equipment, and nuclear fuel are items that only recently have been candidates for leasing by utilities. As more utilities look for additional sources of capital to finance plant expansion recent trends indicate that more leasing of gen-

erating equipment and nuclear fuel will occur unless unfavorable rate making or accounting treatment affects leasing decisions. Because much of the leasing of computer equipment, motor vehicles, and buildings is of the operating type, it appears that the most fruitful areas for further investigation are generating equipment, nuclear fuel and pollution control equipment which usually results in financing type leases. Recently many states and municipalities have passed strict pollution control laws; this is forcing utilities to acquire expensive equipment to meet the emission requirements of these laws. Because Section 103 (c)(4)(F) of the Internal Revenue Code allows state and local governments to issue bonds for the purchase of pollution control equipment upon which the interest is not taxable to the bondholders, many utilities will probably attempt to lease pollution control equipment from municipalities. The benefits of the low interest rates on the municipal bonds will be passed on in the form of attractive lease rates to the utilities.

Table 2 shows the duration of the leases for the twelve asset categories used in tabulating the results. The information for Table 2 came from question number 3 of the questionnaire. Question number 3 also provided cost data and information on the annual lease payment. From the total amount of information provided from question number 3 a determination of whether the lease was an operating or financing type was made. By looking at the annual payment, duration of the lease, and cost of the equipment leased, an attempt was made to classify a particular lease into the category of operating or financing. For example, if the sum of the annual payments over the duration of the lease exceeded the cost of the leased asset, the lease was classified as a financing type lease. If the

total payments under the lease agreement totaled to less than the cost of the asset, the lease was classified as an operating lease. Although this was a subjective evaluation on the part of the writer, he felt that an attempt at making this type of classification would aid in discovering the importance of long-term financing type leasing in the electric utility industry.

TABLE 2

Duration of Asset Leases

Type of Asset	Year to Year	Less than 1 Year	1-2 Years	Over 2 to 5 yrs	Over 5 to 10 yrs	Over 10 to 20 yrs	Over 20 yrs
Office Equipment	13	1	1	3	0	0	0
Motor Vehicles	16	1	3	10	4	0	0
Aircraft	0	0	2	1	2	0	0
Railroad Cars	0	0	0	0	0	3	0
Construction Equipment	2	0	0	1	0	0	0
Computer Equipment	22	3	10	10	9	0	0
Nuclear Fuel	0	0	0	1	2	0	1
Pollution Control Equipment	0	0	0	0	0	6	1
Generating Equipment	0	0	0	0	1	3	12
Buildings	9	0	1	1	1	2	22
Land	4	0	0	0	0	0	0
Other	9	0	1	2	1	1	2
Total	75	5	18	29	20	15	38

TABLE 3

Lease Classification - Operating or Financing

Type of Asset	Operating	Financing	Could not Classify
Office Equipment	18	1	2
Motor Vehicles	34	0	9
Aircraft	5	0	0
Railroad Cars	0	3	2
Construction Equipment	2	1	1
Computer Equipment	54	2	10
Nuclear Fuel	5	0	7
Pollution Control Equipment	0	7	0
Generating Equipment	3	13	1
Buildings	14	23	9
Land	5	1	0
Other	18	2	8
Total	158	53	49

Table 3 contains the categories of assets and the classification of the type of lease. Some firms failed to supply information regarding the duration of the lease commitments. This caused some leases to fall into the category "could not classify". Table 2 does indicate that there are 53 leases of a duration of ten years or more. Most of these leases and many leases of a lesser duration would be considered candidates for capitalization. Table 3 indicates that leases of 53 firms are classified as financing in nature. Comparison of Table 2 with Table 3 shows that the financing type leases are not always the leases having over ten years duration. Table 2 shows no computer equipment being leased for over ten years; yet there are two financing type leases for computer equipment according to Table 3.

TABLE 4

Nominal Owners of Leased Assets

Type of Asset	Leasing Firm	Bank	Insurance Company	Manufacturer or Vendor	Other
Office Equipment	4	0	1	13	0
Motor Vehicles	21	6	4	1	0
Aircraft	0	2	0	2	1
Railroad Cars	2	1	0	0	0
Construction Equipment	1	0	0	1	1
Computer Equipment	24	3	0	27	0
Nuclear Fuel	3	0	0	1	0
Pollution Control Equipment	0	1	0	0	6
Generating Equipment	2	12	0	0	2
Buildings	8	4	15	0	8
Land	1	0	0	0	4
Other	6	2	0	5	7
Total	72	31	20	50	29

The nominal owners of the leased assets appear in Table 4. Examination of Table 4 can be helpful in determining the types of assets being leased on financing type arrangements. Banks which engage in leasing would generally be leasing assets on long-term agreements except for

some cases of office space in buildings. The primary interest of banks in entering into leasing agreements as lessors is to act as a lender of money, not to own and rent out assets. Leasing is mainly a device used to obtain good security on what is, in effect, a loan. Therefore banks would generally be lessors under financing type lease agreements. The lessor insurance companies would be in a situation similar to banks. Manufacturers and vendors, on the other hand, usually lease on an operating type of an agreement. Leasing firms would be expected to have many types of both operating and financing leases. Generating equipment is usually leased from banks according to the firms that responded to the "nominal owner" part of question number 3. Some firms that responded to parts of question number 3 failed to list the nominal owner. This causes the totals in Table 4 not to agree with those of Table 2 and Table 3.

TABLE 5

Treatment of Leases on Statements for Different Purposes

Purpose	Capitalized	Expensed Currently	Footnoted	Other
Published Financial Statements	17	87	19	1
Regulatory Commissions	17	86	18	2
Income Tax	17	86	N/A	0

N/A = Not Applicable

Table 5 lists how leases are treated for different purposes. Some firms treat some of their leases one way and some of their leases another way. This causes the totals to exceed the number of firms leasing. As can be seen from the table the majority of firms expense their lease payments currently. If all of the leases which were classified as financing

in Table 3 would be capitalized the number of firms capitalizing leases in Table 5 would increase by 36 (i.e., 53 financing leases in Table 3 minus 17 capitalized in Table 5*). If firms feel that more stringent capitalization requirements may come in the future, their fear of having to place a considerable amount of additional debt on the balance sheet may become a reality. This has apparently caused some firms to express a negative attitude toward additional and/or new leasing of assets. It is interesting to note that for each purpose category in Table 5, seventeen firms stated that they capitalize leases. In fifteen of these cases the same firm stated they capitalized some of their leases for all three purposes. Perhaps they and their regulatory commissions are following the Internal Revenue Service in their determination of the capitalization status of the lease.

Question number 7 of the questionnaire asked the firms to estimate the source of funds to finance capital investment in the future. Thirty firms stated that they would use leasing to finance up to ten percent of their capital investment while 102 firms said they would not use leasing at all for this purpose. Some firms that are planning to lease in the future evidently do not consider leasing as a source of funds. The responses to question number 8 bear this out. Sixty-eight firms said they anticipated leasing assets in the next five years and 56 firms said they did not anticipate leasing. Table 6 lists the number of firms that anticipate leasing various types of assets in the future.

TABLE 6

Assets to be Leased in the Future

Type of Asset	Number of Firms
Office Equipment	9
Motor Vehicles	26
Aircraft	2
Railroad Cars	4
Construction Equipment	4
Computer Equipment	26
Nuclear Fuel	9
Pollution Control Equipment	10
Generating Equipment	11
Buildings	27
Land	5
Other	17
Total	150

Many of the leases anticipated above would fall into the financing class, especially those for buildings, railroad cars, nuclear fuel, generating equipment and pollution control equipment. Question number 10 asked firms that did not anticipate leasing if they had ever considered the leasing alternative as opposed to owning the asset. Forty firms responded "yes" and 23 firms responded "no".

The reasons firms chose not to lease are included in Table 7. The main reason firms chose not to lease was economic or financial. This appears to be logical especially since many utility firms could borrow at favorable rates in order to debt finance their assets.

TABLE 7

Why Firms Chose Not to Lease

Reason	Number of Firms
Economic or Financial	21
Accounting Treatment	4
Not included in rate base	8
Other	3
Total	36

Of the firms responding to question number 12, ten had no bond indenture restrictions and 117 did. Fifty-four firms said these restrictions would affect leasing decisions and 72 said they would not affect leasing decisions. A more detailed report of the "free response" type questions follow.

Comments Appearing on the Questionnaire

Questions number nine, eleven, and twelve of the questionnaire called for a "free response" type of an answer which differed from the more structured format of the other questions. The information from the responses to these questions was incorporated into some of the above tables. However categorizing many of these responses in a particular slot on a table removes much of the uniqueness of the response and forces responses to be classified into a fixed number of categories which cannot always have the best possible fit to the response. Much of the reasoning why a firm does or does not lease becomes apparent from these sentence comments to the questions which called for such a response.

Reasons Why Firms Chose to Lease

Several firms which responded to question number 9 stated that one of the reasons they chose to lease rather than to own assets was because the cost of leasing assets was below their composite cost of capital. Although the cost to the firm to lease the asset is usually more than to use debt financing, the composite cost of capital is oftentimes higher because of the high cost of equity capital. Some of these firms feel that leasing assets taps an additional source of capital that is open to the firm at a cost less than their composite cost of capital.

One firm stated that it resorted to leasing for the following reason: "_____ uses leasing because leasing provides the Company with an additional source of capital at a cost which is less than the composite cost of capital." Another firm commented that, "Ownership financing [was] too costly for non revenue producing equipment and facilities." This latter firm, which was leasing buildings, pollution control equipment, and automotive equipment probably was not able to include some of these assets in their rate base according to the regulatory commission that controlled them.

Some of the electric utility firms which are involved in significant amounts of plant expansion appear very much interested in attracting investors that are not currently investing in utility securities. They feel that leasing assets provides the mechanism for investors who have previously or only more recently avoided investing in utility securities. One large electric utility firm commented that "Lease financing provides another method of raising capital, provides flexibility in the scheduling of financings and also may provide new types of investors who are not investing in the Company's debt and equity securities."

Exceedingly high rates of interest a few years ago and somewhat lower rates more recently made many utilities conscious of the adverse effects of issuing large amounts of long-term debt that would not be redeemed for forty or fifty years. Although bond issues could be refinanced if interest rates fell, this could generally not be done without penalties to the issuer. Most of the leases utilities get involved in are for durations of twenty-five years or less including those of a financing nature as opposed to short-term operating leases. This is illustrated by part of one firm's reasons for leasing assets: "To avoid:

(a) permanent financing when interest rates are high; (b) dilution of earnings by substituting leasing for equity financing."

Some firms stated that certain types of assets could not be pledged as security for outstanding debt as specified in their indenture agreements. Since these firms could lease the same assets, they entered into leasing contracts for the types of assets not allowed to be pledged under the bond indenture agreements. The cash flow back advantage of sale and lease-back agreements was another reason why some firms selected the leasing option.

It was previously mentioned that some firms were leasing assets because the cost of leasing was below their composite cost of capital even though above the cost of long-term debt capital. In the course of conducting the research for this dissertation it was discovered that one utility firm was in effect obtaining funds for the leasing of assets at rates of interest considerably below the rate for AA corporate bonds. The utility organized shell corporations whose sole function was to borrow money from large commercial banks, issue commercial paper, purchase fixed assets and lease the fixed assets to the utility. The shell corporations obligations were partly in the form of borrowing from the large banks at the current prime rate of interest, and to a much greater extent in the form of commercial paper issued at the prime rate of interest. The lessor, the shell corporation in this case, has no profit motive so that the utility was obtaining its money capital at a rate of interest two to two and one-half percent less than the rate for AA corporate bonds even when brokerage fees and administrative costs were considered. The firm was engaging in off balance sheet financing which it

claimed made it easier for the utility to keep its ratios in line with regulatory commission guidelines. The firm summed up its reasons for engaging in this type of financing method by stating that two factors were the causes "(1) Cost of money, (2) off balance sheet treatment". Shell corporations borrowing at prime, purchasing fixed assets, and leasing them to the utility was thought to be an extremely innovative way to obtain low cost money capital to finance the expansion of the firm. The utility felt it was doing both its customers and investors a service by using this financing technique.

Cost was also the reason why many firms are engaged in the leasing of a specific type of asset. Pollution control equipment is now being leased by many firms from state and local governments. State and local governments are allowed to issue tax exempt bonds to finance the purchase of pollution control equipment. Because of the tax exempt status, the bonds carry a low interest rate. This allows the utility to lease the pollution control equipment for 20 to 30 year periods at a cost which is lower than that of owning the assets via debt financing.

Reasons Why Firms Chose Not to Lease

Question number 11 asked firms that had considered the leasing alternative why the firm chose to own rather than to lease the assets. It is apparent from most of the responses that they were commenting on the types of leases that are the main interest of this study, financing type leases of a long-term nature.

The preceding section of this chapter dealing with question number 9 mentioned that one of the reasons many firms leased was because they felt the cost to lease was less than the cost to own. The most frequent

response to question number 11 was a comment stating that the cost to lease an asset was greater than the cost to own the same asset. One firm listed its objection to leasing as follows: "Leasing is viewed as a debt alternative and as such it is the costliest form of debt we can incur." While several firms responding to question number 9 stated they leased because the cost to lease was less than their composite cost of capital, some firms that responded to question number 11 said their composite cost of capital was less than the cost to lease. "Due to leverage factor inherent in utility industry operations, the Company's composite cost of money is generally less than return requirements built into lease proposals," was one firm's response to question number 11.

Although higher costs for leasing discourage some firms from leasing, another factor that would cause lower earnings was also cited. When utility firms are not allowed to put an asset in their rate base because they do not own it but lease it instead, they are discouraged from leasing the asset. One firm cited "1) Higher cost (leasing profit goes to a middleman) and 2) no rate base is derived from leasing" as the reasons why the firm chose to own their equipment. Another firm referred to the lack of rate base treatment as follows: "Return earned on rate base considered sufficiently high to negate the savings from leasing. The other reason, need to tap non-conventional sources of capital, is not currently considered a problem for us."

Closely tied to the rate base issue is the whole area of lease treatment by those in a position to prescribe accounting regulations. Utilities not only have to meet generally accepted accounting principles and Securities and Exchange Commission requirements, but also they

face accounting regulations set out by the Federal Power Commission and state regulatory commissions. At the present time, the treatment of leases by all bodies concerned is in a very unstable position. Nobody can predict with certainty what the treatment accorded leases is going to be in the near future. Because of this situation, many utility firms are reluctant to commit the firm to long-term lease agreements when the near future could bring changes adverse to their interests. One firm stated "uncertain accounting treatment to be required by governmental agencies," as the only reason why it decided not to lease generating units to handle peak demand.

Most of the firms that responded to question number 11 listed next to specific assets which they considered leasing, the reason for not leasing that particular asset. This implies that the firm had analyzed the leasing possibility with a particular asset in mind and found leasing to be unattractive. The responses to questions number 9 and 11 indicate that in many cases some firms find leasing attractive and others do not for the same types of assets. The response of one firm stood out from among all others because of a strong blast against leasing without any reference to specific assets which it had considered leasing. If the people in charge of financing utility firms' capital assets think like the individual quoted below, no firm would ever consider leasing. This is not to say that what is stated has no merit, but rather to point out that the statement indicates a lack of analyzing the leasing question for specific types of plant and equipment.

> If utilities can finance as economically as lessors and lessors, in addition, require a profit--what is the economic advantage to a utility of leasing? If utilities utilize leasing as an off-balance sheet devise, it is

> recognized by creditors and others as such and if not then what value does the lease have and if so then creditors aren't doing their job. If utilities utilize leases because they don't receive an adequate rate of return then leases are an interim device that doesn't correct a basic problem.

The person from the firm that made the above statement admitted in another part of the questionnaire that short-term operating leases of data processing equipment have merit. Perhaps long-term leasing would not be advantageous for this firm, but no indication was given of an investigation of this possibility. Because all of the firms responding to question number 9 found leasing to be favorable it seems that any utility should at least investigate the consequences of leasing particular items of plant and equipment. A firm failing to investigate the leasing possibility may be ignoring a viable source of funding its capital expansions.

The Effect of Restrictive Covenants on Leasing Decisions

Question number 12 of the questionnaire inquired about any restrictive covenants that the firm's bond indenture agreements may have contained. The reaction of the firms to whether these limitations would affect leasing decisions was varied as might be expected. The following statement is typical of firms stating that a minimum debt interest coverage could affect its leasing decisions. "If our interest coverage fell below the Indenture requirement, we might, of course, resort to more leasing." This firm apparently feels that leasing can be an effective method of circumventing bond indenture agreements. Another firm responded "Indenture interest coverage calculations are determined on the basis of long-term debt only, therefore such restriction is favor-

able to leasing types of assets previously described when coverages are trending toward minimum level." Responses similar to those above appeared on the majority of questionnaires having the "yes" column checked for requiring a minimum debt interest coverage. This would seem to indicate that more firms may start leasing to a greater extent if interest coverages continue to fall because of low utility earnings in relation to bond interest payments.

The issue of the capitalization of leases appears in the responses to question number 12. Many firms are concerned that if leases are required to be capitalized their long-term debt and interest figures would rise dramatically and they would lose any benefit of leasing over that of debt financing.

> We would need to maintain significant bondable property to enable us to issue future bonds. We must have a good debt/equity ratio to maintain our bond rating, therefore, we would be careful about leasing a very large item that would require capitalizing and including in long-term debt.

The response above was typical of the several firms that were worried about the possible required capitalization of leases and its nullifying the benefits of leasing.

Nuclear fuel usage by more utilities in the future will probably cause more leasing to be undertaken by utilities. Large amounts of nuclear fuel must be obtained a considerable amount of time before a nuclear plant is in a productive state. Some firms commented that indenture agreements make it undesirable for a firm to debt finance the purchase of nuclear fuel by issuing bonds. One firm's explanation of the situation it faces regarding the acquisition of nuclear fuel reveals why it is desirable for it to lease nuclear fuel.

> Under the Company's indenture, property additions cannot be used as collateral for first mortgage bonds until all regulatory licenses are received. Thus, our nuclear fuel is not a good property addition under the mortgage until the related nuclear generating station has its AEC operating license. This restriction does not apply when using nuclear fuel as collateral for a lease. Also with leasing there are no minimum interest or rental coverage requirements.

The responses to question number 12 can therefore be placed into two categories if the special circumstances applying to nuclear fuel are put aside. Some firms believe that leases will have to be capitalized for purposes of making calculations pertinent to indenture agreements if they are not capitalized already. These firms feel that there is no point in leasing since it has the same effects as debt financing for computing coverages and ratios and could be more costly. The other basic category of responses is that leasing is an effective way to finance plant and equipment because leasing agreements will not jeopardize the keeping of the specified agreements contained in current bond indentures. These firms indicate that they will resort to more leasing as the limits on their current agreements are approached.

Relevance of the Questionnaire to the Model

Although data from the questionnaire are not used as direct inputs for the operation of the model described in Chapter IV, the questionnaire is indirectly linked with the model. The results of the questionnaire indicate that there is leasing activity of a financing nature in the electric utility industry. Fifty-three firms are engaged in leasing activity of a financing nature according to Table 3. Examination of the individual questionnaires that were returned showed that some firms had

annual commitments for lease payments totaling in the millions of dollars. Not only are there many electric utilities currently leasing on a financing basis, it appears as though leasing will be used in the near future. Table 6 contained figures of estimated future leasing activity. Nine or more firms were planning to lease nuclear fuel, pollution control equipment, or generating equipment. As was discussed previously leases for these types of assets are usually of a financing nature as opposed to an operating nature. In addition 27 firms indicated they were planning to lease buildings, some of which certainly would be financing type leases.

The use of the questionnaire has shown that leasing is indeed a financing method that is now used and will probably continue to be used as a method for financing the expansion of an electric utility's plant. Modeling the effects of financing plant investment by the lease method should prove useful for the firms, regulatory commissions, investors and others interested. The modeling has been justified to some extent by the results of the questionnaire.

CHAPTER IV

THE GENERAL MODEL

This chapter deals with the development of a general model for deriving a series of financial statements that result from assumed acquisitions of capital assets utilizing various financing methods. The procedures used in generating the statements under the various assumptions and the origin of the initial statements are described. A program was written to perform the calculations and print the resulting financial statements. A copy of the program appears in Appendix E.

Origin of the Initial Statements

The initial balance sheet and income statement data used as a starting point for the generation of new financial statements under the various financing techniques are condensed from company annual reports submitted to the Federal Power Commission. The statements are a composite of those of all Class A and Class B electric utilities in the United States for 1970.[1] As new assets are acquired and incorporated into the generated statements, the assumption is made that these facilities will be revenue producing and cost increasing in fixed ratios similar to those in the past. The assumptions regarding changes in the accounts of the financial statements results partially from an analysis of these Federal Power Commission reports. Financial statements in the Statistics of Privately-Owned Electric Utilities in the United States for the years 1965 through 1970 were

[1]Federal Power Commission, Statistics of Privately-Owned Electric Utilities in the United States, 1970 (December, 1971), pp. xiii-xv.

examined to determine the approximate percentage rate of expansion of plant and equipment. This process was used to estimate the rates of change and to calculate amounts on the income statement for several accounts. Although no individual firm may possess the ratios and relationships of these statements, they are typical and thus the use of this composite industry-wide average seems to be a realistic manner from which to commence the generation of the financial statements.

The ratios for the composite industry-wide financial statements have been relatively stable over the past several years which supports their use as the initial statements. Reference to Statistics of Privately-Owned Electric Utilities in the United States indicates that from 1966 to 1970 the percentages of sales or total assets seldom varied by more than one percentage point during the time period.

Financing Assumptions Used to Generate the Statements

Financial statements are generated under five different financing assumptions: issuance of common stock, issuance of preferred stock, issuance of long-term debt, use of leasing, and financing in the existing capital ratio. The term "financing in the existing capital ratio" means that the capital investment occurs through the issuance of common stock, preferred stock, and long-term debt, in the ratio that exists on the initial statements. Under the leasing assumption, two different sets of statements resulted because of the capitalization of the lease in one case and the noncapitalization in the other case. In addition to the capital investment cases, a set of financial statements is generated from the initial set assuming that the firm continues to operate but does not invest in any plant expansion. It is assumed that new plant equal to the annual depreciation charge is acquired in all cases.

Assumptions Common to All Models

Many of the assumptions used in the generation of the financial statements are common to all models. Table 8 is a list of assumptions that are common to all models. Variations from the common assumptions are discussed with the individual financing assumptions. The reasons for the selection of the various amounts in Table 8 are explained below. The assumptions in Table 8 reflect only those changes relevant to changing financing assumptions. Accounts that are not significantly affected by changing the financing assumptions have unchanged balances.

Table 8

List of Common Assumptions

1. New utility plant is acquired on the first day of 19+1 whose value is 15% of the Total Utility Plant in 19+0.

2. The rate of return used in this model is 6.1% of Net Utility Plant.

3. Utility plant is retired and new utility plant is acquired equal to the amount of depreciation taken the previous year for each year starting with the first day of 19+2.

4. Interest Charged to Construction is 6.1% of the amount invested each year.

5. Other Income remains the same in 19+1 as in the initial income statement. Other Income rises in years 19+2 through 19+5 because it is assumed that the increase in Current and Accrued Assets over the 19+0 balance is temporarily invested at the rate of 5.5%.

6. Federal Income Taxes are calculated by taking 36% of the after tax net income amount.

7. Deferred Income Taxes on the income statement are equal to 3% of after tax net income.

8. The following income statement accounts rise by 15% in 19+1 and remain constant thereafter.
   Operating Expenses
   Depreciation and Amortization Expense
   Other Taxes

9. The Investment Tax Credit is 4% of the investment in plant and equipment each year.

10. Current and Accrued Assets are equal to the prior year's balance plus the amount by which Net Income exceeds dividends plus the net credits made to the Deferred Debits, and Deferred Income Taxes Account.

11. The Deferred Income Taxes balance sheet balance each year is computed by adding the amount from the income statement to the prior year's balance.

12. The following account balances remain at the 19+0 level for all years:
    - Other Paid In Capital
    - Current and Accrued Liabilities
    - Deferred Credits
    - Operating Reserves
    - Contributions In Aid of Construction

13. The Deferred Debits account, which is composed mostly of charges for bonds issued at a discount and issuance expenses, declines each year by 4% of the 19+0 amount.

The initial income statement for the year ending December 31, 19+0, is shown in Exhibit 2. The initial balance sheet for December 31, 19+0, is shown in Exhibit 3.

Exhibit 2
Initial Year Income Statement

Hypothetical Utilities, Inc.
Income Statement
For Year Ending December 31, 19+0
(Millions of Dollars)

Operating Revenues	$23,128
Operating Expenses and Maintenance	-11,978
Depreciation and Amortization Expense	- 2,399
Rent	0
Federal Income Taxes	- 1,233
Other Taxes	- 2,498
Deferred Income Taxes	- 110
Investment Tax Credit	- 25
Total Operating Expenses	-18,243
Total Operating Income	4,885
Interest Charged to Construction	588
Other Income (Net)	170
Interest on Long Term Debt	- 1,977
Other Interest Charges	- 259
Net Income	$ 3,407
Dividends Declared on Common Stock	$ 2,159
Dividends Declared on Preferred Stock	$ 362

Exhibit 3
Initial Year Balance Sheet

Hypothetical Utilities, Inc.
Balance Sheet
December 31, 19+0
(Millions of Dollars)

Assets

Total Utility Plant		$102,277
Accumulated Depreciation		-22,348
Net Utility Plant		79,929
Other Property and Investment		1,742
Current and Accrued Assets		5,321
Deferred Debits		425
Total Assets and Other Debits		$ 87,417

Liabilities and Other Credits

Proprietary Capital		
Common Stock	$13,283	
Preferred Stock	7,499	
Premium on Capital Stock	3,381	
Retained Earnings	9,363	
Other Paid in Capital	1,018	
Total Proprietary Capital		$ 34,544
Long Term Debt		41,938
Current and Accrued Liabilities		7,309
Deferred Credits		799
Operating Reserves		146
Contributions in Aid of Construction		483
Deferred Income Taxes		2,198
Total Liabilities and Other Credits		$ 87,417

Explanation of the Assumptions

Total Utility Plant is increased by fifteen percent of the Total Utility Plant in 19+0 because for the past several years this figure approximates the industry-wide growth rate as indicated by the Federal Power Commission statistics. The 6.1% rate of return used for years 19+1 through 19+5 is approximately the same as the rate of return that the results for 19+0 yielded. The rate of return is calculated by

dividing Total Operating Income on the income statement by Net Utility Plant on the balance sheet. Although the Federal Power Commission includes working capital in the rate base for calculating a rate of return, this model does not include working capital in the rate base. This was done to facilitate the job of generating the statements from data readily available. The 6.1% rate is a figure that closely approximates the relationship that existed between Total Operating Income and Net Utility Plant on the Federal Power Commission industry wide composite statements during the last several years. The importance of the rate of return is explained in the following quotation.

> The rate of return is the amount of money a utility earns, over and above operating expenses, depreciation expense, and taxes, expressed as a percentage of the legally established net valuation of utility property, the rate base. Included in the "return" are interest on long-term debt, dividends on preferred stock, and earnings on common stock equity. In other words, the return is that money earned from operations which is available for distribution among the various classes of contributors of money capital. In the case of common stock holders, part of their share may be retained as surplus. The rate-of-return concept merely converts the dollars earned on the rate base into a percentage figure, thus making the item more easily comparable with that in other companies or industries.[2]

In order to keep Net Utility Plant, which is equal to the rate base, from declining it is assumed that new utility plant having a value equal to the prior year's depreciation is acquired on January 1 of each year starting with 19+2. The 6.1% rate for Interest Charged to Construction (identical with the rate of return) was chosen because it is unlikely that regulatory commissions would question the use of such a figure, whereas any figure higher than the allowed rate of return could be subject to reduction.

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[2]Paul J. Garfield and Wallace F. Lovejoy, Public Utility Economics (Englewood Cliffs: Prentice-Hall, 1964), p. 116.

Changes in the Other Income account and the Current and Accrued Assets account are closely linked. The net cash flow enters the Current and Accrued Assets accounts. Because it is not logical for a firm to leave large amounts of idle cash in bank accounts that earn no return, it is assumed that what would be considered excessive amounts of cash would be invested at the annual rate of 5.5%.

The 36% rate used to compute the federal income tax is for calculation purposes and is not the effective tax rate. It is the relationship that existed in the 1940 composite statements and reference to several annual reports of electric utility firms indicates that this approximate relationship exists for actual firms. The three percent rate used for Deferred Income Taxes on the income statement was selected for like reasons.

The Operating Expenses Account, Depreciation and Amortization Expense account, and the Other Taxes account all rose by fifteen percent in 1941. It is assumed that there are no economies of scale to be gained and the new plant purchased will cost proportionately as much to operate as the existing plant. Depreciation for financial statement purposes is taken on a straight-line basis which would explain the fifteen percent rise in Depreciation and Amortization Expense.

The Investment Tax Credit account was actually an expense in the 1970 industry-wide figures despite the expansion of the Total Utility Plant Account. This probably resulted from two aspects of the tax law. During 1970 no investment tax credit was allowed because it was repealed by the Tax Reform Act of 1969. The debits to the account arose because of adjustments that were made for the early disposal of assets

which had been acquired using the investment tax credit that must be recaptured.

The five balance sheet accounts (item 12, Table 8) that had constant balances throughout the entire period were not changed, because under the investment assumptions made there appears to be no good method of estimating the magnitude of any fluctuations. Although there would be adjustments in a real situation, the changes would appear to be so slight that attempting to estimate the amount of change contributes little, if anything, to the model's soundness.

Statements Generated Under Various Assumptions

Issuance of Common Stock

The increase of fifteen percent in the Total Utility Plant account is matched by increases in the Common Stock and Premium on Capital Stock accounts. It is assumed that 60% of the stock issue proceeds represents par value with the remainder being a premium. The 60% figure was chosen because the Common Stock account represents about 60% of the inferred common stock owners' equity in the 1940 balance sheet.

The amount of dividends declared on the common stock is equal to sixteen percent of the Common Stock account balance. This assumption is in line with the 1940 figures. Because the balance of preferred stock remained the same as in 1940, dividends declared on preferred stock remain unchanged.

Issuance of Preferred Stock

The Preferred Stock account is credited for the entire amount of the fifteen percent increase in the Total Utility Plant account because it is assumed the stock is issued for the par amount. Dividends on the

preferred stock are five percent of the Preferred Stock account balance. Common dividends remain the same as in 19+0 becuase no new common stock was issued.

Issuance of Long-Term Debt

Under the long-term debt assumption the entire amount of the increase in Total Utility Plant is matched by an increase in the Long-Term Debt account. Interest on Long-Term Debt increases over 19+0 by seven percent of the new investment in plant in 19+1 and then remains constant. An interest rate of seven percent seems to be a reasonable bond interest rate and was used in this case. Unlike the cases where new stock was issued all dividends declared remain the same as in 19+0. It is assumed that the issuance of this amount of long-term debt will not effect the credit rating of the utility.

Non-Capitalized Lease

In the case of a non-capitalized lease no investment increase is indicated on the firm's books. The investment tax credit falls to zero in 19+1. The tax law provides that the lessor is entitled to the tax credit unless certain conditions exist in the lease agreement which can allow for the lessee's use of the tax credit. The annual lease payments are formulated with this factor taken into consideration. It is assumed in this case that the lessor uses the tax credit. The investment tax credit for years 19+2 through 19+5 is equal to four percent of the investment becuase investment during that period is financed by internally generated funds. Depreciation and Amortization Expenses remains at the level of 19+0, as do the dividends on common and preferred stocks. The rent account is charged each year with an amount equal to 9.5% of the invest-

ment in year 19+1. This amount is in line with amounts charged for 20-year leases for acquisition of property rights only.

Capitalized Lease

The case of the capitalized lease is very similar to the long-term debt case. The increase in Total Utility Plant is matched by an increase in the Long-Term Debt account. Dividends on common and preferred stock are the same as in 19+0. The investment tax credit becomes zero in 19+1, because it is assumed that the lessor gets the tax credit instead of the lessee. An investment tax credit equal to four percent of the investment for the remaining years is assumed because of the use of internally generated funds for the financing of the investment. Interest on Long-Term Debt increases over the 19+0 amount by an amount equal to 7.2 percent of the long-term debt associated with the newly acquired plant. The Interest on Long-Term Debt in each subsequent year equals the 19+0 amount plus 7.2 percent of the balance of the long-term debt associated with the newly acquired plant. The long-term debt associated with the newly acquired plant declines each year by the amount by which the lease rental payment exceeds the interest on the unamortized balance of the debt related to the newly acquired plant.

Existing Capital Structure

The increase of fifteen percent in the Total Utility Plant account is accompanied by credits to the stock and debt accounts. Thirty percent of the funds come from common stock issuance of which 60% is placed into the Common Stock account and 40% into the Premium on Capital Stock account. Fifteen percent of the funds come from preferred stock issu-

ance, all of which is credited to the Preferred Stock account. The remaining 55% comes from issuing long-term debt which increases the Long-Term Debt account. Interest on Long-Term Debt increases over 19+0 by an amount equal to seven percent of the new investment in plant financed by issuance of long-term debt in 19+1. Interest on Long-Term Debt remains constant after 19+1.

The amount of dividends declared on the common stock is equal to sixteen percent of the Common Stock account balance. Dividends on the preferred stock are five percent of the Preferred Stock account balance.

No Plant Expansion

Five years of financial statements are produced starting with the statements of 19+0. Investment in plant each year occurs to the extent of the annual depreciation charge. Because there is no plant expansion, Operating Expenses and Maintenance and Depreciation and Amortization Expense continue at their 19+0 level. Dividends continue at the 19+0 rate. All other accounts react as in the description of the assumptions common to all models.

Summary

A general model was developed in this chapter which used Federal Power Commission statements as a guide for determining some of the relationships between figures to be generated as well as all of the figures on the initial statements. Assumptions common to all financing methods and specific to individual methods were listed and explained. It is hoped that the assumptions that were made have helped to produce a viable model that is useful for predicting the effects of various financing methods for electric utilities' investment in plant and equipment.

CHAPTER V

RESULTS OF THE GENERATED FINANCIAL STATEMENTS

Introduction

The results of the generated financial statements will be discussed and analyzed in this chapter. The different financing assumptions have direct effects on the rate making process and income tax liability as well as the various effects on the financial statements themselves.

Changes Involving Significant Items Appearing on the Financial Statements

All changes to significant items appearing on the financial statements with the exception of operating revenues and income taxes are discussed in this section.

Net Income

Table 9 contains the after tax net income amounts for each of the seven assumptions under which statements were generated. Totals for the five-year period are also given. It is readily observed that the two financing assumptions involving only stock issuance have the highest net income totals. This could be anticipated because the firm would pay out no capital costs for the financing of the expansion before measurement of net income. The existing capital structure assumption ranks next to the pure stock issuance assumptions when considering total net income for the five-year period. The pure debt financing case ranks fourth in total net income. When an expansion in utility plant is financed by a lease that is capitalized on the firm's books, the resulting net income

TABLE 9*

AFTER TAX NET INCOME UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structures
Year 1	$ 2,810	$ 4,681	$ 4,681	$ 3,607	$ 2,810	$ 2,641	$ 4,091
Year 2	2,977	4,113	4,149	3,057	3,108	2,978	3,538
Year 3	3,007	4,129	4,204	3,093	3,147	3,015	3,572
Year 4	3,040	4,146	4,261	3,130	3,187	3,055	3,607
Year 5	3,075	4,164	4,322	3,170	3,230	3,098	3,644
Total	$14,909	$21,233	$21,617	$16,057	$15,482	$14,787	$18,452

*Data for this table obtained from the generated financial statements in Appendix A.

TABLE 10*

RETAINED EARNINGS BALANCES UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structures
Year 1	$ 9,652	$10,084	$10,743	$10,449	$ 9,652	$ 9,483	$10,397
Year 2	10,108	10,237	11,591	10,985	10,239	9,940	10,878
Year 3	10,594	10,406	12,494	11,557	10,865	10,434	11,393
Year 4	11,113	10,592	13,454	12,166	11,531	10,968	11,943
Year 5	11,667	10,796	14,475	12,815	12,240	11,545	12,530

*Data for this table obtained from the generated financial statements in Appendix A.

is lower than when the lease is not capitalized. The results of this study show that the total net income for the five-year period under the assumption of a capitalized lease is even less than the five-year total when it was assumed that no plant expansion occurred.

If net income were the sole criteria for judging the worth of a method of financing, the stock issuance cases would appear to be most favorable. Financing the investment with a lease that had to be capitalized would be unthinkable according to the net income criteria. Because net income is not the sole criterion for judging the desirability of a financing method, no recommendation of financing methods can be made on only the net income results.

Retained Earnings

The retained earnings balances at the end of each year under each financing assumption are contained in Table 10. Retained earnings increased for all years under all assumptions because the net income always exceeded the dividends declared. At the end of year 5, the retained earnings balance is highest in the preferred stock case with a balance of $14,475. The lowest balance occurs in the common stock case which has a balance of $10,796 at the end of year 5. The low retained earnings balance in the common stock case would be expected because common equity is usually the highest cost capital to obtain. The capitalized lease case ranks next to the common stock case as the lowest retained earnings balance at the end of the five-year period.

Balances in the retained earnings accounts are often associated with a firm's dividend paying capability. It must also be realized that a firm's cash position is as vital to the payment of dividends as its re-

tained earnings balance. Although the capitalized lease case ranks next to the common stock case as the lowest retained earnings balance at the end of the five-year period, the firm would be in a somewhat better dividend paying position because it does not have as much outstanding stock on which to pay dividends.

Current Ratios

Current ratios for all financing assumptions and all years appear in Table 11. The current ratio is computed by dividing the Current and Accrued Assets account balance by the Current and Accrued Liabilities account balance. Because the Current and Accrued Liabilities balance is the same for all cases in all years, the increase in current ratios is attributed solely to the rise in the current and accrued assets. This assumes that all dividends and taxes applicable to the current year are paid as of the end of that current year. Just as in the area of the Retained Earnings account balance, the preferred stock case ranks first after five years. This results, as in the retained earnings case, because the increase in income before taxes and interest belongs to the stockholders. Because the common stock dividend payout is a higher percentage than the preferred stock dividend payout, cases involving increases in common stock outstanding will show lower retained earnings balances and lower current ratios. The lowest current ratio at the end of five years is for the case where utility plant was not expanded.

Electric utilities typically have current ratios that range from about .6 to .9. At the close of the five-year period all cases had current ratios in excess of 1.0. This was caused by two factors. Current liabilities remained constant during the five-year period because

TABLE 11*

CURRENT RATIOS UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structures
Year 1	.78	1.22	1.31	1.27	1.11	1.08	1.26
Year 2	.86	1.26	1.45	1.36	1.20	1.11	1.35
Year 3	.94	1.31	1.59	1.45	1.30	1.14	1.43
Year 4	1.02	1.35	1.74	1.55	1.41	1.16	1.53
Year 5	1.11	1.40	1.90	1.65	1.52	1.20	1.62

*Data for this table obtained from the generated financial statements in Appendix A.

TABLE 12*

DEBT/EQUITY RATIOS UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structures
Year 1	1.20	.83	.82	1.61	1.20	1.64	1.19
Year 2	1.19	.83	.80	1.58	1.18	1.61	1.17
Year 3	1.17	.82	.79	1.56	1.16	1.58	1.16
Year 4	1.16	.82	.78	1.53	1.14	1.54	1.14
Year 5	1.14	.82	.76	1.51	1.12	1.50	1.13

*Data for this table obtained from the generated financial statements in Appendix A.

there was no sound basis to determine a change. The other factor that caused the high current ratios was the accumulation of the net cash flow in the form of temporary investments. Because all cases yield current ratios higher than those that are typical, the relative ranking of the results becomes the distinguishing criteria.

Debt/Equity Ratios

Table 12 contains the debt/equity ratios for all financing assumptions during the five-year period. This ratio was computed by dividing the balance in the Long-Term Debt account by total proprietary capital as appears on the balance sheets each year. The debt/equity ratio declines in all cases because long-term debt remains constant after the beginning of Year 1 in all cases. Debt/equity ratios for the non-capitalized lease case, no plant expansion case, and existing capital structure case are approximately the same. The common stock case and preferred stock case have debt/equity ratios very similar to each other and considerably below the three cases mentioned above. On the other hand, the debt case and capitalized lease case have similar debt/equity ratios that are significantly above the first three mentioned cases.

Return on Stockholders' Investment

The return on stockholders' investment which is shown in Table 13 was calculated by dividing each year's net income by the total proprietary capital balance at the end of each year. With the exception of the first year the rate of return is highest for the non-capitalized lease case. The lowest rate of return, after the first year occurs for the preferred stock case. This results because the retained earnings are always larger in this case and the net income does not rise

TABLE 13*

RETURN ON STOCKHOLDERS' INVESTMENT UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structure
Year 1	8.07%	9.25%	9.13%	10.12%	8.07%	7.62%	9.63%
Year 2	8.44%	8.10%	7.96%	8.45%	8.76%	8.48%	8.24%
Year 3	8.41%	8.11%	7.93%	8.42%	8.73%	8.47%	8.22%
Year 4	8.38%	8.11%	7.89%	8.38%	8.68%	8.45%	8.19%
Year 5	8.35%	8.11%	7.86%	8.34%	8.63%	8.44%	8.17%

*Data for this table obtained from the generated financial statements in Appendix A.

TABLE 14*

OPERATING REVENUE UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structure
Year 1	$ 22,846	$ 26,430	$ 26,430	$ 26,012	$ 26,475	$ 26,249	$ 26,201
Year 2	22,816	26,712	26,726	26,301	26,496	26,270	26,488
Year 3	22,828	26,718	26,747	26,314	26,511	26,284	26,501
Year 4	22,840	26,725	26,770	26,329	26,527	26,301	26,515
Year 5	22,854	26,732	26,794	26,344	26,544	26,317	26,529
Total	$114,184	$133,317	$133,467	$131,300	$132,553	$131,421	$132,234

*Data for this table obtained from the generated financial statements in Appendix A.

proportionally as fast. The rate of return for the capitalized lease case ranks second to the non-capitalized lease case in all years after the first. In the cases where the plant was expanded, the rates of return after the first year are all higher when the expansion in Year 1 was financed by debt or lease agreements.

Rate Making Effects

The rates utilities are allowed to charge in total are affected by changes in the operating revenue requirements of the firm. It is assumed that the utility is allowed to earn a return on its invested capital and that in 19+1 the firm earns a rate of return on its just expanded plant in the plant expansion cases. In effect immediate rate adjustments are assumed. Operating Revenues are determined by allowing the utility to recover all of its "above the line" operating expenses and a 6.1% return on its Net Utility Plant. Table 14 lists the Operating Revenues for the firm for each year under the different financing assumptions. As would be expected, operating revenue requirements are lowest under the assumption of no plant expansion. The preferred stock and common stock assumptions have the highest operating revenues over the five-year period with amounts of $133,467 and $133,317 respectively. The financing assumptions involving a capitalized lease and debt rank at the bottom of all instances when plant is expanded. The capitalized lease assumption requires $131,421 of Operating Revenue and the debt assumption requires $131,300 of Operating Revenue.

If the 19+0 figure for Operating Revenues would be increased by fifteen percent because it was assumed that there were no economics of scale and output would rise proportionally, Operating Revenues would

increase to $26,597. The fifteen percent increase would assume that the power was sold in the same ratio to the existing customer mix. Perhaps much of the increase in output would be purchased by users that have the lower rates charged by the utilities which would force changes in the rate scale charged the various classes of customers. The rate structure imposed on the various classes of customers is beyond the scope of this project. Table 14 indicates that rates in total will change depending upon the financing assumption chosen but does not specify how the rates of various classes of customers will change.

Income Tax Liability Effects

When considering income taxes, both the firm and the government are most concerned with income taxes that are payable currently. Table 15 contains the balances for all assumptions in all years for the Federal Income Taxes account less the Investment Tax Credit account. Although the firm will supposedly be liable for the deferred income taxes in the future, they are inconsequential for the analysis here. It is anticipated the Deferred Taxes account will continue to increase its balance and in effect not be liquidated. This is being caused by the continued future expansion of capital investment in the utility industry during the foreseeable future. Since the balance in the Income Tax account less the balance in the Investment Tax Credit account is the amount the firm will pay currently and the government will collect currently, it is the tax figure most relevant to the analysis.

As in the area of Net Income, the preferred stock and common stock cases rank first and second in size of the Federal Income Taxes minus

TABLE 15*

FEDERAL INCOME TAXES MINUS INVESTMENT TAX CREDIT UNDER EACH OF THE FINANCING ASSUMPTIONS

	No Plant Expansion	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structures
Year 1	$1,011	$1,071	$1,071	$ 685	$1,011	$ 951	$ 859
Year 2	976	1,371	1,384	991	1,023	962	1,164
Year 3	987	1,376	1,403	1,003	1,037	975	1,176
Year 4	998	1,383	1,424	1,017	1,051	990	1,189
Year 5	1,011	1,389	1,446	1,031	1,067	1,005	1,202
Total	$4,983	$6,590	$6,728	$4,727	$5,189	$4,883	$5,590

*Data for this table obtained from the generated financial statements in Appendix A.

TABLE 16*

SIGNIFICANT FIGURES COMPARING THE NON-CAPITALIZED AND CAPITALIZED LEASE CASES

	Non-Capitalized Lease	Capitalized Lease
Operating Revenue - 5 Year Total	$132,553	$131,421
Net Income - 5 Year Total	15,482	14,787
Federal Income Taxes minus Investment Tax Credit - 5 Year Total	5,1[illegible]9	4,883
Retained Earnings Balance - End of Year 5	12,240	11,545
Current Ratio - End of Year 5	1.52	1.20
Return on Stockholders' Investment - Year 5	8.63%	8.44%
Debt/Equity Ratio - End of Year 5	1.12	1.50

*Data for this table obtained from the generated financial statements in Appendix A.

Investment Tax Credit. The debt issue case ranks lowest in size for Federal Income Taxes minus Investment Tax Credit. The low ranking of both the debt issue case and the capitalized lease case results because the interest payments made on the increased amount of debt outstanding are fully deductible against operating income to determine taxable income.

Non-Capitalized Lease versus Capitalized Lease--A Direct Comparison

An inspection of Table 16 will indicate that the non-capitalization of a lease would appear to be more favorable from the point of view of the government as well as investors. However, customers in total would pay higher rates in the non-capitalization case. Productive capacity of the firm is the same in both the non-capitalized and capitalized cases. Therefore, any differences in amounts and ratios do not result because the plant size differs.

Operating Revenues for the non-capitalized lease case are .86% higher than Operating Revenues under the capitalized lease assumption. This would mean that over the five-year period customers in total would pay .86% more for electricity if the firm did not capitalize the property rights acquired in the lease agreement as opposed to capitalizing the same property rights. The total difference in the rates paid by customers in this model under the lease assumption is relatively small and the result of the accounting treatment accorded the lease agreement.

The five-year net income total is more favorable to investors under the non-capitalized lease alternative. Net income is about 4.7 percent higher than in the capitalized lease case for the five-year period. Coupled with the more favorable net income outcome for the

non-capitalized case are some other favorable outcomes that result from the higher net income in the non-capitalized case. The retained earnings balance at the end of year five is six percent higher in the case of the non-capitalized lease. The current ratios for the non-capitalized and capitalized cases at the end of Year 5 are 1.52 and 1.20 respectively. The more favorable retained earnings balance and current ratio in the non-capitalized lease case made the dividend paying capability, as measured by traditional standards, of the firm stronger than for the capitalized lease case. This better dividend capability for the non-capitalized case is probably more apparent than real. The investor in the utility's owners' equity securities also has a higher return on investment in the non-capitalized lease case when the return on stockholders' investment is calculated. The rate of return on stockholders' investment is 8.63% in the non-capitalized lease case and 8.44% in the capitalized case. As was previously explained, the rate of return on stockholders' equity is calculated by dividing net income by total proprietary capital. The debt/equity ratios computed from the figures on the financial statements also favors the non-capitalization treatment from an investor's viewpoint because the debt/equity ratio is 1.12 for the non-capitalized assumption and 1.50 for the capitalized assumption. This precludes the possibility that an analyst would be able to infer adjustments from other data included with the statements in the non-capitalized case. Although analysts would attempt to adjust for the non-capitalization of the lease, it is unlikely that the adjustments could be done on a uniform, industry-wide basis.

Non-capitalization of the lease even appears more favorable from the government's point of view when the issue of tax revenue is exam-

ined. Because the income taxes being deferred under the different financing techniques are the same proportion of the taxes paid under each respective financing method, the government would prefer the method yielding the highest current tax payments. Taxes collected, which equals federal income taxes minus investment tax credit in each year, is greater under the non-capitalized assumption. The five-year totals of federal income taxes minus investment tax credit are $5,189 for the non-capitalized assumption and $4,883 for the capitalized assumption, an amount which is 6.3% higher in the non-capitalized case.

Explanation of Some Unexpected Results

Many of the relationships which resulted on the generated financial statements could have been anticipated. A few of the results seem rather startling at first glance. The results of the study show that total net income for the five-year period under the assumption of a capitalized lease is $14,787 which is less than the $14,909 for the like period in the no plant expansion case. Total Operating Income is $5,812 each year for the capitalized lease case as opposed to $4,876 each year for the no plant expansion case. Total Operating Income is equal to Operating Revenues less "above the line" expenses. As would be expected, the capitalized lease case has a greater Total Operating Income figure because of the expanded rate base. This resulted because the model assumes that Total Operating Income is always equal to 6.1% of the Net Utility Plant amount. The reason for the lower Net Income figure for the five-year period is because of "below the line" expenses. In Year 1 "below the line" expenses for the capitalized lease case were higher because the Interest on Long-Term Debt was $3,082 as opposed to $1,977 for the no plant expansion case. In

Years 2 through 5 the Net Income for the capitalized lease case exceeded the Net Income for the no plant expansion case by $147 in total. This was not enough to offset the $169 difference in Year 1 by which the no plant expansion case exceeded the capitalized lease case.

Although the after tax net income for the preferred stock case is always the highest after the first year, the return on stockholders' equity is always the lowest after the first year. This is caused by the greater accumulation of retained earnings in the preferred stock case as opposed to all other cases which is shown in Table 10. The greater accumulation of retained earnings was caused by a high net income and lower dividend payments than in the common stock case.

Implications for Regulatory Commissions

The results of the generated financial statements indicate that regulatory commissions should encourage the use of debt and lease financing. When plant is expanded, the pure stock financing methods yielded the highest Operating Revenue figures and consequently the highest rates charged customers would come under those two cases. Although the five-year totals for Operating Revenues were not significantly less in the non pure stock cases, other factors also favor debt financing which includes both capitalized and non-capitalized leases.

The return on stockholders' investment is always higher after the first year in cases where debt issuance or lease agreements were involved in the financing of the investment. It is true that debt/equity ratios are higher when debt or leasing is used as is shown in Table 12. Relatively high debt/equity ratios have been the norm in the public utility industry for many years. Unless the firm's credit rating would

be adversely affected in the pure debt financing case, it appears that both customers and stockholders would be better off by firms initially financing expansion by debt or using lease agreements to some extent. If it can be assumed that one of a regulatory commission's important tasks is to protect the interests of both customers and stockholders in an equitable manner, it has not shirked its responsibility by encouraging the use of more leasing and/or debt to finance plant expansion under present conditions.

Summary

This chapter has discussed the results of the model financial statements that were generated under the various financing assumptions. It was shown that stock issuance caused the firm to have the highest net income figures with the consequence of having the customers of the firm pay the highest rates. Because the highest incomes resulted in the stock issuance cases the government also realized the greatest income tax revenues under those cases.

When the non-capitalized lease case was pitted against the capitalized lease case, the non-capitalization of the lease appeared to be more favorable from the points of view of government revenue, and favorable looking financial statements. Operating revenues for the non-capitalized lease case were only .86% higher than for the capitalized case. The firm's tax expense payable currently and government revenue collectible currently was 6.3% greater in the non-capitalized case. The investor also fared better under non-capitalization considering the results of higher net income, higher return on stockholders' invested capital, higher retained earnings balances, and better current ratios and debt/equity ratios.

CHAPTER VI

RECOMMENDATIONS FOR THE TREATMENT OF LEASES

The purpose of this chapter is to recommend the treatment that should be accorded leases for financial statement, rate making, and income tax purposes. Treatment of leases for these and other purposes has been an accounting question wrangled with for decades by many people. The treatments recommended here are specifically for the electric utility industry. Although much of the discussion in this chapter can be generalized to all types of firms, it appears at this point that the treatment accorded leases may have to be determined on an industry-by-industry basis as opposed to one manner of treatment for all types of firms. There at least seems to be sufficient evidence that the regulated industries may have to be treated in a manner different from that of other non-regulated industries.

Financial Statement Treatment

The present status of financial statement treatment is not to capitalize a lease unless it represents what is in effect an installment purchase of the property. This is the rule according to Opinion No. 5 of the Accounting Principles Board which also requires the details of the lease to be spelled out in footnotes to the financial statements. Even an Exposure Draft of the Accounting Principles Board dated January 9, 1973, does not call for any more extensive capitalization treatment; only more disclosure treatment is called for via notes to the financial statements, separate schedules, or parenthetically in

the financial statements. The Exposure Draft was dropped in April of 1973 and the lessee treatment of leases was placed on the agenda of the new Financial Accounting Standards Board. Although many people have spoken out in favor of the capitalization of long-term leases, the opposing view has won out to date and still has many advocates.

The arguments against the capitalization of leases are many and cover a broad range of points for attack. A discussion of these arguments will aid in determining whether the arguments are sound and whether they are applicable to the electric utility industry. One argument against the capitalization of the lease is that to date debts reported on the liabilities side of the balance sheet have always been fixed and predetermined. To capitalize a lease would cause a liability without fixed value to be placed on the balance sheet. This state of not being fixed or predetermined results because a lessee's obligation under the agreement may not be for the full amount of the length of the lease agreement if bankruptcy or reorganization results. In many bankruptcy or reorganization cases this is true; however this cannot be used as a good argument for excluding lease agreements from capitalization treatment. Those who believe in this argument as a substantial reason against capitalization seem to think of a balance sheet as a statement of affairs, which is more or less a balance sheet of a firm in financial distress, as opposed to a balance sheet prepared under the concept of a going concern. Many lease agreements in recent years have contained provisions which would defeat the bankruptcy and reorganization laws. These agreements have the effect of determining the liability at a larger amount than would ordinarily be the case under the bankruptcy laws. If the going concern concept is accepted, the

placing of a long-term lease on the balance sheet in the form of an asset with its related liability would be entirely within this concept. To strike down the capitalization of long-term lease agreements because the liability is not fixed or predetermined would ignore the going concern concept in favor of something that would approach a liquidation value concept with respect to the liability for the lease. Many of the liabilities on a typical balance sheet do not retain their fixity in times of financial stress. Even though legal liability often remains fixed, the priority of claims is often structured so that the claims are not all settled on the same pro-rata basis. Lessors are often in better shape after a lessee becomes bankrupt than when a debtor defaults on an unsecured loan because the lessor can usually take possession of the leased property whereas an unsecured creditor may have only a worthless claim on the debtor's assets. The substance of the issue is that leases, just as other types of liabilities found on the balance sheet, often will not be settled for the full amount in times of financial distress. However, because the balance sheet does not purport to state accounts at liquidation values, capitalization of a lease and the recording of the corresponding liability is entirely consistent with the concept of a going concern.

It is very possible that a lease commitment could be so uncertain that capitalization of the commitment would not be feasible. If the lease is open-ended and cancelable at the option of the lessor or lessee on short-term notice it would not make much sense to attempt to capitalize the lease as an asset. In some industries it is very common for practically all lease agreements to be of the percentage of revenue

type. This type of agreement provides that the lessee pay a specified percentage of the operating revenues generated by the leased facility as the rent for the facility. Taxes and insurance would be paid by the lessee in addition to the rent payment. Chain-stores use the percentage lease almost exclusively in their acquisition of property rights for retail and warehouse facilities. Because the commitment in terms of future rental payments is not at all fixed, it would be hard to justify capitalization in cases such as this. If the electric utility industry were engaged in percentage leasing to a large extent, the argument of the liability not being a fixed or predetermined amount would be very potent for the non-capitalization case.

Another reason that is frequently given for not capitalizing leases is that the periodic payment includes amounts for future services in addition to the property rights being acquired. Services such as heat, maintenance, taxes, and insurance are often provided for in the periodic payments. It would appear that the value of these ancillary services could be readily determined in an objective manner. If it is assumed that the value of the ancillary services can be determined and excluded prior to the capitalization process, the argument of property rights commingled with services would not be very strong for the rejection of capitalization.

Much of the total case against the capitalization of leases falls into what could be termed the legalistic view of the argument. Because the title to the property is not with the lessee, the lease can therefore not be considered an asset. The lease is classified as an executory contract by which the parties to the agreement each promise to perform specific acts in the future. It has never been generally accept-

able to place executory contracts on the books of a firm in the form of assets and liabilities unless a loss is apparent. If leases are to be viewed as executory contracts and accorded the same financial statement treatment as other executory contracts, they cannot possibly be shown on the balance sheet of a firm as an asset whose value is included in the total assets of the firm.

Professor John H. Myers in his study of lease reporting felt that the objections to the balance sheet presentation of leases fell into five categories, two of which would come under the legalistic area discussed above. A third objection dealt with the distortion of standard ratios used in financial analysis, rate making, and state tax allocations. Another objection was that too many subjective judgments were involved in the capitalization process so as to render the results meaningless and misleading. The final objection was that many of the economic advantages of leasing would be lost if leases were capitalized.[1] While many of the arguments against the capitalization of leases have merit, the section that follows attempts to build a stronger case for the capitalization of long-term leases on the published financial statements of investor-owned electric utilities than has been stated for non-capitalization of leases.

The Case for Capitalization

The case for the capitalization of leases on the published financial statements is developed with the interests of investors and creditors in mind. The intention of the writer in building the argument is to present the firm as objectively as possible, in light of the substance of what

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[1] John H. Myers, Accounting Research Study No. 4, pp. 6-8.

has taken place. The practicality of the recommendations is also considered. The theory and practice of accounting has always relied upon legal considerations to a great extent for the determination of the treatment of items on the financial statements. While legal concepts have been and will probably continue to have a great deal of influence on accounting theory and practice, they have not and should not be the sole input into the accounting rule-making process. The Federal tax law has evolved to the level where the substance of a transaction takes precedence over the form in many cases. Although the Federal tax law is far from an ideal instrument, the accounting rule-making process could greatly benefit from applying an analogous method where so warranted. Accounting "law" or rule-making should develop with more attention paid to the economic or financial substance of the transaction than to the legal form of the transaction. This is not to say that accounting rule-making has ignored the substance and looked only at the form in the past, but rather to suggest that more attention be paid to the non-legalistic aspects of a transaction in the future.

Many firms presently acquire property rights such as leasehold improvements and employment contracts which are similar to property rights acquired in a lease. In some cases these rights are capitalized and in other cases they are not capitalized. Employment contracts which a firm has with key employees are usually not enforceable and are not capitalized. Contracts for the future purchase of goods or services are also as a general rule not capitalized. In contrast to the treatment of these executory type contracts, which will be discussed later, is the treatment given leasehold improvements. It is generally acceptable practice to capitalize leasehold

improvements because they have been paid for and amortize their cost over the shorter of the life of the improvement or the expected life of the lease including options to extend if the option is expected to be exercised. The lessee does not own the leasehold improvements in the sense of having title to them. Rather the lessee has the right to the use of the leasehold improvements for a period of time not to exceed the life of the lease.

The capitalization of a leasehold improvement is virtually the same as recording as an asset the value paid in advance for a long-term lease. Although seldom done in the business world, a long-term lease that was entirely paid for on the date of its inception would always be recorded as an asset with no arguments raised by anybody. In both the cases of leasehold improvements and in prepaid long-term leases, an asset is placed on the books of the lessee who does not have legal title to the physical property. Although nobody would quibble with the capitalization of the prepaid long-term lease, once the payments are deferred until a point in time subsequent to the time when the lessee first takes possession of the property, many people question whether an asset exists. A sale and lease back arrangement is another case where many do not believe an asset exists. If the agreement is for the expected useful life of the property or if the lessee is entitled to acquire title for a nominal sum, the arrangement in substance is virtually the same as borrowing and purchasing real estate.

"Assets" could probably be defined in almost as many ways as there exist people to define them, many of the definitions being equivalent. Sprouse and Moonitz in their work "A Tentative Set of Broad Accounting

Principles for Business Enterprises" set forth a definition which will be used in this study for the meaning of an asset. "Assets represent expected future economic benefits, rights to which have been acquired by the enterprise as a result of some current or past transaction."[2] This definition is far reaching and stretched to its furthest could be used to justify the capitalization of all types of executory contracts. It does not appear that Sprouse and Moonitz intended this to be the case as is pointed out here. "For example, a piece of equipment already acquired and in use usually represents an asset, but equipment which, according to present plans, is to be acquired next year does not constitute an existing but merely a budgeted asset."[3] As was stated before, a prepaid lease would be placed on the balance sheet by everybody; but the deferral of payment applying to the same agreement causes many to doubt whether an asset exists. Long-term leases appear to qualify within the spirit as well as the letter of the above definition of an asset. A long-term lease certainly provides some "expected future economic benefits." The lease rights have been "acquired by the enterprise as a result of some current or past transaction." The prior statements would qualify long-term leases as assets according to the letter of the Sprouse and Moonitz definition. Most executory contracts could also meet this surface test. However long-term leases appear to meet the spirit of the definition, whereas certain other executory contracts do not. Some executory contracts seem to fall closer to the "present plans" category than to an asset's acquired category.

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[2]Robert T. Sprouse and Maurice Moonitz, Accounting Research Study No. 3, p. 20.

[3]Ibid., pp. 20-21.

While the latter statement is very much subject to dispute, an attempt will be made to establish a case in favor of the statement.

Many people believe that the verdict for leases cannot be given until the entire area of commitments is studied and a decision made as to their treatment on financial statements. The decision on the treatment of commitments as a whole is beyond the scope of this project, yet leases appear to be different from executory contracts for purchases of goods and employment of people. In order to justify the capitalization of long-term leases they must be shown to be different in substance from purchase and employment contracts.

When a long-term lease agreement is signed, the lessor promises to provide the facility for the use and quiet enjoyment of the lessee. Because the lessee has possession and/or control of the facility, the lessor has only to play a rather passive role in allowing the quiet enjoyment for him to fulfill his entire obligation. The situation as applies to executory contracts for employment and purchases is considerably different with regard to the role of the supplier party. The employee in an employment contract must continue to play a very active role if he is to fulfill his obligation stipulated in the contract. The vendor of goods or services in a purchase contract must similarly be very active in supplying the required goods and services. Because the role of the other party (lessor, employee, or supplier) to an agreement is considerably different in reality for a lessor as opposed to an employee or supplier, it seems that a lease is indeed different from executory contracts of employment and supply. In the absence of any unusual circumstances, the lessee does possess an asset in the true sense of the Sprouse and Moonitz definition as soon as the lease agree-

ment is signed. Once an asset is assumed to exist, it must be properly valued and placed on the balance sheet if the financial statements are to fully disclose the firm's financial position.

Although few long-term leases are currently being capitalized, an examination of how lenders, lessors and lessees subjectively evaluate leases should indicate what they feel the status of a long-term lease is. Most lenders have probably always considered a prospective debtor's lease obligations in considering the prospective debtor's creditworthiness and ability to repay because lenders want to allow for commitments not appearing on the balance sheet. In more recent times lenders seem to be coming more aware of the equivalency of long-term debt and long-term lease obligations. When lenders require the long-term lease obligations to be figured into the calculated debt/equity ratios and a portion of the annual lease payment to be considered as interest for purposes of interest coverage or fixed charges coverage, the day for ignoring the lease on the balance sheet is gone. The following statement was made by the chief executive of a major company.

> Long-term lease commitments are really nothing more or less than another method of financing. From a business standpoint, laying aside for the moment legal definitions, this kind of commitment is just as much an involvement of the company's credit as borrowing from a bank or creating any other kind of liability. But most companies appear disinclined to record lease liabilities on the balance sheet. I would think that where these commitments are significant, and omitted from consideration, comparison of different companies' financial positions by investors is, to say the least, difficult, and in some cases seriously distorted.[4]

Because the lessor is in effect a lender, many lessors also require that existing long-term leases be "capitalized" for purposes of computing var-

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[4]Henry G. Hamel, Leasing in Industry, p. 63.

ious ratios. Furthermore many lease agreements stipulate that any additional leases be treated as if a long-term debt obligation has arisen.

Even the lessees themselves recognize that leasing agreements are in effect acquisition of assets although an examination of annual reports indicates most lessees refuse to give them balance sheet treatment. It follows that internal reporting on a reasonable basis dictates that lessees capitalize leases for this purpose. Assume that a firm has three profit centers. Two profit centers contain fixed assets that are all owned and the third profit center contains a similar quantity of items that are leased. If any meaningful comparison of the rate of return for the three departments is to be made, the value of the leased equipment must be used in the rate of return calculation. If a lessee feels that internal capitalization is needed to present a fairly determined set of results, he should also feel that his creditors should be entitled to see a fairly determined set of financial statements used for external purposes.

Recommendation for Capitalization

The above discussion has shown that a lease does possess the characteristics of an asset in terms of the Sprouse and Moonitz definition which has been accepted by many as a viable definition. Leases are different from executory contracts in which the other party must play a very active role in fulfilling his obligations. The lessor in a lease agreement for property rights only has to let the lessee have quiet enjoyment which allows the lessor to play a very passive role for the duration of the lease. Lenders, lessors, and lessees themselves all treat lease agreements as if they are instruments that give rise to assets and liabilities.

If the substance of the agreement is going to prevail over the form and if reality of the situation as determined by an interested and objective party, such as the creditor, is to be reflected on the balance sheet, long-term leases must be capitalized. The only type of long-term lease that would present problems in the determination of a good estimate of the value obtained in the lease agreement would be in the case of a percentage lease. Since the returned questionnaires showed no evidence of percentage leases in the electric utility industry, this should not cause problems for the capitalization of long-term leases by utilities. Many critics of lease capitalization believe that the capitalization by itself is incomplete and possibly misleading. Just because a lease is capitalized should not exclude the use of notes to the financial statements which describe the capitalization process. Long-term leases should be disclosed in notes to the financial statements as well as in the dollar totals on the statements. The interests of both creditors and investors will then best be served.

Rate Making Treatment

Two groups of people are affected when the question of rate making treatment of leases is investigated. Investors, both present and potential, and customers of the firm are the groups directly affected by changes that affect the utility's financial position and performance over time. Customers are not only affected by the rates charged but also by the level of service they receive. The lowest possible rates may not be the most ideal situation for the customer if his level of service falls below an acceptable level. When investor owned electric

utilities are the suppliers, the customers' level of service is somewhat a function of the current and potential investors' well being. If an investor's prospective rate of return on utility stock is not very favorable, the utility may not be able to attract enough capital to finance as much new plant and equipment needed for a high level of service.

Some people who have spoken out on the leasing issue in the past have either implied or stated emphatically that electric rates would rise considerably if leases were capitalized for rate making purposes. Robert O. Whitman stated that he felt electric rates would rise if leases were required to be capitalized. This would result because of the increased financing costs incurred due to the apparent deterioration of the firm's financial position.[5] Whitman offered no quantitative substantiation for his claims. The treatment recommended by the writer in the financial statement treatment section for leases on the published financial statements does not agree with that of Whitman's non-capitalization proposal. On the other hand, the recommendation made by the writer for the rate making treatment accorded leases is for non-capitalization.

Non-capitalization of the lease for rate making purposes is advocated because the results of the generated financial statements indicate that under non-capitalization the after tax net income over the five year period is higher than when the lease is capitalized. Unlike what others have predicted about the rates charged customers, the generated financial statements showed that rates would be less than one percent higher over the five year peiod if the lease was not capitalized. Because rates over the five-year period are virtually the same in both cases, the decision

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[5]Robert O. Whitman, Public Utilities Fortnightly, September 30, 1971, pp. 27-28.

on the treatment of leases for rate making purposes can be made on other grounds. If it can be assumed that the higher level of net income would make a difference in the attractiveness of investment in an electric utility firm and that more investment in the electric utility industry is necessary to meet the service needs of customers, non-capitalization of the lease for rate making purposes seems desirable.

Table 17 contains hybrid income statements. The purpose of the hybrid statements is to show what results when leases are capitalized for financial statement purposes and not capitalized for the determination of rates. The figures on Table 17 come from the generated financial statements. Amounts for Operating Revenues, Federal Income Taxes, and Deferred Federal Income Taxes, were taken from the statements generated under the non-capitalized lease assumption. All other figures were taken from the statements generated under the capitalized lease assumption with the exception of Total Operating Income and Net Income which were calculated directly on this statement. If it is assumed that Operating Revenues and amounts involving federal income taxes are determined from the non-capitalized case and the remaining figures come from the capitalized case, the hybrid statements are internally consistent with one insignificant exception. Other Income (Net) would be slightly higher due to a slightly greater accumulation of cash than resulted under the pure capitalized lease statements. This in turn would cause Federal Income Taxes, Deferred Income Taxes, Total Operating Expenses, Total Operating Income, and Net Income to increase by insignificant amounts. Because this situation causes

changes that are so slight, the results of these hybrid statements are not tainted.

Table 17

Hybrid Income Statements

	Year 1	Year 1	Year 3	Year 4	Year 5	Total
Operating Revenues	$26,475	$26,496	$26,511	$26,527	$26,544	$132,553
Operating Expenses and Maintenance	-13,775	-13,775	-13,775	-13,775	-13,775	- 68,875
Depreciation and Amortization Expense	- 2,759	- 2,759	- 2,759	- 2,759	- 2,759	- 13,795
Federal Income Taxes	- 1,011	- 1,119	- 1,133	- 1,147	- 1,163	- 5,573
Other Taxes	- 2,873	- 2,873	- 2,873	- 2,983	- 2,873	- 14,365
Deferred Income Taxes	- 84	- 93	- 94	- 96	- 97	- 464
Investment Tax Credit	110	110	110	110	110	550
Total Operating Expense	$20,392	$20,509	$20,524	$20,540	$20,557	$102,522
Total Operating Income	6,083	5,987	5,987	5,987	5,987	30,031
Interest Charged to Construction	0	168	168	168	168	672
Other Income (Net)	170	313	323	334	346	1,486
Interest on Long-Term Debt	- 3,082	- 3,056	- 3,029	- 3,000	- 2,968	- 15,135
Other Interest Charges	- 259	- 259	- 259	- 259	- 259	- 1,295
Net Income	$ 2,912	$ 3,153	$ 3,190	$ 3,230	$ 3,275	$ 15,759

The hybrid statements of Table 17, which assume rates and federal income taxes were determined under non-capitalization of the lease, indicate that net income is 6.6% higher for the five year period than under the total capitalization case. Some may question the results of all statements involving leases because they feel the results may be too sensitive to changes in the interest rate used to determine the total lease payments. A 7.2% interest rate was used in the capitalized lease case which was .2% above the interest rate in the long-term debt case.

If it is still assumed that the lessor will get the investment tax credit, an interest rate of eight percent (a one point increase over the long-term debt rate) would be about as high as a lessee would ever expect to pay in this case. If it were assumed that the lease term would be 24 years instead of 20 years the interest rate would be about eight percent with the same annual payment. Net Income for the five year period would decline by $688 and Operating Revenue would fall by $269 as compared to the 7.2% interest rate case. Payments on the lease must continue for an additional four years. An increase in the interest rate of .8% assumed in the capitalized lease case does not affect the results to any great extent since it must be considered that the increased Operating Revenue and Net Income would continue for four additional years when comparing the eight percent capitalized lease case with the 7.2% capitalized lease case and the no plant expansion case. The generated financial statements for leases appear to be relatively insensitive to small changes in the interest rates assumed on the leases and would not affect the decision to not capitalize for rate making purposes.

Federal Income Tax Treatment

The treatment to be accorded leases for the purpose of determining the federal income tax liability should be equitable to both the utility firms and the government. An examination of the results of the generated financial statements for the two leasing cases will aid in the making of a recommendation for tax treatment of leases.

When the non-capitalization assumption was used for rate making purposes and tax liability determination, the amount collected by the

federal government over the five-year period was $5,189. This was the amount of Federal Income Taxes less the Investment Tax Credit. The corresponding figure when the lease was capitalized for both rate making and federal income tax purposes was $4,883. These two tax figures are not totally comparable because the operating revenues differed causing income before taxes to differ and as a consequence the income tax figures differed.

Although the utility firms are much interested in the net amount they must pay the federal government in income taxes (Federal Income Taxes less Investment Tax Credit), the federal government is probably just as concerned with the amount shown as Federal Income Taxes as it is with the former figure. This is because the lessor of the leased equipment would avail himself of the investment tax credit since the model assumed that the lessee did not get the investment tax credit. The federal government would then lose from the lessor what it gained from the lessee. The gap between the tax figures which included the investment tax credit was $306, the non-capitalized case being the higher. When the effects of the investment tax credit are ignored the gap narrows to $250, the non-capitalization case again coming out higher.

The design of the model does not allow for exact calculation of the income tax liability assuming lease capitalization and operating revenues determined under non-capitalization. Neither does it allow for the reverse of the above situation. Some approximations of these effects may be made. Operating Revenues for the five-year period in the case of non-capitalization exceeded the Operating Revenues for the capitalization case by $1,132. If it were assumed that Operating

Revenues were determined under non-capitalization and federal income taxes calculated with capitalization of the lease, the difference between the original capitalized statements for both purposes and non-capitalized for both purposes would shrink from the $250 difference that existed. In order to get a rough idea of how much the income tax would increase on $1,132 of additional operating revenue, increases in Operating Revenues and Other Income were compared with the increases in Federal Income Taxes from year 2 to year 4 under the non-capitalization assumption. Federal Income Taxes rose by about 25% of the increases in Operating Revenues and Other Income. If this 25% rate were applied to the $1,132, the $250 difference would change to a $33 difference in the other direction. The point is that the difference in federal income taxes collected by the government is very slight when these approximations are made.

Because the difference in Federal Income Taxes under the two methods appears to be insignificant no recommendation is made in favor of one method over the other. The model assumed that straight line amortization of the leased equipment was used in the capitalization case. If leases were capitalized and amortized by an accelerated method, the obvious effect would be to give the utility firms the advantage of tax savings in the early years of the lease agreement with increased taxes in later years once the growth rate of leasing slowed. If lease payments were expensed like rent for tax purposes, the question of the use of accelerated methods of amortization could be avoided.

Summary

Leases should be capitalized for financial statement purposes if the substance of an agreement is to prevail over the form. Most lenders regard lease obligations as similar to debt. Lessees capitalize leases for internal reporting purposes such as computing return on investment. If the reality of the situation is to be reflected in the utilities' financial statements, capitalization is the only realistic alternative. Because electric utilities are not involved in percentage leasing, the capitalization of leases is also feasible. Non-capitalization of leases is recommended for rate making purposes. Customers will pay virtually the same rates under either treatment. Because investors will fare better with non-capitalization through higher utility earnings, non-capitalization is recommended. If utility securities are a desirable investment, the chances of sufficient money capital for expansion of plant and equipment to serve the customers are greatly enhanced. No recommendation is made for the tax treatment because there is little difference in the tax liabilities between the capitalized and non-capitalized case.

CHAPTER VII

RECOMMENDATIONS FOR FINANCING ELECTRIC UTILITIES' INVESTMENT IN PLANT AND EQUIPMENT

Introduction

The electric utility industry has been hard pressed for the past several years to finance the needed expansion of its plant and equipment. The industry must be able to expand its physical facilities if it is going to be able to supply the power sufficient for future needs. Investors in electric utility securities have to be able to earn good returns on their investments; yet regulatory commissions must continue to balance the interests of investors and customers. This chapter looks at the issue from both a firm's standpoint and a regulatory commission's standpoint.

The recommendations made in this chapter are based on the results of the model that was constructed. Many electric utility firms have capital structures that are very similar to the capital structure of the model firm. The recommendations made may not be applicable to firms which have capital structures that vary more than a slight amount from the model firm. This would be particularly true for firms that have a higher proportion of debt in their capital structure than the model firm.

From a Firm's Standpoint

The firm must be concerned with having a record of good performance from the eyes of both its debtholders and owners. Debtholders

are interested in the safety of their investment. Coverage of bond interest and debt/equity ratios are two indicators which would be of interest to bondholders of a firm. Because investors who own a firm's stock are usually not limited to a specific amount for a return on their investment like that of bondholders, owners of stock are usually most interested in return on investment figures. Owners would also be interested in knowing what the firm's debt/equity ratios were and the bond rating of the firm. Debt/equity ratios and bond ratings would be indicators of the risk of investment in the firm.

Table 18

"Times Bond Interest Earned" Under Different Assumptions as to Financing of Asset Acquisition

	Common Stock	Preferred Stock	Debt	Non-Capitalized Lease	Capitalized Lease	Existing Capital Structure
Year 1	4.29	4.29	2.64	2.98	2.19	3.21
Year 2	3.89	3.92	2.39	3.19	2.35	2.92
Year 3	3.90	3.96	2.41	3.21	2.38	2.93
Year 4	3.92	4.00	2.43	3.24	2.42	2.95
Year 5	3.93	4.04	2.44	3.27	2.45	2.97

Table 18 contains "times bond interest earned" figures for the six investment cases where the utility plant was expanded. The coverage figure was computed by dividing the sum of Net Income, Interest on Long-Term Debt, Federal Income Taxes, and Deferred Income Taxes by the Interest on Long-Term Debt figure in each case. Interest coverage is well over 2.0 in all years for all cases. The financing of the expansion

by stock results in the highest interest coverage figures as would be expected. The long-term debt case and the capitalized lease case yield about the same figures after the first year. While the non-capitalized lease case has coverage figures of approximately .8 above the capitalized lease case, it should be remembered that most analysts and investors would make adjustments for the non-capitalization in some manner even though many indenture agreements do not require the adjustment.

Debt/Equity ratios for all cases and all years were shown on Table 12 of Chapter V. Electric utilities typically have debt/equity ratios between 1.1 and 1.3 although some individual firms may vary considerably from this. At the end of Year 5 the common stock and preferred stock cases were low with figures of .82 and .76 respectively. The debt and capitalized lease cases were high at the end of Year 5 with ratios of 1.51 and 1.50 respectively.

While a bondholder's return in the form of interest is fixed with the consequence that he values highly the safety of the fixed return, stockholders are more concerned with the return on the owner's equity. Return on stockholders' investment for all years and all cases was presented in Table 13 of Chapter V. Cases involving debt and leases ranked highest, because the net income was spread over a smaller amount of owners' equity. The higher percentage returns for the owners in the debt and leasing cases is coupled with higher risk due to higher debt-equity ratios and lower interest coverage. Once a firm's debt/equity ratios and interest coverage figures start to deteriorate, the utility becomes a prime candidate for the lowering of its bond rating by the bond rating companies.

It is not easy to recommend how an electric utility should finance its expansion. It is frequently the case that a regulatory commission forces a capital structure upon the firm. The degree of flexibility of the capital structure is variable and depends on the specific commission involved. The recommendations made here assume that the regulatory commission is somewhat flexible with respect to the firm's capital structure. If it is assumed that the firm's prime responsibility to its investors is to its stockholders and not its bondholders, the electric utility firms should probably attempt to finance a greater percentage of their investment in plant by debt and leases. Obviously, it would not be possible to finance all future expansion in this manner because the firm would become too risky an investment for even the most speculative investors. On the other hand, an expansion of the percentage of capital coming from debt would probably not adversely affect, to any great extent, the risk position of a firm that is similar to the model firm. Expansion by greater use of debt and leases would increase the return on stockholders' investment and would probably make new stock issues in later time periods more desirable to investors.

Although an increase in the percentage of debt is recommended, a recommendation for substituting leasing on a long-term basis for a portion of the debt financing is strongly recommended. This will greatly improve the surface appearance of the firm if the lease is not capitalized. Even when the lease is capitalized, the generated financial statements showed the capitalized lease case to be slightly more desirable than the debt case on all counts with the exception

of the current ratio and income taxes. As was explained previously, the generated financial statements assumed that the lessor got the investment tax credit and that the lessee paid an implied interest rate of .2% above the long-term debt rate. It would not be atypical for the lessee to get the investment tax credit in exchange for a higher interest rate. The point is that the assumptions for the generated statements were thought to be reasonable and are reflected in this recommendation. The chief advantage of substituting long-term leasing for debt is the tapping of a source of funds that has not been extensively used in the past. This should prove to be at least a partial solution to the utilities' need for funds.

From a Regulatory Standpoint

Unlike the financing issue from the utility's standpoint, the regulatory commission must balance the interests of utility customers and investors. The trade-off of risk versus rate of return that faces investors was discussed above. Customers also face a trade off between level of services and rates they must pay for service. If the regulatory commission properly performs its function, it must allow the firms to be financially sound and it must have customers receive acceptable service at a reasonable rate.

Commissions must allow the utilities to be more flexible in their capital structures. If no flexibility were allowed the individual firms, they would be forced to issue new securities in the percentage of their current capital structure even though this may not be best from a utility firm or customer point of view. The recommendations will assume that the regulatory commissions will allow the utility

firms to change their capital structure if the firms so desire and the changes are not adverse to their customers' interest. It was concluded above that, from purely a utility firm standpoint, the firm should attempt to finance a greater percentage of its plant and equipment by debt and leasing.

The customers' interests can be partially examined by observing the effects on rates over the five-year period that the model was run. Operating Revenues, which represent total amounts paid by customers, over the five-year period and calculated for each assumption were shown on Table 14 of Chapter V. The use of long-term debt yielded the lowest Operating Revenue figures and preferred stock issuances yielded the highest figures over the five-year period. The difference between the lowest and highest cases is small with the preferred stock case slightly over 1.6% above the long-term debt case. The model assumed that investment for expansion occurred only in the first year. The differences in Operating Revenues between the various financing techniques would become more noticeable if each method was used consistently for several consecutive investments in plant and equipment. Because increased use of debt and leasing as opposed to stock would lead to lower relative rates, the regulatory commissions should encourage this to happen by allowing firms to change their capital structures to accommodate such changes. It should not take much coercion for utility firms to debt-finance more of their expansion because it was shown to be in the best interests of the firm and the owners in the preceding section. Although neither leasing case yielded Operating Revenues as low as the long-term debt case, both were below the common

stock and preferred stock cases. The substitution of leasing for debt should not be hampered by regulatory commissions. Rather, leasing should be encouraged to the extent that it does not inject too much risk into the firm.

Summary

Very often it is felt that the best interests of a firm and its customers are mutually exclusive when a firm is attempting to do what is best for its investors. This does not appear to be the case if the issue of how to finance an electric utility's plant expansion is examined. The increased use of debt allows for greater returns to utility stockholders and lower rates for its customers. Care must be taken not to expand the percentage of debt in the utility firm's capital structure to such an extent that the credit rating of the utility will deteriorate. If electric utility firms are in need of tapping new sources of debt capital, the leasing alternative should be investigated. Unless the additional interest cost is too great for a lease, it could be as desirable to lease as to purchase with borrowed funds in the conventional manner.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

Introduction

There seem to be indications that the long-term leasing of items of plant and equipment in the electric utility industry is becoming more prevalent. Annual reports of some electric utilities disclose the recent signing of long-term lease agreements. Although people who are knowledgeable about such matters connected with the electric utility industry are aware of some of the leasing activity, little is known about the industry-wide practice of leasing and the magnitude of its use. The treatment accorded leases by firms in general has been the topic of widespread debate for many years. More recently people concerned with the effects of the treatment given leases in the public utility industry have spoken out on this issue. The industry views on the issue that are publicly expressed are against the capitalization of leases. The argument against the capitalization of leases by utilities appears to be founded on the premise that capitalization of the lease will have adverse effects on utility investors and customers in the form of lower net income and higher rates. Although the capitalization of leases is purported to be adverse to the interests of investors and customers, no quantification of the effects of the treatment accorded leases in the public utility industry has been published to date.

The purpose of this dissertation is to discover the extent of leasing activity in the electric utility industry, quantify the effects of different financing assumptions including capitalized and non-capitalized leases, and make recommendations as to the treatment accorded leases and the financing methods to be used. A questionnaire is used to survey all Class A and Class B electric utilities in the United States on their current and planned leasing activities. The quantification of the effects of various financing assumptions is done by the use of a set of model financial statements. Balance sheets and income statements for a five-year period are generated for each of the various assumptions and the results are compared. The information obtained from the questionnaire and the results of the generated financial statements are used to make the recommendations for the treatment of leases on financial statements, rate making, and federal income tax treatment. Recommendations for the future financing of plant expansion are made from a utility and from a regulatory commission standpoint.

Results of the Questionnaire Survey

The questionnaire used in the survey on leasing activity was mailed to 190 Class A and Class B electric utilities. A total of 133 firms, which was a 70% response rate, returned the questionnaire after the initial request and a follow up were made. The responses indicated that 93 utilities were engaged in some type of leasing. Examination of the individual questionnaires indicated almost without exception that certain types of assets have become popular items for leasing

in the past few years. Railroad cars, generating equipment and nuclear fuel are items that only recently have been leased by utilities.

Information was obtained on the questionnaire that allowed for classification of the lease as a financing or operating type of an agreement. Cost of the leased equipment, duration of the lease, and payment structure were looked at to determine the classification. Because of incomplete responses it was not possible to classify all of the leases as either financing or operating. It was determined that 53 financing leases existed, all but seven being for buildings, generating equipment, pollution control equipment, and railroad cars.

It was discovered that a few firms treat some of their leases one way for financial statement purposes and a different way for rate making and income tax purposes. The vast majority of the firms expensed their lease payments currently for all purposes. It was interesting to note that for each purpose category (financial statement, rate making, and income tax) seventeen firms stated that they capitalize leases. In fifteen of these cases the same utility stated they capitalized some of their leases for all three purposes. Perhaps the firms and their regulatory commissions were following the Internal Revenue Service in their determination of the capitalization status of the lease.

Leasing is in the future plans of some utilities as a source of funds to finance the acquisition of plant and equipment. Thirty firms stated that they would use leasing to finance up to ten percent of their capital investment in the next three years. Some of the

firms that responded did not consider leasing as a source of funds because 68 firms stated as a response to another question that they intended to lease assets in the future. The firms that had considered leasing but chose not to lease listed economic or financial reasons as the main reasons for not leasing. Most firms' bond indenture agreements had restrictive convenants as to interest coverage or debt/equity ratios. One hundred seventeen firms had such restrictions and 54 firms said they would affect leasing decisions.

Several inquiries on the questionnaire called for a "free response" type of an answer. The responses that appeared indicated that some firms had given the leasing alternative considerable thought while others dismissed leasing with the hasty conclusion that it was too costly. One group of firms felt that leasing was an effective way to finance plant and equipment because leasing agreements would not jeopardize the keeping of the specified agreements contained in current bond indentures. These firms indicated that they will resort to more leasing as the limits on their current agreements are approached. Other utilities believed that leases will have to be capitalized for purposes of making calculations pertinent to indenture agreements if they are not capitalized already. These firms felt that there is no point in leasing since it has the same effects as debt financing for computing coverages and ratios and could be more costly.

Results of the Model

The general model permitted the generation of financial statements under the various financing methods that were assumed. Significant items on the financial statements were examined to see the

size of changes. These items included after tax net income, retained earnings balances, current ratios, debt/equity ratios, return on stockholders' investment, operating revenues, and federal income taxes.

Stock issuance cases had the highest operating revenue figures but yielded lower returns on stockholders' investment. After tax net income and federal income taxes were higher under the stock cases. Higher debt/equity ratios resulted from debt financing, but current ratios were most favorable when preferred stock was issued.

When the two leasing assumptions were directly compared, it was seen that as far as Operating Revenues are concerned there was little difference between the two methods of accounting for the lease. Operating Revenues for the five-year period were less than one percent higher for the non-capitalized case. The five-year net income total was more favorable to investors under the non-capitalized lease alternative. Net income was about 4.7 percent higher than in the capitalized lease case for the five-year period. Coupled with the more favorable net income outcome for the non-capitalized case were some other favorable outcomes that resulted from higher net income in the non-capitalized case. The retained earnings balance was six percent higher in the non-capitalized lease case at the end of year 5. The current ratios for the non-capitalized and capitalized lease cases at the end of year 5 were 1.52 and 1.20 respectively. Even the rate of return on stockholders' investment was higher in the non-capitalized case, 8.63% as opposed to 8.44% in the capitalized case. As would be expected the debt/equity ratio was higher when the lease was capitalized. The debt/equity ratio

was 1.50 for the capitalized assumption and 1.12 for the non-capitalized assumption. It is very probable that an analyst would be able to infer adjustments from other data included with the statements in the non-capitalized case. Although analysts would attempt to adjust for the non-capitalization of the lease, it is unlikely that the adjustments could be done on a uniform, industry-wide basis. Finally, the federal income tax payments were more favorable to the government under the non-capitalization treatment. The five-year totals of federal income taxes minus investment tax credit were $5,189 for the non-capitalized assumption and $4,883 for the capitalized assumption, an amount which was 6.3% higher in the non-capitalized case.

Recommendations

It was recommended by the writer that leases be capitalized for financial statement purposes. Leases were determined to be different from executory contracts in which the other party must play a very active role in fulfilling his obligations. Acquisition of property rights through a long-term lease appears to be an asset in terms of the Sprouse and Moonitz definition in Accounting Research Study No. 3. Long-term leases that provide for the acquisition of property rights must be capitalized if the substance of the agreement is to prevail over the form. Long-term leases should also be disclosed in notes to the financial statements which describe the capitalization process. Only then will the interests of both investors and creditors be best served.

Non-capitalization treatment is recommended for rate making purposes. The choice of treatment accorded leases for rate making purposes makes little difference from a customer's viewpoint of rates paid. They will pay virtually the same rate under either treatment. Investors fare better with non-capitalization because utility earnings are higher. If investors fare better under non-capitalization, utility securities will be a more desirable investment, and the chances of sufficient money capital for expansion of plant and equipment to serve the customers are greatly enhanced.

When the effects of the investment tax credit are removed, the differences in federal income tax liabilities were negligible. No recommendation for the tax treatment is made, because it would not make any real difference assuming straight line amortization of the lease is taken. If accelerated amortization were allowed, most utilities would probably prefer to capitalize leases for tax purposes.

Given that a utility is in need of capital for expansion of its facilities and that it is allowed to modify its capital structure to some degree, it would be in the best interests of its stockholders to finance expansion with relatively more debt and less stock. Utility firms would then have higher returns on stockholders' investment with increases in their risk factor. As long as the change in capital structure is not extreme and minimum interest coverage ratios are maintained, the increase in risk would not adversely affect the firm's credit rating. Electric utilities should strongly consider the substitution of leasing for some of their future long-term debt financing of property. If leases are not capitalized on the financial

statements, the surface view of the firm will greatly improve. Even if the lease is capitalized, the generated financial statements showed the capitalized case to be slightly more desirable than the long-term debt case. An important advantage of substituting leasing for long-term debt is the tapping of a source of funds that has not been extensively used in the past.

Regulatory commissions have to plan a balancing role between the investors' interests and the customers' interests. It has already been concluded that slightly more debt in the capital structure would be better for the owners of utility equity securities. The expansion of debt in an electric utility's capital structure also appears desirable from the customer's point of view. The financing of expansion by long-term debt yielded the lowest total Operating Revenue figures which would indicate the lowest rates. Both leasing alternatives yielded Operating Revenues above those of long-term debt but below those of stock issuance. Because an expansion of leasing and debt relative to owners' equity in the capital structure of electric utilities is desirable from an owner's and customer's standpoint, regulatory commissions should encourage these types of changes in the firms' capital structures.

Final Remarks

The treatment accorded leases has more than just the superficial effects on the figures appearing on a utility's income statement and balance sheet. Because the amount of operating revenues will vary with the treatment of leases for regulatory purposes, the real effects

of changes in revenues received and income taxes paid occur. The actual cash position of the firm will change as a result of the above effects as well as changes in all of the other indicators of a firm's position and performance that could be caused by apparent as well as real effects.

Leasing has been shown to be a viable alternative for an electric utility to use in the financing of its expansion of plant and equipment. The model used to generate financial statements in this study assumed that the firm was equivalent to the industry average. The potential for an individual firm to obtain beneficial results from the use of leasing would depend on many factors specific to each firm. Two of the most important factors would be the regulatory commissions' attitude toward what the debt/equity ratio of the firm should be and what the present debt/equity ratio of the firm actually is. The correct decision on the leasing issue is firm specific. Unless a utility rigorously analyzes the leasing alternative, it will never know whether it missed the best method of financing a portion of its needed expansion.

APPENDIX A

The Generated Financial Statements

INITIAL STATEMENTS

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 0

ASSETS

TOTAL UTILITY PLANT		$ 102277
ACCUMULATED DEPRECIATION		-22348
NET UTILITY PLANT		79929
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		5321
DEFERRED DEBITS		425
TOTAL ASSETS AND OTHER DEBITS		$ 87417

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	9363	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		34544
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2198
TOTAL LIABILITIES AND OTHER CREDITS		$ 87417

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 0

OPERATING REVENUES	$	23128
OPERATING EXPENSES AND MAINTENANCE		-11978
DEPRECIATION AND AMORTIZATION EXPENSE		-2399
RENT		-0
FEDERAL INCOME TAXES		-1233
OTHER TAXES		-2498
DEFERRED INCOME TAXES		-110
INVESTMENT TAX CREDIT		-25
TOTAL OPERATING EXPENSES		-18243
TOTAL OPERATING INCOME		4885
INTEREST CHARGED TO CONSTRUCTION		588
OTHER INCOME (NET)		170
INTEREST ON LONG TERM DEBT		-1977
OTHER INTEREST CHARGES		-259
NET INCOME	$	3407

DIVIDENDS DECLARED ON COMMON STOCK	$	2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$	362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF COMMON STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	8941
DEFERRED DEBITS	425
TOTAL ASSETS AND OTHER DEBITS	$ 103620

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 22488	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	9518	
RETAINED EARNINGS	10084	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		50607
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2338
TOTAL LIABILITIES AND OTHER CREDITS		$ 103620

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 26430
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1685
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-140
INVESTMENT TAX CREDIT	614
TOTAL OPERATING EXPENSES	-20618
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	936
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4681

DIVIDENDS DECLARED ON COMMON STOCK	$ 3598
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF COMMON STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	9234
DEFERRED DEBITS	408
TOTAL ASSETS AND OTHER DEBITS	$ 103896

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 22488	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	9518	
RETAINED EARNINGS	10237	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		50760
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2461
TOTAL LIABILITIES AND OTHER CREDITS		$ 103896

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 26712
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1481
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-123
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20901
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	369
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4113

DIVIDENDS DECLARED ON COMMON STOCK	$ 3598
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF COMMON STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		9544
DEFERRED DEBITS		391
TOTAL ASSETS AND OTHER DEBITS		$ 104189

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 22488	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	9518	
RETAINED EARNINGS	10406	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		50929
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2585
TOTAL LIABILITIES AND OTHER CREDITS		$ 104189

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$	26718
OPERATING EXPENSES AND MAINTENANCE		-13775
DEPRECIATION AND AMORTIZATION EXPENSE		-2759
RENT		-0
FEDERAL INCOME TAXES		-1486
OTHER TAXES		-2873
DEFERRED INCOME TAXES		-124
INVESTMENT TAX CREDIT		110
TOTAL OPERATING EXPENSES		-20907
TOTAL OPERATING INCOME		5812
INTEREST CHARGED TO CONSTRUCTION		168
OTHER INCOME (NET)		385
INTEREST ON LONG TERM DEBT		-1977
OTHER INTEREST CHARGES		-259
NET INCOME	$	4129

DIVIDENDS DECLARED ON COMMON STOCK	$	3598
DIVIDENDS DECLARED ON PREFERRED STOCK	$	362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF COMMON STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	9871
DEFERRED DEBITS	374
TOTAL ASSETS AND OTHER DEBITS	$ 104499

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 22488	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	9518	
RETAINED EARNINGS	10592	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		51115
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2709
TOTAL LIABILITIES AND OTHER CREDITS		$ 104499

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$ 26725
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1493
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-124
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20914
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	402
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4146

DIVIDENDS DECLARED ON COMMON STOCK	$ 3598
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF COMMON STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	10217
DEFERRED DEBITS	357
TOTAL ASSETS AND OTHER DEBITS	$ 104828

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 22488	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	9518	
RETAINED EARNINGS	10796	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		51319
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2834
TOTAL LIABILITIES AND OTHER CREDITS		$ 104828

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$ 26732
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1499
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-125
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20921
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	420
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4164

DIVIDENDS DECLARED ON COMMON STOCK	$ 3598
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF PREFERRED STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		9600
DEFERRED DEBITS		425
TOTAL ASSETS AND OTHER DEBITS		$ 104279

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	22841	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10743	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		51266
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2338
TOTAL LIABILITIES AND OTHER CREDITS		$ 104279

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 26430
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1685
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-140
INVESTMENT TAX CREDIT	614
TOTAL OPERATING EXPENSES	-20618
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	936
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4681

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 1142

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF PREFERRED STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		10589
DEFERRED DEBITS		408
TOTAL ASSETS AND OTHER DEBITS		$ 105251

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	22841	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	11591	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		52114
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2462
TOTAL LIABILITIES AND OTHER CREDITS		$ 105251

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 26726
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1494
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-124
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20915
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	405
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4149

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 1142

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF PREFERRED STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		11635
DEFERRED DEBITS		391
TOTAL ASSETS AND OTHER DEBITS		$ 106280

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	22841	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	12494	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		53017
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2588
TOTAL LIABILITIES AND OTHER CREDITS		$ 106280

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$ 26747
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1513
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-126
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20936
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	460
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4204

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 1142

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF PREFERRED STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		12740
DEFERRED DEBITS		374
TOTAL ASSETS AND OTHER DEBITS		$ 107368

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	22841	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	13454	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		53977
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2716
TOTAL LIABILITIES AND OTHER CREDITS		$ 107368

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$	26770
OPERATING EXPENSES AND MAINTENANCE		-13775
DEPRECIATION AND AMORTIZATION EXPENSE		-2759
RENT		-0
FEDERAL INCOME TAXES		-1534
OTHER TAXES		-2873
DEFERRED INCOME TAXES		-128
INVESTMENT TAX CREDIT		110
TOTAL OPERATING EXPENSES		-20959
TOTAL OPERATING INCOME		5812
INTEREST CHARGED TO CONSTRUCTION		168
OTHER INCOME (NET)		517
INTEREST ON LONG TERM DEBT		-1977
OTHER INTEREST CHARGES		-259
NET INCOME	$	4261

DIVIDENDS DECLARED ON COMMON STOCK	$	2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$	1142

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF PREFERRED STOCK ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		13908
DEFERRED DEBITS		357
TOTAL ASSETS AND OTHER DEBITS		$ 108519

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	22841	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	14475	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		54998
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2846
TOTAL LIABILITIES AND OTHER CREDITS		$ 108519

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$ 26794
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1556
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-130
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20983
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	578
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4322

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 1142

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF LONG TERM DEBT ISSUED
IN YEAR 1

HYPOTHETICAL UTILITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		9274
DEFERRED DEBITS		425
TOTAL ASSETS AND OTHER DEBITS		$ 103953

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10449	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		35630
LONG TERM DEBT		57280
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2306
TOTAL LIABILITIES AND OTHER CREDITS		$ 103953

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 26012
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1299
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-108
INVESTMENT TAX CREDIT	614
TOTAL OPERATING EXPENSES	-20200
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	936
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-3051
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3607

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF LONG TERM DEBT ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	9919
DEFERRED DEBITS	408
TOTAL ASSETS AND OTHER DEBITS	$ 104581

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10985	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36166
LONG TERM DEBT		57280
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2398
TOTAL LIABILITIES AND OTHER CREDITS		$ 104581

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 26301
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1101
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-92
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20490
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	387
INTEREST ON LONG TERM DEBT	-3051
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3057

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF LONG TERM DEBT ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	10601
DEFERRED DEBITS	391
TOTAL ASSETS AND OTHER DEBITS	$ 105246

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	11557	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36738
LONG TERM DEBT		57280
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2491
TOTAL LIABILITIES AND OTHER CREDITS		$ 105246

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$	26314
OPERATING EXPENSES AND MAINTENANCE		-13775
DEPRECIATION AND AMORTIZATION EXPENSE		-2759
RENT		-0
FEDERAL INCOME TAXES		-1113
OTHER TAXES		-2873
DEFERRED INCOME TAXES		-93
INVESTMENT TAX CREDIT		110
TOTAL OPERATING EXPENSES		-20503
TOTAL OPERATING INCOME		5812
INTEREST CHARGED TO CONSTRUCTION		168
OTHER INCOME (NET)		423
INTEREST ON LONG TERM DEBT		-3051
OTHER INTEREST CHARGES		-259
NET INCOME	$	3093

DIVIDENDS DECLARED ON COMMON STOCK	$	2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$	362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF LONG TERM DEBT ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		11321
DEFERRED DEBITS		374
TOTAL ASSETS AND OTHER DEBITS		$ 105949

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	12166	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		37347
LONG TERM DEBT		57280
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2585
TOTAL LIABILITIES AND OTHER CREDITS		$ 105949

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$ 26329
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1127
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-94
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20518
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	460
INTEREST ON LONG TERM DEBT	-3051
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3130

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF LONG TERM DEBT ISSUED
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	12082
DEFERRED DEBITS	357
TOTAL ASSETS AND OTHER DEBITS	$ 106693

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	12815	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		37996
LONG TERM DEBT		57280
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2680
TOTAL LIABILITIES AND OTHER CREDITS		$ 106693

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$ 26344
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1141
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-95
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20533
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	500
INTEREST ON LONG TERM DEBT	-3051
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3170

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A NON-CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-24747
NET UTILITY PLANT	77530
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	8093
DEFERRED DEBITS	425
TOTAL ASSETS AND OTHER DEBITS	$ 87790

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	9652	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		34833
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2282
TOTAL LIABILITIES AND OTHER CREDITS		$ 87790

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 26475
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-1457
FEDERAL INCOME TAXES	-1011
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-84
INVESTMENT TAX CREDIT	0
TOTAL OPERATING EXPENSES	-21599
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	0
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 2810

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A NON-CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT		$ 102277
ACCUMULATED DEPRECIATION		-24747
NET UTILITY PLANT		77530
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		8790
DEFERRED DEBITS		408
TOTAL ASSETS AND OTHER DEBITS		$ 88470

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10239	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		35420
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2375
TOTAL LIABILITIES AND OTHER CREDITS		$ 88470

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 26496
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-1457
FEDERAL INCOME TAXES	-1119
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-93
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-21620
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	322
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3108

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A NON-CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT		$ 102277
ACCUMULATED DEPRECIATION		-24747
NET UTILITY PLANT		77530
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		9527
DEFERRED DEBITS		391
TOTAL ASSETS AND OTHER DEBITS		$ 89190

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10865	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36046
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2469
TOTAL LIABILITIES AND OTHER CREDITS		$ 89190

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$ 26511
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-1457
FEDERAL INCOME TAXES	-1133
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-94
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-21635
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	361
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3147

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A NON-CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-24747
NET UTILITY PLANT	77530
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	10306
DEFERRED DEBITS	374
TOTAL ASSETS AND OTHER DEBITS	$ 89952

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	11531	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36712
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2565
TOTAL LIABILITIES AND OTHER CREDITS		$ 89952

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$ 26527
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-1457
FEDERAL INCOME TAXES	-1147
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-96
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-21651
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	401
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3187

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A NON-CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT		$ 102277
ACCUMULATED DEPRECIATION		-24747
NET UTILITY PLANT		77530
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		11129
DEFERRED DEBITS		357
TOTAL ASSETS AND OTHER DEBITS		$ 90758

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	12240	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		37421
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2662
TOTAL LIABILITIES AND OTHER CREDITS		$ 90758

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$ 26544
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-1457
FEDERAL INCOME TAXES	-1163
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-97
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-21668
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	444
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3230

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		7926
DEFERRED DEBITS		425
TOTAL ASSETS AND OTHER DEBITS		$ 102605

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINEC EARNINGS	9483	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		34664
LONG TERM DEBT		56927
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2277
TOTAL LIABILITIES AND OTHER CREDITS		$ 102605

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 26249
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-951
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-79
INVESTMENT TAX CREDIT	0
TOTAL OPERATING EXPENSES	-20437
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	0
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-3082
OTHER INTEREST CHARGES	-259
NET INCOME	$ 2641

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		8110
DEFERRED DEBITS		408
TOTAL ASSETS AND OTHER DEBITS		$ 102772

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	9940	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		35121
LONG TERM DEBT		56548
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2366
TOTAL LIABILITIES AND OTHER CREDITS		$ 102772

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 26270
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1072
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-89
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20458
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	313
INTEREST ON LONG TERM DEBT	-3056
OTHER INTEREST CHARGES	-259
NET INCOME	$ 2978

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		8306
DEFERRED DEBITS		391
TOTAL ASSETS AND OTHER DEBITS		$ 102951

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10434	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		35615
LONG TERM DEBT		56143
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2456
TOTAL LIABILITIES AND OTHER CREDITS		$ 102951

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$ 26284
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1085
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-90
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20472
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	323
INTEREST ON LONG TERM DEBT	-3029
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3015

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	8514
DEFERRED DEBITS	374
TOTAL ASSETS AND OTHER DEBITS	$ 103142

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10968	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36149
LONG TERM DEBT		55708
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2548
TOTAL LIABILITIES AND OTHER CREDITS		$ 103142

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$ 26301
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1100
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-92
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20489
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	334
INTEREST ON LONG TERM DEBT	-3000
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3055

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF A CAPITALIZED LEASE
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	8735
DEFERRED DEBITS	357
TOTAL ASSETS AND OTHER DEBITS	$ 103346

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	11545	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36726
LONG TERM DEBT		55242
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2641
TOTAL LIABILITIES AND OTHER CREDITS		$ 103346

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$ 26317
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1115
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-93
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20505
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	346
INTEREST ON LONG TERM DEBT	-2968
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3098

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF NO PLANT EXPANSION
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-22348
NET UTILITY PLANT	79929
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	5694
DEFERRED DEBITS	425
TOTAL ASSETS AND OTHER DEBITS	$ 87790

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	9652	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		34833
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2282
TOTAL LIABILITIES AND OTHER CREDITS		$ 87790

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 22846
OPERATING EXPENSES AND MAINTENANCE	-11978
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-0
FEDERAL INCOME TAXES	-1011
OTHER TAXES	-2498
DEFERRED INCOME TAXES	-84
INVESTMENT TAX CREDIT	0
TOTAL OPERATING EXPENSES	-17970
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	0
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 2810

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF NO PLANT EXPANSION
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-22348
NET UTILITY PLANT	79929
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	6256
DEFERRED DEBITS	408
TOTAL ASSETS AND OTHER DEBITS	$ 88335

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10108	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		35289
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2371
TOTAL LIABILITIES AND OTHER CREDITS		$ 88335

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 22816
OPERATING EXPENSES AND MAINTENANCE	-11978
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-0
FEDERAL INCOME TAXES	-1072
OTHER TAXES	-2498
DEFERRED INCOME TAXES	-89
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-17940
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	191
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 2977

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF NO PLANT EXPANSION
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-22348
NET UTILITY PLANT	79929
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	6849
DEFERRED DEBITS	391
TOTAL ASSETS AND OTHER DEBITS	$ 88911

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	10594	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		35775
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2461
TOTAL LIABILITIES AND OTHER CREDITS		$ 88911

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$ 22828
OPERATING EXPENSES AND MAINTENANCE	-11978
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-0
FEDERAL INCOME TAXES	-1083
OTHER TAXES	-2498
DEFERRED INCOME TAXES	-90
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-17952
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	221
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3007

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF NO PLANT EXPANSION
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-22348
NET UTILITY PLANT	79929
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	7476
DEFERRED DEBITS	374
TOTAL ASSETS AND OTHER DEBITS	$ 89521

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	11113	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36294
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2552
TOTAL LIABILITIES AND OTHER CREDITS		$ 89521

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$ 22840
OPERATING EXPENSES AND MAINTENANCE	-11978
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-0
FEDERAL INCOME TAXES	-1094
OTHER TAXES	-2498
DEFERRED INCOME TAXES	-91
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-17964
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	254
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3040

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF NO PLANT EXPANSION
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT	$ 102277
ACCUMULATED DEPRECIATION	-22348
NET UTILITY PLANT	79929
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	8139
DEFERRED DEBITS	357
TOTAL ASSETS AND OTHER DEBITS	$ 90167

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 13283	
PREFERRED STOCK	7499	
PREMIUM ON CAPITAL STOCK	3381	
RETAINED EARNINGS	11667	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		36848
LONG TERM DEBT		41938
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2644
TOTAL LIABILITIES AND OTHER CREDITS		$ 90167

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$ 22854
OPERATING EXPENSES AND MAINTENANCE	-11978
DEPRECIATION AND AMORTIZATION EXPENSE	-2399
RENT	-0
FEDERAL INCOME TAXES	-1107
OTHER TAXES	-2498
DEFERRED INCOME TAXES	-92
INVESTMENT TAX CREDIT	96
TOTAL OPERATING EXPENSES	-17978
TOTAL OPERATING INCOME	4876
INTEREST CHARGED TO CONSTRUCTION	146
OTHER INCOME (NET)	289
INTEREST ON LONG TERM DEBT	-1977
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3075

DIVIDENDS DECLARED ON COMMON STOCK	$ 2159
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 362

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF INVESTMENT IN THE EXISTING CAPITAL RATIO
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 1

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		9236
DEFERRED DEBITS		425
TOTAL ASSETS AND OTHER DEBITS		$ 103915

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 16044	
PREFERRED STOCK	9800	
PREMIUM ON CAPITAL STOCK	5222	
RETAINED EARNINGS	10397	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		42481
LONG TERM DEBT		50376
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2321
TOTAL LIABILITIES AND OTHER CREDITS		$ 103915

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 1

OPERATING REVENUES	$ 26201
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1473
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-123
INVESTMENT TAX CREDIT	614
TOTAL OPERATING EXPENSES	-20389
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	936
OTHER INCOME (NET)	170
INTEREST ON LONG TERM DEBT	-2568
OTHER INTEREST CHARGES	-259
NET INCOME	$ 4091

DIVIDENDS DECLARED ON COMMON STOCK	$ 2567
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 490

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF INVESTMENT IN THE EXISTING CAPITAL RATIO
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 2

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		9840
DEFERRED DEBITS		408
TOTAL ASSETS AND OTHER DEBITS		$ 104502

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 16044	
PREFERRED STOCK	9800	
PREMIUM ON CAPITAL STOCK	5222	
RETAINED EARNINGS	10878	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		42962
LONG TERM DEBT		50376
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2427
TOTAL LIABILITIES AND OTHER CREDITS		$ 104502

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 2

OPERATING REVENUES	$ 26488
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1274
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-106
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20677
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	385
INTEREST ON LONG TERM DEBT	-2568
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3538

DIVIDENDS DECLARED ON COMMON STOCK	$ 2567
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 490

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF INVESTMENT IN THE EXISTING CAPITAL RATIO
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 3

ASSETS

TOTAL UTILITY PLANT	$ 117619
ACCUMULATED DEPRECIATION	-25107
NET UTILITY PLANT	92512
OTHER PROPERTY AND INVESTMENT	1742
CURRENT AND ACCRUED ASSETS	10479
DEFERRED DEBITS	391
TOTAL ASSETS AND OTHER DEBITS	$ 105124

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 16044	
PREFERRED STOCK	9800	
PREMIUM ON CAPITAL STOCK	5222	
RETAINED EARNINGS	11393	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		43477
LONG TERM DEBT		50376
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2534
TOTAL LIABILITIES AND OTHER CREDITS		$ 105124

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 3

OPERATING REVENUES	$ 26501
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1286
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-107
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20690
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	419
INTEREST ON LONG TERM DEBT	-2568
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3572

DIVIDENDS DECLARED ON COMMON STOCK	$ 2567
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 490

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF INVESTMENT IN THE EXISTING CAPITAL RATIO
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 4

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		11154
DEFERRED DEBITS		374
TOTAL ASSETS AND OTHER DEBITS		$ 105782

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 16044	
PREFERRED STOCK	9800	
PREMIUM ON CAPITAL STOCK	5222	
RETAINED EARNINGS	11943	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		44027
LONG TERM DEBT		50376
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2642
TOTAL LIABILITIES AND OTHER CREDITS		$ 105782

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 4

OPERATING REVENUES	$ 26515
OPERATING EXPENSES AND MAINTENANCE	-13775
DEPRECIATION AND AMORTIZATION EXPENSE	-2759
RENT	-0
FEDERAL INCOME TAXES	-1299
OTHER TAXES	-2873
DEFERRED INCOME TAXES	-108
INVESTMENT TAX CREDIT	110
TOTAL OPERATING EXPENSES	-20704
TOTAL OPERATING INCOME	5812
INTEREST CHARGED TO CONSTRUCTION	168
OTHER INCOME (NET)	454
INTEREST ON LONG TERM DEBT	-2568
OTHER INTEREST CHARGES	-259
NET INCOME	$ 3607

DIVIDENDS DECLARED ON COMMON STOCK	$ 2567
DIVIDENDS DECLARED ON PREFERRED STOCK	$ 490

STATEMENTS PREPARED UNDER THE
ASSUMPTION OF INVESTMENT IN THE EXISTING CAPITAL RATIO
IN YEAR 1

HYPOTHETICAL UTILITITIES, INC.

BALANCE SHEET

DECEMBER 31, 19 + 5

ASSETS

TOTAL UTILITY PLANT		$ 117619
ACCUMULATED DEPRECIATION		-25107
NET UTILITY PLANT		92512
OTHER PROPERTY AND INVESTMENT		1742
CURRENT AND ACCRUED ASSETS		11867
DEFERRED DEBITS		357
TOTAL ASSETS AND OTHER DEBITS		$ 106478

LIABILITIES AND OTHER CREDITS

PROPRIETARY CAPITAL		
COMMON STOCK	$ 16044	
PREFERRED STOCK	9800	
PREMIUM ON CAPITAL STOCK	5222	
RETAINED EARNINGS	12530	
OTHER PAID IN CAPITAL	1018	
TOTAL PROPRIETARY CAPITAL		44614
LONG TERM DEBT		50376
CURRENT AND ACCRUED LIABILITIES		7309
DEFERRED CREDITS		799
OPERATING RESERVES		146
CONTRIBUTIONS IN AID OF CONSTRUCTION		483
DEFERRED INCOME TAXES		2751
TOTAL LIABILITIES AND OTHER CREDITS		$ 106478

HYPOTHETICAL UTILITIES, INC.

INCOME STATEMENT

FOR YEAR ENDING DECEMBER 31, 19 + 5

OPERATING REVENUES	$	26529
OPERATING EXPENSES AND MAINTENANCE		-13775
DEPRECIATION AND AMORTIZATION EXPENSE		-2759
RENT		-0
FEDERAL INCOME TAXES		-1312
OTHER TAXES		-2873
DEFERRED INCOME TAXES		-109
INVESTMENT TAX CREDIT		110
TOTAL OPERATING EXPENSES		-20718
TOTAL OPERATING INCOME		5812
INTEREST CHARGED TO CONSTRUCTION		168
OTHER INCOME (NET)		491
INTEREST ON LONG TERM DEBT		-2568
OTHER INTEREST CHARGES		-259
NET INCOME	$	3644

DIVIDENDS DECLARED ON COMMON STOCK	$	2567
DIVIDENDS DECLARED ON PREFERRED STOCK	$	490

APPENDIX B

The Questionnaire and Cover Letters

Company Code _____

Survey on Leasing by Public Utilities

1. Has your firm been a lessee in any leasing agreement during the past five years?

_____YES _____NO if no, go to 7

2. What types of assets has the firm leased?

1)

2)

3)

4)

5)

6)

3. Please supply the requested information regarding the lease commitments which your firm is presently involved in.

type of asset leased	duration of the lease	nominal owner of the asset (bank, leasing firm, etc)	cost of equipment leased	annual payment*
1)				
2)				
3)				
4)				
5)				
6)				

*If the annual payment is not level, please explain the payment structure.

4. How does the firm treat the lease payments on the financial statements presented stockholders? Check all that apply.

_____1) Capitalizes

_____2) Expensed as rent

_____3) Footnoted

_____4) Other (explain)

5. How does the firm treat the lease payments to regulatory commissions? Check all that apply.

_____1) Capitalizes

_____2) Expensed as rent

_____3) Footnoted

_____4) Other (explain)

6. How does the firm treat the lease payments on its federal income tax returns?

_____1) Capitalizes

_____2) Expensed as rent

_____3) Other (explain)

7. What is your firm's projected capital investment in dollar terms for the following calendar years or fiscal years ending in:

1972_____ 1973_____ 1974_____

Date estimation was made_____

Estimated source of funds to finance the investments:

_____% debt issuance

_____% preferred stock issuance

_____% common stock issuance

_____% leasing

_____% other

8. Does your firm anticipate leasing any assets in the next five years instead of owning the asset?

_____YES _____NO if no, go to 10

9. Why did your firm choose to lease rather than own?

type of asset to be leased	reason(s) for leasing
1)	
2)	
3)	
4)	

10. If your firm does not anticipate entering into any lease agreements as a lessee, has your firm ever considered the leasing alternative as opposed to owning the assets?

_____YES if yes, answer 11. _____NO if no, go to 12

11. What was the reason why your firm chose to own rather than lease assets?

Type of Asset	Reason(s) for not leasing
1)	
2)	
3)	

12. Do any of your firm's bond indenture agreements. . .

specify debt/equity ratios that must be maintained? YES____ NO____

limit the percentage of property mortgaged? YES____ NO____

require a minimum debt interest coverage? YES____ NO____

If yes to any of the items in #12, would these limitations affect leasing decisions? Explain.

Please place this questionnaire in the stamped, self-addressed envelope which is provided. Thank you very much for your cooperation.

INDIANA UNIVERSITY
Graduate School of Business
SCHOOL OF BUSINESS BUILDING
BLOOMINGTON, INDIANA 47401

TEL. NO. 812—337-

Dear Sir:

I would like you or a member of your staff to help in a research project of the Indiana University Graduate School of Business. The project involves my doctoral dissertation which is entitled "The Effects of Leasing On The Financial Statements, Rate Making, and Income Tax Liability In The Public Utility Industry." Financial support for the project is in the form of a Doctoral Dissertation Award from the Institute of Public Utilities.

Because leasing of assets appears to be more prevalent today in the public utility industry, accountants and financial analysts as well as the Securities and Exchange Commission and Federal Power Commission have become concerned about how the treatment of leases will affect the firm in various ways.

The enclosed questionnaire is being sent to all Class A and Class B electric companies as a method of obtaining some of the data for the project. All information obtained from the questionnaire will be kept confidential as to the firm's identity through the use of a coding system. All firms that participate will receive a summary of the questionnaire's results.

People from public accounting firms and public utility firms, as well as people from the Federal Power Commission have encouraged and supported this project. I ask for your participation so that a better understanding of leasing in the industry can evolve. I would also appreciate receiving a copy of your 1971 Annual Report.

Please return the completed questionnaire in the enclosed self-addressed envelope.

Thank you for your cooperation and help.

Sincerely,

Philip L. Kintzele

INDIANA UNIVERSITY
Graduate School of Business
SCHOOL OF BUSINESS BUILDING
BLOOMINGTON, INDIANA 47401

TEL. NO. 812—337-

Dear Sir:

Several weeks ago I sent you a short questionnaire concerning the leasing activities of public utility firms. Perhaps my first request was lost in the mail or otherwise misplaced. In any event, I have not received a reply from your firm at this time. The purpose of the questionnaire is to gather some of the data for my doctoral dissertation. All Class A and Class B electric utilities were recipients of the questionnaire.

The completion of the questionnaire should not take too much of your time or a staff member's time. Its return to me is very important for the completion of my data gathering. For your convenience a stamped, self-addressed envelope is enclosed. All information obtained will remain confidential as to the firm's identity. Firms that participate will receive a summary of the results. Another copy of the questionnaire is enclosed. If you have already returned the questionnaire please ignore this letter.

Sincerely,

Philip L. Kintzele

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Enclosure

APPENDIX C

Listing of Persons Interviewed and Corresponded With for the Development of the Questionnaire

Charles C. Chopp, General Supervisor Technical Studies Section--The Cleveland Electric Illuminating Company, Cleveland, Ohio.

L. H. Drennan, Jr., Deputy Chief Accountant--Federal Power Commission, Washington, D. C.

O. J. Peterson, Assistant Treasurer--Virginia Electric and Power Company, Richmond, Virginia.

Jay Price, Partner--Arthur Andersen & Co., Chicago, Illinois.

APPENDIX D

LISTING OF THE ELECTRIC UTILITY FIRMS COMPRISING THE QUESTIONNAIRE SURVEY SAMPLE

Charles P. Jackson, Vice President
and Treasurer
Alabama Power Company
600 North 18th Street
Birmingham, Alabama 35202

Ralph Fletcher, President and
Treasurer
Alpena Power Company
310 North Second Avenue
Alpena, Michigan 49707

Robert L. Forsberg, Vice President,
Finance and Treasurer
Arizona Public Service Company
P. O. Box 21666
Phoenix, Arizona 85036

A. B. Coen, Treasurer and Secretary
Arkansas Power and Light Company
9th and Louisiana Streets
Little Rock, Arkansas 72203

E. L. McKenzie, Treasurer
Arkansas Missouri Power Company
405 West Park Street
Blytheville, Arkansas 72315

Anthony C. Vence, Vice President
and Treasurer
Atlantic City Electric Company
1600 Pacific Avenue
Atlantic City, New Jersey 08404

F. Edward Rugemer, Vice President,
Finance
Baltimore Gas and Electric Company
Gas and Electric Building
Baltimore, Maryland 21203

T. A. Greenquist, Treasurer
Bangor Hydro-Electric Company
33 State Street
Bangor, Maine 04401

G. T. Locke, Secretary and Treasurer
Black Hills Power and Light Company
625 Ninth Street
Rapid City, South Dakota 57701

Frank R. Buckbee, Jr., Secretary
and Treasurer
Blackstone Valley Electric Company
Washington Highway
P. O. Box 1111
Lincoln, Rhode Island 02865

Joseph P. Tyrrell, Vice President
and Treasurer
Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199

R. M. Keith, Treasurer and Clerk
Brockton Edison Company
36 Main Street
Brockton, Massachusetts 02403

Ross Workman, Financial Vice President
California Pacific Utilities Company
550 California Street
San Francisco, California 94104

James S. Currie, Treasurer
Carolina Power and Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

L. W. Cross, Vice President and
Controller
Central Hudson Gas and Electric
Corporation
284 South Road Avenue
Poughkeepsie, New York 12602

E. P. Knecht, Controller
Central Illinois Light Company
300 Liberty Street
Peoria, Illinois 61602

G. R. Cook, Vice President, Finance and Secretary
Central Illinois Public Service Company
607 East Adams Street
Springfield, Illinois 62701

Wayne Jones, Comptroller
Central Kansas Power Company, Inc.
111 East 11th Street
Hays, Kansas 67601

S. O. Brame, Vice President, Finance
Central Louisiana Electric Company
415 Main Street
Pineville, Louisiana 71360

F. R. Lane, Controller
Central Power and Light Company
120 North Chaparral Street
Corpus Christi, Texas 78401

W. H. Kimball, Vice President, Finance
Central Maine Power Company
9 Green Street
Augusta, Maine 04330

W. M. Rodeck, Controller
Central Telephone and Utilities Corporation
1201 N. Street
Lincoln, Nebraska 68508

Robert E. Schill, Vice President, Finance
Central Vermont Public Service Company
77 Grove Street
Rutland, Vermont 05701

Richard A. Miller, Vice President, Finance
Celveland Electric Illuminating Company
Illuminating Building
66 Public Square
Cleveland, Ohio 44113

J. P. O'Brien, Controller
Cincinnati Gas and Electric Company
4th and Main Streets
Cincinnati, Ohio 45201

Harold Knopf, V.P. and Treasurer
Citizens Utilities Company
Ridgeway Center
Stamford, Connecticut 06905

R. A. Heimann, Controller
Columbus and Southern Ohio Electric Company
215 North Front Street
Columbus, Ohio 43215

Raymond Buchert, Treasurer
Commenwealth Edison Company
P. O. Box 767
Chicago, Illinois 60690

Russell A. Larson, Secretary and Treasurer
Commonwealth Edison Company of Indiana, Inc.
One First National Plaza
Chicago, Illinois 60690

D. R. Barnard, Treasurer
Community Public Service Company
501 West 6th Street
Fort Worth, Texas 76102

Parker C. Peterman, Controller
Consolidated Edison of New York, Inc.
4 Irving Place
New York, New York 10003

L. A. Englehardt, Comptroller
Consolidated Water Power Company
Wisconsin Rapids, Wisconsin 54494

W. E. Griffin, Secretary and Treasurer
Dallas Power and Light Company
1506 Commerce Street
Dallas, Texas 75201

R. E. McCormick, Vice President and Comptroller
Dayton Power and Light Company
25 North Main Street
Dayton, Ohio 45401

J. L. Hammond, Vice President, Finance
Delmarva Power and Light Company
600 Market Street
Wilmington, Delaware 19899

R. W. Hartwell, Vice President, Finance
Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

R. E. Frazer, Treasurer
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28202

J. A. Knepper, Treasurer and Controller
Duquesne Light Company
435 Sixth Avenue
Pittsburgh, Pennsylvania 15219

W. R. Gregory, Controller, Vice President Finance
Edison Sault Electric Company
725 East Portage Avenue
Sault St. Marie, Michigan 49783

Dennis Lane, President
El Paso Electric Company
215 North Stanton Street
El Paso, Texas 79901

V. H. Clark, Secretary and Treasurer
Electric Energy, Inc.
P. O. Box 165
Joppa, Illinois 62953

Byron Mueller, Treasurer
Empire District Electric Company
602 Joplin Street
Joplin, Missouri 64801

J. G. Loader, Secretary and Treasurer
Florida Power Corporation
101 5th Street, S.
St. Petersburg, Florida 33733

C. R. Place, Secretary and Treasurer
Fall River Electric Light Company
85 North Main Street
Fall River, Massachusetts 02722

B. Edward Wood, Treasurer
Florida Power and Light Company
P. O. Box 3100
Miami, Florida 33101

E. J. Patterson, Vice President and Treasurer
Florida Public Utilities Company
401 South Dixie Street
West Palm Beach, Florida 33401

H. B. Wansley, Financial Vice President
Georgia Power Company
270 Peachtree St., N.W.
Atlanta, Georgia 30303

T. C. Couser, Treasurer
Granite State Electric Company
65 North Park Street
Lebanon, New Hampshire 03766

J. F. Sturzenberger, Vice President, Finance
Green Mountain Power Corporation
1 Main Street
Burlington, Vermont 05401

E. A. Lupberger, Secretary and Treasurer
Gulf Power Company
75 North Pace Boulevard
Pensacola, Florida 32502

E. L. Bailey, Treasurer
Gulf States Utilities Company
285 Liberty Avenue
Beaumont, Texas 77701

A. F. Ing, Treasurer
Hawaiian Electric Company, Inc.
900 Richards Street
Honolulu, Hawaii 96813

M. A. Smith, Secretary and Comptroller
Home Light and Power Company
810 9th Street
Greely, Colorado 80631

H. R. Dean, Vice President and Comptroller
Houston Lighting and Power Company
611 Walker Avenue
Houston, Texas 77002

M. M. Ilch, Vice President and Treasurer
Idaho Power Company
1220 Idaho Street
Boise, Idaho 83701

D. F. Meek, Secretary and Treasurer
Illinois Power Company
500 South 27th Street
Decatur, Illinois 62525

C. Perry Griffith, President, Finance
Indianapolis Power and Light Company
25 Monument Circle
Indianapolis, Indiana 46206

F. C. Meyer, Controller
Interstate Power Company
1000 Main Street
Dubuque, Iowa 52001

J. B. Rehnstrom, Treasurer
Iowa Electric Light and Power Company
P. O. Box 351
Cedar Rapids, Iowa 52406

G. G. Gilchrist, Secretary and Treasurer
Iowa Power and Light Company
823 Walnut Street
Des Moines, Iowa 50303

E. K. Corporon, Vice President and Treasurer
Iowa Public Service Company
Orpheum Electric Building
Sioux City, Iowa 51102

R. E. Rich, Treasurer and Secretary
Iowa Southern Utilities
300 Sheridan Avenue
Centerville, Iowa 52544

D. H. Shaw, Treasurer
Iowa-Illinois Gas and Electric Company
206 East Second Street
Davenport, Iowa 52801

J. S. Burchell, Comptroller
Jersey Central Power and Light Company
Madison Avenue at Punch Bowl Road
Morristown, New Jersey 07960

Kenneth Hovland, Sr. Vice President and Treasurer
Kansas City Power and Light Company
1330 Baltimore Avenue
Kansas City, Missouri 64141

W. B. Walker, Secretary and Controller
Kansas Gas and Electric Company
P. O. Box 208
Wichita, Kansas 67201

H. F. Schuster, Comptroller
Kansas Power and Light Company
818 Kansas Avenue
Topeka, Kansas 66612

A. C. Stewart, Vice President, Finance
Kentucky Utilities Company
120 South Limestone Street
Lexington, Kentucky 40507

G. M. Bashara, Secretary and Treasurer
Lake Superior District Power Company
101 West Second Street
Ashland, Wisconsin 54806

Fred C. Eggerstedt, Jr., Senior Vice President and Treasurer
Long Island Lighting Company
250 Old Country Road
Mineola, New York 11501

J. H. Erwin, Jr., Treasurer
Louisiana Power and Light Company
142 Delaronde Street
New Orleans, Louisiana 70114

H. J. Anderson, Vice President, Accounting
Louisville Gas and Electric Company
311 West Chestnut Street
Louisville, Kentucky 40201

William A. McNamara, Vice President, Finance
Madison Gas and Electric Company
100 North Fairchild Street
Madison, Wisconsin 53701

F. E. Livingston, Secretary and Treasurer
Maine Public Service Co.
209 State Street
Presque Isle, Maine 04769

G. J. Schneider, Vice President, Finance
Metropolitan Edison Company
Box 542
Reading, Pennsylvania 19603

L. P. Modeen, Vice President, Finance
Minnesota Power and Light Company
30 West Superior Street
Duluth, Minnesota 55802

W. R. Casper, Treasurer
Mississippi Power and Light Company
Electric Building
Jackson, Mississippi 39201

K. M. Ezell, Controller and Treasurer
Mississippi Power Company
2992 West Beach
Gulfport, Mississippi 39501

H. Jones, Secretary and Treasurer
Missouri Edison Company
202 South Third Street
Louisiana, Missouri 63353

C. L. Hitt, Vice President, Accounting
Missouri Power and Light Company
101 Madison Street
Jefferson City, Missouri 65101

Kelly Williams, Vice President, Accounting, and Secretary
Missouri Public Service Company
10700 East 50th Highway
Kansas City, Missouri 64138

M. R. Lansmon, Treasurer
Missouri Utilities Company
400 Broadway
Cape Girardeau, Missouri 63701

J. J. Harrington, Vice President and Treasurer
Montana Power Company
40 East Broadway
Butte, Montana 59701

B. H. Thompson, Vice President and Treasurer
Montana Dakota Utilities Company
400 North 4th Street
Bismarck, North Dakota 58501

E. H. Eddleston, Treasurer
Montaup Electric Company
P. O. Box 391
Fall River, Massachusetts 02722

M. H. Fridrich, Treasurer
Mt. Carmel Public Utility Company
316 Market Street
Mt. Carmel, Illinois 62863

A. E. Pearson, Senior Vice President and Treasurer
Nevada Power Company
4th and Stewart Streets
Las Vegas, Nevada 89101

C. C. Matthews, Jr., Secretary and Treasurer
New Mexico Electric Service Company
520 Broadmoor Building
Hobbs, New Mexico 88240

A. J. Brodtmann, Vice President, Finance
New Orleans Public Service, Inc.
317 Beronne St.
New Orleans, Louisiana 70160

R. A. Jacobson, Comptroller
New York State Electric and Gas Corporation
P. O. Box 287
Ithaca, New York 14850

William P. Shreenan, Treasurer
Newport Electric Corporation
45 Long Wharf Mall
Newport, Rhode Island 02840

John G. Haehl, Jr., Vice President, Finance
Niagara Mohawk Power Corporation
300 Erie Boulevard
West Syracuse, New York 13202

A. H. Petersen, Controller
Northern Indiana Public Service Company
5265 Hohman Avenue
Hammond, Indiana 46320

Clayton K. Larson, Vice President, Finance
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

J. L. Carroll, Vice President and Treasurer
Northern States Power Company
100 North Barstow Street
Eau Claire, Wisconsin 54701

E. H. Minske, Treasurer
Northwestern Public Service Company
Huron, South Dakota 57350

R. C. Murdoch, Comptroller
Ohio Edison Company
47 North Main Street
Akron, Ohio 44308

J. G. Cartwright, Controller
Oklahoma Gas and Electric Company
321 North Harvey Avenue
Oklahoma City, Oklahoma 73101

Ralph E. Trower, Treasurer
Orange and Rockland Utilities, Inc.
125 High Street
Boston, Massachusetts 02110

H. C. Johnson, Vice President and Treasurer
Otter Tail Power Company
215 South Cascade Street
Fergus Falls, Minnesota 56537

T. N. Ward, Vice President, Secretary, and Treasurer
Ohio Valley Electric Corporation
P. O. Box 468
Piketon, Ohio 45661

D. L. Bell, Vice President, Finance
Pacific Gas and Electric Company
245 Market Street
San Francisco, California 94106

John H. Geiger, Vice President and Treasurer
Pacific Power and Light Company
920 S.W. 6th Avenue
Portland, Oregon 97204

Russell C. Bartle, Comptroller
Pennsylvania Electric Company
1001 Broad Street
Johnstown, Pennsylvania 15907

R. R. Fortune, Vice President, Finance
Pennsylvania Power and Light Company
901 Hamilton Street
Allentown, Pennsylvania 18101

William Robinson, Treasurer
Pennsylvania Power Company
1 East Washington Street
New Castle, Pennsylvania 16101

John H. Austin, Jr., Vice President, Finance and Accounting
Philadelphia Electric Company
1000 Chestnut Street
Philadelphia, Pennsylvania 19105

Theodore Fryou, Treasurer and Controller
Portland General Electric Company
621 S.W. Alder Street
Portland, Oregon 97205

A. M. Creed, Comptroller
Potomac Edison Company
Downsville Pike
Hagerstown, Maryland 21740

H. Lowell Davis, Vice President and Controller
Potomac Electric Power Company
929 E. Street N.W.
Washington, D. C. 20004

R. D. Speer, Sr. Vice President, Finance and Treasurer
Public Service Company of Colorado
550-15th Street
Denver, Colorado 80202

V. R. Rehnstrom, Vice President and Comptroller
Public Service Company of Indiana, Inc.
1000 East Main Street
Plainfield, Indiana 46168

Jack N. Watts, Vice President
and Treasurer
Southwestern Electric Power Company
428 Travis Street
Shreveport, Louisiana 71101

L. L. Bobo, Vice President and
Treasurer
Southwestern Electric Service Company
214 East Rusk Street
Jacksonville, Texas

A. D. Sebastian, Comptroller
Southwestern Public Service Company
720 Mercantile Dallas Building
Dallas, Texas 75201

J. H. Lindsay, Vice President,
Secretary, and Treasurer
Superior Water Light and Power
Company
1230 Tower Avenue
Superior, Wisconsin 54881

J. K. Taggart, Treasurer
Tampa Electric Company
P. O. Box 111
Tampa, Florida 33601

Frederick Rogers, Vice President
and Treasurer
Texas Electric Service Company
Seventh and Lamar Streets
Fort Worth, Texas 76102

H. O. Weatherbee, Jr., Treasurer
Texas Power and Light Company
Fidelity Union Life Building
Dallas, Texas 75201

T. A. Kostanski, Controller
Toledo Edison Company
300 Madison Avenue
Toledo, Ohio 43652

W. D. Brooks, Vice President and
Treasurer
Tucson Gas and Electric Company
220 West 6th Street
Tucson, Arizona 85702

Edward H. Dickol, Vice President
Finance and Treasurer
U.G.I. Corporation
1401 Arch Street
Philadelphia, Pennsylvania 19105

M. J. Welshans, Vice President,
Finance
Union Electric Company
One Memorial Drive
St. Louis, Missouri 63166

Eugene J. Rosazza, Vice President,
Finance and Accounting
The United Illuminating Company
80 Temple Street
New Haven, Connecticut 06506

D. M. Monroe, Vice President
Finance, Secretary and Treasurer
Upper Peninsula Power Company
616 Shelden Avenue
Houghton, Michigan 49931

D. L. Broussard, Vice President,
Finance, Secretary, and Treasurer
Utah Power and Light Company
1407 West North Temple Street
Salt Lake City, Utah 84116

G. A. Spence, Treasurer
Virginia Electric and Power
Company
700 East Franklin Street
Richmond, Virginia 23216

J. M. Coombs, Treasurer
Washington Water Power Company
E. 1411 Mission Avenue
Spokane, Washington 99202

W. L. Wagner, Comptroller
West Penn Power Company
Cabin Hill
Greensburg, Pennsylvania 15601

J. C. Crownover, Vice President
and Treasurer
West Texas Utility Company
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Cheyenne, Wyoming 82001

APPENDIX E

COMPUTER PROGRAM

```
      PROGRAM HYPUTL(INPUT,OUTPUT)
C     ****************************************************************
C
C     LIST OF VARIABLES
C
C        TUP = TOTAL UTILITY PLANT
C     ACCDEP = ACCUMULATED DEPRECIATION
C        NUP = NET UTILITY PLANT
C      OPINV = OTHER PROPERTY AND INVESTMENT
C      CACAS = CURRENT AND ACCRUED ASSETS
C         DD = DEFERRED DEBITS
C         TA = TOTAL ASSETS AND OTHER DEBITS
C         CS = COMMON STOCK
C         PS = PREFERRED STOCK
C     PREMCS = PREMIUM ON CAPITAL STOCK
C         RE = RETAINED EARNINGS
C       OPIC = OTHER PAID IN CAPITAL
C        TPC = TOTAL PROPRIETARY CAPITAL
C        LTD = LONG TERM DEBT
C       CACL = CURRENT AND ACCRUED LIABILITIES
C         DC = DEFERRED CREDITS
C       ORES = OPERATING RESERVES
C      CIATC = CONTRIBUTIONS IN AID TO CONSTRUCTION
C      DITBS = DEFERRED INCOME TAXES--BALANCE SHEET
C         TL = TOTAL LIABILITIES AND OTHER CREDITS
C      OPREV = OPERATING REVENUES
C      OPEXP = OPERATING EXPENSES AND MAINTENANCE
C        DEP = DEPRECIATION AND AMORTIZATION EXPENSE
C        FIT = FEDERAL INCOME TAXES
C       OTAX = OTHER TAXES
C      DITIS = DEFERRED INCOME TAXES--INCOME STATEMENT
C        ITC = INVESTMENT TAX CREDIT
C     TOPEXP = TOTAL OPERATING EXPENSES
C     TOPINC = TOTAL OPERATING INCOME
C     CONINT = INTEREST TO CONSTRUCTION
C        OINC = OTHER INCOME (NET)
C     INTLTD = INTEREST ON LONG TERM DEBT
C      OINTC = OTHER INTEREST CHARGES
C         NI = NET INCOME
C       DDPS = DIVIDENDS DECLARED ON PREFERRED STOCK
C       DDCS = DIVIDENDS DECLARED ON COMMON STOCK
C         RT = RENT
C
C     ****************************************************************
C
C     LIST OF SUBROUTINES
C
C      ICS = STATEMENTS PREPARED ASSUMING ISSUANCE OF COMMON STOCK
C      IPS = STATEMENTS PREPARED ASSUMING ISSUANCE OF PREFERRED STOCK
C     ILTD = STATEMENTS PREPARED ASSUMING ISSUANCE OF LONG TERM DEBT
C      LNC = STATEMENTS PREPARED ASSUMING LEASES NOT CAPITALIZED
C       LC = STATEMENTS PREPARED ASSUMING LEASES CAPITALIZED
C      INTL = STATEMENTS PREPARED ASSUMING NO PLANT EXPANSION
C       ECS = STATEMENTS PREPARED ASSUMING EXISTING CAPITAL STRUCTURE
C
```

```
PROGRAM     HYPUTL     R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
C     ***************************************************************
      REAL NUP,OPINV,OPIC,LTD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      COMMON RT
      IYR = 0
      KNT = 0
      IKNT = 0
      J = 0
C
C     READ INITIAL VALUES OF PARAMETERS
C
   50 READ 1,TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,RT
    1 FORMAT(8(F10.0))
      IF(KNT .EQ. 0) GO TO 2
   60 IF(KNT .EQ. 1) GO TO 4
      IF(KNT .EQ. 2) GO TO 5
      IF(KNT .EQ. 3) GO TO 6
      IF(KNT .EQ.4) GO TO 7
      IF(KNT .EQ. 5) GO TO 8
      IF(KNT .EQ. 6) GO TO 9
      IF(KNT .EQ. 7) GO TO 10
    4 CALL ICS
      PRINT 301
  301 FORMAT(1H1,15X*STATEMENTS PREPARED UNDER THE*)
      PRINT 302
  302 FORMAT(1H ,15X*ASSUMPTION OF COMMON STOCK ISSUED*)
      PRINT 303
  303 FORMAT(1H ,15X*IN YEAR 1*//)
      IYR = IYR+1
      GO TO 2
    5 CALL IPS
      PRINT 301
      PRINT 305
  305 FORMAT(1H ,15X*ASSUMPTION OF PREFERRED STOCK ISSUED*)
      PRINT 303
      IYR = IYR+1
      GO TO 2
    6 CALL ILTD
      PRINT 301
      PRINT 308
  308 FORMAT(1H ,15X*ASSUMPTION OF LONG TERM DEBT ISSUED*)
      PRINT 303
      IYR = IYR+1
      GO TO 2
    7 CALL LNC
      PRINT 301
      PRINT 311
  311 FORMAT(1H ,15X*ASSUMPTION OF A NON-CAPITALIZED LEASE*)
      PRINT 303
      IYR = IYR+1
      GO TO 2
```

```
PROGRAM    HYPUTL    R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
      8 CALL LC
        PRINT 301
        PRINT 314
    314 FORMAT(1H ,15X*ASSUMPTION OF A CAPITALIZED LEASE*)
        PRINT 303
        IYR = IYR+1
        GO TO 2
      9 CALL INTL
        PRINT 301
        PRINT 317
    317 FORMAT(1H ,15X*ASSUMPTION OF NO PLANT EXPANSION*)
        PRINT 303
        IYR = IYR+1
        GO TO 2
     10 CALL ECS
        PRINT 301
        PRINT 320
    320 FORMAT(1H ,15X*ASSUMPTION OF INVESTMENT IN THE EXISTING CAPITAL RA
       1TIO*)
        PRINT 303
        IYR = IYR+1
        GO TO 2
      2 CONTINUE
        IF(KNT .EQ. 0) PRINT 300
    300 FORMAT(1H1,15X*INITIAL STATEMENTS*//)
        PRINT 200,IYR
    200 FORMAT(1H0,34X,*HYPOTHETICAL UTILITIES, INC.*//,35X,*BALANCE SHE
       1ET*//,35X,*DECEMBER 31, 19 + *,I1)
        PRINT 201
    201 FORMAT(1H0,38X,*ASSETS*/,39X,*-------*)
        PRINT 100,TUP
    100 FORMAT(1H0,16X*TOTAL UTILITY PLANT*,32X,*$*,J9)
        IF(ACCDEP .GT. 0.0) ACCDEP=ACCDEP*(-1.0)
        PRINT 101,ACCDEP
    101 FORMAT(1H ,16X*ACCUMULATED DEPRECIATION*,27X,J10/,68X,*----------*
       1)
        PRINT 102,NUP
    102 FORMAT(1H ,16X*NET UTILITY PLANT*,34X,J10)
        PRINT 103,OPINV
    103 FORMAT(1H ,16X*OTHER PROPERTY AND INVESTMENT*,22X,J10)
        PRINT 104,CACAS
    104 FORMAT(1H ,16X*CURRENT AND ACCRUED ASSETS*,25X,J10)
        PRINT 105,DD
    105 FORMAT(1H ,16X*DEFERRED DEBITS*,36X,J10/,68X,*----------*)
        PRINT 106,TA
    106 FORMAT(1H ,16X*TOTAL ASSETS AND OTHER DEBITS*,22X,*$*,J9/,68X,*==
       1==========*)
        PRINT 202
    202 FORMAT(1H0,30X,*LIABILITIES AND OTHER CREDITS*/,31X,*---------- -
       1-- ---- ------*)
        PRINT 203
    203 FORMAT(1H0,16X*PROPRIETARY CAPITAL*,32X)
        PRINT 107,CS
    107 FORMAT(1H0,18X*COMMON STOCK*,27X,*$*,J9)
        PRINT 108,PS
```

```
PROGRAM     HYPUTL     R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/1
      108 FORMAT(1H ,18X*PREFERRED STOCK*,24X,J10)
          PRINT 109,PREMCS
      109 FORMAT(1H ,18X*PREMIUM ON CAPITAL STOCK*,15X,J10)
          PRINT 110,RE
      110 FORMAT(1H ,18X*RETAINED EARNINGS*,22X,J10)
          PRINT 111,OPIC
      111 FORMAT(1H ,18X*OTHER PAID IN CAPITAL*,18X,J10/,58X,*----------*)
          PRINT 112,TPC
      112 FORMAT(1H ,16X*TOTAL PROPRIETARY CAPITAL*,26X,J10)
          PRINT 113,LTD
      113 FORMAT(1H ,16X*LONG TERM DEBT*,37X,J10)
          PRINT 114,CACL
      114 FORMAT(1H ,16X*CURRENT AND ACCRUED LIABILITIES*,20X,J10)
          PRINT 115,DC
      115 FORMAT(1H ,16X*DEFERRED CREDITS*,35X,J10)
          PRINT 116,ORES
      116 FORMAT(1H ,16X*OPERATING RESERVES*,33X,J10)
          PRINT 117,CIATC
      117 FORMAT(1H ,16X*CONTRIBUTIONS IN AID OF CONSTRUCTION*,15X,J10)
          PRINT 118,DITBS
      118 FORMAT(1H ,16X*DEFERRED INCOME TAXES*,30X,J10/,68X,*----------*)
          PRINT 119,TL
      119 FORMAT(1H ,16X*TOTAL LIABILITIES AND OTHER CREDITS*,16X,*$*,J9/,68
         1X,*==========*)
          PRINT 250,IYR
      250 FORMAT(1H1,36X,,*HYPOTHETICAL UTILITIES, INC.*//,35X,*INCOME STATE
         1MENT*//,35X,*FOR YEAR ENDING DECEMBER 31, 19 + *,I1)
          PRINT 150,OPREV
      150 FORMAT(1HO,16X*OPERATING REVENUES*,33X,*$*,J9/,68X,*==========*)
          IF(OPEXP .GT. 0.0) OPEXP=OPEXP*(-1.0)
          PRINT 151,OPEXP
      151 FORMAT(1H ,16X*OPERATING EXPENSES AND MAINTENANCE*,17X,J10)
          IF(DEP .GT. 0.0) DEP=DEP*(-1.0)
          PRINT 152,DEP
      152 FORMAT(1H ,16X*DEPRECIATION AND AMORTIZATION EXPENSE*,14X,J10)
          IF(RT .GT. 0.0) RT=RT*(-1.0)
          PRINT 1525,RT
     1525 FORMAT(1H ,16X*RENT*,47X,J10)
          IF(FIT .GT. 0.0) FIT=FIT*(-1.0)
          PRINT 153,FIT
      153 FORMAT(1H ,16X*FEDERAL INCOME TAXES*,31X,J10)
          IF(OTAX .GT. 0.0) OTAX=OTAX*(-1.0)
          PRINT 154,OTAX
      154 FORMAT(1H ,16X*OTHER TAXES*,40X,J10)
          IF(DITIS .GT. 0.0) DITIS=DITIS*(-1.0)
          PRINT 155,DITIS
      155 FORMAT(1H ,16X*DEFERRED INCOME TAXES*,30X,J10)
          IF(KNT .EQ.0) ITC = ITC*(-1.0)
          PRINT 156,ITC
      156 FORMAT(1H ,16X*INVESTMENT TAX CREDIT*,30X,J10/,68X,*==========*)
          IF(TOEXP .GT. 0.0) TOEXP=TOEXP*(-1.0)
          PRINT 157,TOEXP
      157 FORMAT(1H ,16X*TOTAL OPERATING EXPENSES*,27X,J10/,68X,*==========*
         1)
          PRINT 158,TOPINC
```

```
PROGRAM      HYPUTL     R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
      158 FORMAT(1H ,16X*TOTAL OPERATING INCOME*,29X,J10)
          PRINT 159,CONINT
      159 FORMAT(1H ,16X*INTEREST CHARGED TO CONSTRUCTION*,19X,J10)
          PRINT 160,OINC
      160 FORMAT(1H ,16X*OTHER INCOME (NET)*,33X,J10)
          IF(INTLTD .GT. 0.0) INTLTD=INTLTD*(-1.0)
          PRINT 161,INTLTD
      161 FORMAT(1H ,16X*INTEREST ON LONG TERM DEBT*,25X,J10)
          IF(OINTC .GT. 0.0) OINTC=OINTC*(-1.0)
          PRINT 162,OINTC
      162 FORMAT(1H ,16X*OTHER INTEREST CHARGES*,29X,J10/,68X,*----------*)
          PRINT 163,NI
      163 FORMAT(1H ,16X*NET INCOME*,41X,*$*,J9/,68X,*==========*)
          PRINT 164,DDCS
      164 FORMAT(1H0,////17X*DIVIDENDS DECLARED ON COMMON STOCK*,17X,*$*,J9)
          PRINT 165,DDPS
      165 FORMAT(1H0,16X*DIVIDENDS DECLARED ON PREFERRED STOCK*,14X,*$*,J9)
          IF(IKNT .EQ. 0) KNT = KNT+1
          IKNT = IKNT+1
          IF(IKNT .LE. 5) GO TO 60
          KNT = KNT+1
          IKNT = 1
          IYR = 0
          J = J+1
          IF(J .LT. 7) GO TO 50
          STOP
          END
```

```
      SUBROUTINE ICS
      REAL NUP,OPINV,OPIC,LTD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      INVST = TUP*.15
      TUP = TUP+INVST
      NUP = TUP-ACCDEP
      CS = CS+(.60*INVST)
      PREMCS = PREMCS+(.40*INVST)
      IPREMCS = PREMCS*.5
      PREMCS = IPREMCS
      ITC = .04*INVST
      CONINT = .061*INVST
      TOPINC = .061*NUP
    1 CONTINUE
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP+DEP)
      OINC = SOINC+DIF
    7 CONTINUE
      IF(IKNT .GE. 2) CONINT = .061*INVST
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      IF(IKNT .GE. 2) GO TO 2
      OPEXP = OPEXP*1.15
      IOPEXP = OPEXP+.5
       OPEXP = IOPEXP
      DEP = DEP*1.15
        IDEP = DEP+.5
         DEP = IDEP
    2 CONTINUE
      FIT = .36*NI
        IFIT = FIT+.5
         FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
      OTAX = OTAX*1.15
       IOTAX = OTAX+.5
        OTAX = IOTAX
    3 CONTINUE
      IF(IKNT .GE. 2) DITIS = 0.0
      DITIS = .03*NI
```

```
SUBROUTINE ICS        R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX
      OPREV = TOPINC+TOEXP
      DDCS = CS*.16
      IF(IKNT .GE. 2) GO TO 4
      ACCDEP = ACCDEP+DEP
      IACCDEP = ACCDEP+.5
      ACCDEP = IACCDEP
    4 CONTINUE
      NUP = TUP-ACCDEP
      INUP = NUP+.5
      NUP = INUP
      RE = RE+NI-DDCS-DDPS
      IRE = RE+.5
      RE = IRE
      IF(IKNT .GE. 2) GO TO 5
      ICACL = CACL+.5
      CACL = ICACL
    5 CONTINUE
      DITBS = DITBS+DITIS
      IDITBS = DITBS+.5
      DITBS = IDITBS
      TPC = CS+PS+PREMCS+RE+OPIC
      ITPC = TPC+.5
      TPC = ITPC
      ILTD = LTD+.5
      LTD = ILTD
      TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
      ITL = TL+.5
      TL = ITL
      IF(IKNT .EQ. 2) DDD = DD*.04
      IF(IKNT .GE. 2) DD = DD-DDD
      CACAS = TL-NUP-OPINV-DD
      ICACAS = CACAS+.5
      CACAS = ICACAS
      DIF = (CACAS-SCACAS)*.055
      TA = NUP+OPINV+CACAS+DD
      ITA = TA+.5
      TA = ITA
      RETURN
      END
```

```
      SUBROUTINE IPS
      REAL NUP,OPINV,OPIC,ITD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(ITC .LT. 0.0) ITC=ITC*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      INVST = TUP*.15
      TUP = TUP+INVST
      NUP = TUP-ACCDEP
      PS = PS+INVST
      IPREMCS = PREMCS*.5
      PREMCS = IPREMCS
      ITC = .04*INVST
      CONINT = .061*INVST
      TOPINC = .061*NUP
    1 CONTINUE
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP+DEP)
      OINC = SOINC+DIF
    7 CONTINUE
      IF(IKNT .GE. 2) CONINT = .061*INVST
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      IF(IKNT .GE. 2) GO TO 2
      OPEXP = OPEXP*1.15
      IOPEXP = OPEXP+.5
       OPEXP = IOPEXP
      DEP = DEP*1.15
        IDEP = DEP+.5
         DEP = IDEP
    2 CONTINUE
      FIT = .36*NI
        IFIT = FIT+.5
         FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
      OTAX = OTAX*1.15
      IOTAX = OTAX+.5
        OTAX = IOTAX
    3 CONTINUE
      IF(IKNT .GE. 2) DITIS = 0.0
      DITIS = .03*NI
```

```
SUBROUTINE IPS        R *=*/                    CDC 6600 FTN V3.0-P382 OPT=1  05/1
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX
      OPREV = TOPINC+TOEXP
      DDPS = PS*.05
      IF(IKNT .GE. 2) GO TO 4
      ACCDEP = ACCDEP+DEP
      IACCDEP = ACCDEP+.5
      ACCDEP = IACCDEP
    4 CONTINUE
      NUP = TUP-ACCDEP
      INUP = NUP+.5
      NUP = INUP
      RE = RE+NI-DDCS-DDPS
      IRE = RE+.5
      RE = IRE
      IF(IKNT .GE. 2) GO TO 5
      ICACL = CACL+.5
      CACL = ICACL
    5 CONTINUE
      DITBS = DITBS+DITIS
      IDITBS = DITBS+.5
      DITBS = IDITBS
      TPC = CS+PS+PREMCS+RE+OPIC
      ITPC = TPC+.5
      TPC = ITPC
      ILTD = LTD+.5
      LTD = ILTD
      TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
      ITL = TL+.5
      TL = ITL
      IF(IKNT .EQ. 2) DDD = DD*.04
      IF(IKNT .GE. 2) DD = DD-DDD
      CACAS = TL-NUP-OPINV-DD
      ICACAS = CACAS+.5
      CACAS = ICACAS
      DIF = (CACAS-SCACAS)*.055
      TA = NUP+OPINV+CACAS+DD
      ITA = TA+.5
      TA = ITA
      RETURN
      END
```

```
SUBROUTINE ILTD      R *=*/                          CDC 6600 FTN V3.0-P332 OPT=1  05/1
      SUBROUTINE ILTD
      REAL NUP,OPINV,OPIC,LTD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(ITC .LT. 0.0) ITC=ITC*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      INVST = TUP*.15
      TUP = TUP+INVST
      NUP = TUP-ACCDEP
      LTD = LTD+INVST
      INTLTD = INTLTD+(.07*INVST)
      IDD = DD+.5
      DD = IDD
      ITC = .04*INVST
      CONINT = .061*INVST
      TOPINC = .061*NUP
    1 CONTINUE
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP+DEP)
      OINC = SOINC+DIF
    7 CONTINUE
      IF(IKNT .GE. 2) CONINT = .061*INVST
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      IF(IKNT .GE. 2) GO TO 2
      OPEXP = OPEXP*1.15
      IOPEXP = OPEXP+.5
       OPEXP = IOPEXP
      DEP = DEP*1.15
        IDEP = DEP+.5
         DEP = IDEP
    2 CONTINUE
      FIT = .36*NI
        IFIT = FIT+.5
         FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
      OTAX = OTAX*1.15
      IOTAX = OTAX+.5
        OTAX = IOTAX
    3 CONTINUE
      IF(IKNT .GE. 2) DITIS = 0.0
```

```
SUBROUTINE  ILTD      R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
      DITIS = .03*NI
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX
      OPREV = TOPINC+TOEXP
      IF(IKNT .GE. 2) GO TO 4
      ACCDEP = ACCDEP+DEP
      IACCDEP = ACCDEP+.5
      ACCDEP = IACCDEP
    4 CONTINUE
      NUP = TUP-ACCDEP
      INUP = NUP+.5
      NUP = INUP
      RE = RE+NI-DDCS-DDPS
      IRE = RE+.5
      RE = IRE
      IF(IKNT .GE. 2) GO TO 5
      ICACL = CACL+.5
      CACL = ICACL
    5 CONTINUE
      DITBS = DITBS+DITIS
      IDITBS = DITBS+.5
      DITBS = IDITBS
      TPC = CS+PS+PREMCS+RF+OPIC
      ITPC = TPC+.5
      TPC = ITPC
      TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
      ITL = TL+.5
      TL = ITL
      IF(IKNT .EQ. 2) DDD  = DD*.04
      IF(IKNT .GE. 2) DD = DD-DDD
      CACAS = TL-NUP-OPINV-DD
      ICACAS = CACAS+.5
      CACAS = ICACAS
      DIF = (CACAS-SCACAS)*.055
      TA = NUP+OPINV+CACAS+DD
      ITA = TA+.5
      TA = ITA
      RETURN
      END
```

```
      SUBROUTINE LNC
      REAL NUP,OPINV,OPIC,ITD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      COMMON RT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(ITC .LT. 0.0) ITC=ITC*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(RT .LT. 0.0) RT=RT*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      INVST = TUP*.15
      RT = .095*INVST
      ITC = 0.0
      CONINT = 0.0
      TOPINC = .061*NUP
    1 CONTINUE
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP+DEP)
      CONINT = .061*INVST
      OINC = SOINC+DIF
    7 CONTINUE
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      IF(IKNT .GE. 2) GO TO 2
      OPEXP = OPEXP*1.15
      IOPEXP = OPEXP+.5
       OPEXP = IOPEXP
        IDEP = DEP+.5
         DEP = IDEP
    2 CONTINUE
      FIT = .36*NI
        IFIT = FIT+.5
         FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
      OTAX = OTAX*1.15
      IOTAX = OTAX+.5
        OTAX = IOTAX
    3 CONTINUE
      IF(IKNT .GE. 2) DITIS = 0.0
      DITIS = .03*NI
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX+RT
```

```
SUBROUTINE  LNC        R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
                OPREV = TOPINC+TOEXP
                IF(IKNT .GE. 2) GO TO 4
                ACCDEP = ACCDEP+DEP
                IACCDEP = ACCDEP+.5
                ACCDEP = IACCDEP
              4 CONTINUE
                NUP = TUP-ACCDEP
                INUP = NUP+.5
                NUP = INUP
                RE = RE+NI-DDCS-DDPS
                IRE = RE+.5
                RE = IRE
                IF(IKNT .GE. 2) GO TO 5
                ICACL = CACL+.5
                CACL = ICACL
              5 CONTINUE
                DITBS = DITBS+DITIS
                IDITBS = DITBS+.5
                DITBS = IDITBS
                TPC = CS+PS+PREMCS+RE+OPIC
                ITPC = TPC+.5
                TPC = ITPC
                TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
                ITL = TL+.5
                TL = ITL
                IF(IKNT .EQ. 2) DDD = DD*.04
                IF(IKNT .GE. 2) DD = DD-DDD
                CACAS = TL-NUP-OPINV-DD
                ICACAS = CACAS+.5
                CACAS = ICACAS
                DIF = (CACAS-SCACA)*.055
                TA = NUP+OPINV+CACAS+DD
                ITA = TA+.5
                TA = ITA
                RETURN
                END
```

```
      SUBROUTINE LC
      REAL NUP,OPINV,OPIC,LTD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(ITC .LT. 0.0) ITC=ITC*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      INVST = TUP*.15
      IF(IKNT .EQ. 1) INVSTX = INVST
      TUP = TUP+INVST
      NUP = TUP-ACCDEP
      LTD = LTD+INVST
      IDD = DD+.5
      DD = IDD
      ITC = 0.0
      CONINT = 0.0
      TOPINC = .061*NUP
      DEP = DEP*1.15
        IDEP = DEP+.5
        DEP = IDEP
    1 CONTINUE
      RT = .095*INVSTX
      IF(IKNT .EQ. 1) XLTD = INVSTX
      IF(IKNT .EQ. 1) ISNTLTD = INTLTD
      INTLTD = ISNTLTD+(.072*XLTD)
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP+DEP)
      OINC = SOINC+DIF
      IOINC = OINC+.5
      OINC = IOINC
    7 CONTINUE
      IF(IKNT .GE. 2) CONINT = .061*INVST
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      INI = NI+.5
      NI = INI
      IF(IKNT .GE. 2) GO TO 2
      OPEXP = OPEXP*1.15
      IOPEXP = OPEXP+.5
       OPEXP = IOPEXP
    2 CONTINUE
      FIT = .36*NI
```

```
      IFIT = FIT+.5
       FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
      OTAX = OTAX*1.15
      IOTAX = OTAX+.5
       OTAX = IOTAX
    3 CONTINUE
      IF(IKNT .GE. 2) DITIS = 0.0
      DITIS = .03*NI
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX
      ITOEXP = TOEXP+.5
      TOEXP = ITOEXP
      OPREV = TOPINC+TOEXP
      IOPREV = OPREV+.5
      OPREV = IOPREV
      IF(IKNT .GE. 2) GO TO 4
      ACCDEP = ACCDEP+DEP
      IACCDEP = ACCDEP+.5
      ACCDEP = IACCDEP
    4 CONTINUE
      NUP = TUP-ACCDEP
      INUP = NUP+.5
      NUP = INUP
      RE = RE+NI-DDCS-DDPS
      IRE = RE+.5
      RE = IRE
      IF(IKNT .GE. 2) GO TO 5
      ICACL = CACL+.5
      CACL = ICACL
    5 CONTINUE
      DITBS = DITBS+DITIS
      IDITBS = DITBS+.5
      DITBS = IDITBS
      TPC = CS+PS+PREMCS+RE+OPIC
      ITPC = TPC+.5
      TPC = ITPC
      IF(IKNT .EQ. 2) DDD  = DD*.04
      IF(IKNT .GE. 2) DD = DD-DDD
      LTD = LTD-(RT-.072*XLTD)
      XLTD = XLTD-(RT-.072*XLTD)
      TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
      ITL = TL+.5
      TL = ITL
      CACAS = TL-NUP-OPINV-DD
      ICACAS = CACAS+.5
      CACAS = ICACAS
      DIF = (CACAS-SCACAS)*.055
      TA = NUP+OPINV+CACAS+DD
      ITA = TA+.5
      TA = ITA
      RETURN
      END
```

```
      SUBROUTINE INTL
      REAL NUP,OPINV,OPIC,ITD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TL,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      NUP = TUP-ACCDEP
      IPREMCS = PREMCS+.5
      PREMCS = IPREMCS
      CONINT = 0.0
      ITC = 0.0
      TOPINC = .061*NUP
    1 CONTINUE
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP)
      OINC = SOINC+DIF
      IOINC = OINC+.5
      OINC = IOINC
    7 CONTINUE
      IF(IKNT .GE. 2) CONINT = .061*INVST
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      IF(IKNT .GE. 2) GO TO 2
      IOPEXP = OPEXP+.5
       OPEXP = IOPEXP
        IDEP = DEP+.5
         DEP = IDEP
    2 CONTINUE
      FIT = .36*NI
        IFIT = FIT+.5
         FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
       IOTAX = OTAX+.5
        OTAX = IOTAX
    3 CONTINUE
      DITIS = .03*NI
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX
      OPREV = TOPINC+TOEXP
      IACCDEP = ACCDEP+.5
      ACCDEP = IACCDEP
```

```
SUBROUTINE INTL      R +-*/                    CDC 6600 FTN V3.0-P332 OPT=1  05/
      NUP = TUP-ACCDEP
      INUP = NUP+.5
      NUP = INUP
      RE = RE+NI-DDCS-DDPS
      IRE = RE+.5
      RE = IRE
      IF(IKNT .GE. 2) GO TO 5
      ICACL = CACL+.5
      CACL = ICACL
    5 CONTINUE
      DITBS = DITBS+DITIS
      IDITBS = DITBS+.5
      DITBS = IDITBS
      TPC = CS+PS+PREMCS+RF+OPIC
      ITPC = TPC+.5
      TPC = ITPC
      ILTD = LTD+.5
      LTD = ILTD
      TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
      ITL = TL+.5
      TL = ITL
      IF(IKNT .EQ. 2) DDD = DD*.04
      IF(IKNT .GE. 2) DD = DD-DDD
      CACAS = TL-NUP-OPINV-DD
      ICACAS = CACAS+.5
      CACAS = ICACAS
      DIF = (CACAS-SCACAS)*.055
      TA = NUP+OPINV+CACAS+DD
      ITA = TA+.5
      TA = ITA
      RETURN
      END
```

```
      SUBROUTINE ECS
      REAL NUP,OPINV,OPIC,LTD,ORES,OPREV,OPEXP,OTAX,ITC,OINC,NI,INTLTD
      REAL INVST
      COMMON TUP,ACCDEP,NUP,OPINV,CACAS,DD,TA,CS,PS,PREMCS,RE,OPIC,TPC,L
     1TD,CACL,DC,ORES,CIATC,DITBS,TH,OPREV,OPEXP,DEP,FIT,OTAX,DITIS,ITC,
     2TOEXP,TOPINC,CONINT,OINC,INTLTD,OINTC,NI,DDPS,DDCS,IKNT
      IF(OPEXP .LT. 0.0) OPEXP=OPEXP*(-1.0)
      IF(DEP .LT. 0.0) DEP=DEP*(-1.0)
      IF(FIT .LT. 0.0) FIT=FIT*(-1.0)
      IF(OTAX .LT. 0.0) OTAX=OTAX*(-1.0)
      IF(DITIS .LT. 0.0) DITIS=DITIS*(-1.0)
      IF(ITC .LT. 0.0) ITC=ITC*(-1.0)
      IF(TOEXP .LT. 0.0) TOEXP=TOEXP*(-1.0)
      IF(INTLTD .LT. 0.0) INTLTD=INTLTD*(-1.0)
      IF(OINTC .LT. 0.0) OINTC=OINTC*(-1.0)
      IF(ACCDEP .LT. 0.0) ACCDEP=ACCDEP*(-1.0)
      IF(IKNT .EQ. 1) SCACAS = CACAS
      IF(IKNT .EQ.1) SOINC = OINC
      IF(IKNT .GE. 2) GO TO 1
      INVST = TUP*.15
      TUP = TUP+INVST
      NUP = TUP-ACCDEP
      CS = CS+(.18*INVST)
      ICS = CS+.5
      CS = ICS
      PS = PS+(.15*INVST)
      IPS = PS+.5
      PS = IPS
      PREMCS = PREMCS+(.12*INVST)
      IPREMCS = PREMCS+.5
      PREMCS = IPREMCS
      ITC = .04*INVST
      LTD = LTD+(.55*INVST)
      INTLTD = INTLTD+(.0385*INVST)
      IDD = DD+.5
      DD = IDD
      CONINT = .061*INVST
      TOPINC = .061*NUP
    1 CONTINUE
      IF(IKNT .LT. 2) GO TO 7
      INVST = DEP
      ITC = .04*INVST
      TOPINC = .061*(NUP+DEP)
      OINC = SOINC+DIF
      IOINC = OINC+.5
      OINC = IOINC
    7 CONTINUE
      IF(IKNT .GE. 2) CONINT = .061*INVST
      NI = TOPINC+CONINT+OINC-INTLTD-OINTC
      IF(IKNT .GE. 2) GO TO 2
      OPEXP = OPEXP*1.15
      IOPEXP = OPEXP+.5
      OPEXP = IOPEXP
      DEP = DEP*1.15
        IDEP = DEP+.5
```

```
      DEP = IDEP
    2 CONTINUE
      FIT = .36*NI
        IFIT = FIT+.5
        FIT = IFIT
      IF(IKNT .GE. 2) GO TO 3
      OTAX = OTAX*1.15
       IOTAX = OTAX+.5
        OTAX = IOTAX
    3 CONTINUE
      IF(IKNT .GE. 2) DITIS = 0.0
      DITIS = .03*NI
      IDITIS = DITIS+.5
       DITIS = IDITIS
      TOEXP = OPEXP+DEP+FIT+DITIS-ITC+OTAX
      OPREV = TOPINC+TOEXP
      DDCS = CS*.16
      DDPS = PS*.05
      IF(IKNT .GE. 2) GO TO 4
      ACCDEP = ACCDEP+DEP
      IACCDEP = ACCDEP+.5
      ACCDEP = IACCDEP
    4 CONTINUE
      NUP = TUP-ACCDEP
      INUP = NUP+.5
      NUP = INUP
      RE = RE+NI-DDCS-DDPS
      IRE = RE+.5
      RE = IRE
      IF(IKNT .GE. 2) GO TO 5
      ICACL = CACL+.5
      CACL = ICACL
    5 CONTINUE
      DITBS = DITBS+DITIS
      IDITBS = DITBS+.5
      DITBS = IDITBS
      TPC = CS+PS+PREMCS+RE+OPIC
      ITPC = TPC+.5
      TPC = ITPC
      ILTD = LTD+.5
      LTD = ILTD
      TL = TPC+LTD+CACL+DC+ORES+CIATC+DITBS
      ITL = TL+.5
      TL = ITL
      IF(IKNT .EQ. 2) DDD  = DD*.04
      IF(IKNT .GE. 2) DD = DD-DDD
      CACAS = TL-NUP-OPINV-DD
      ICACAS = CACAS+.5
      CACAS = ICACAS
      DIF = (CACAS-SCACAS)*.055
      TA = NUP+OPINV+CACAS+DD
      ITA = TA+.5
      TA = ITA
      RETURN
      END
```

SELECTED BIBLIOGRAPHY

Accounting Principles Board. Reporting of Leases in Financial Statements of Lessee, Opinion No. 5. New York: American Institute of Certified Public Accountants, September, 1964.

Callaghan & Company. The Law of Federal Income Taxation 1954-57 Rulings. Chicago: Callaghan & Company, 1958.

Cook, Donald C. "The Case Against Capitalizing Leases," Harvard Business Review, January, 1963.

Federal Power Commission. "Order Amending FPC Annual Report Forms No. 1 and No. 2." Order No. 461. Washington, D.C.: Federal Power Commission, November 24, 1972.

_____. Statistics of Privately-Owned Electric Utilities in the United States 1970. Washington, D.C.: Federal Power Commission, December, 1971.

Garfield, Paul J. and Lovejoy, Wallace F. Public Utility Economics. Englewood Cliffs: Prentice-Hall, 1964.

Hamel, Henry G. Leasing in Industry. New York: National Industrial Conference Board, 1968.

Myers, John H. Accounting Research Study No. 4. New York: American Institute of Certified Public Accountants, 1962.

Sprouse, Robert T. and Moonitz, Maurice. Accounting Research Study No. 3. New York: American Institute of Certified Public Accountants, 1961.

Standard and Poor's Corporation. Poor's Register of Corporations, Directors, and Executives. New York: Standard and Poor's Corporation, 1972.

Whitman, Robert O. "Accounting Issues in the Capitalization of Leases." Public Utilities Fortnightly, September 30, 1971.

Zises, Alvin. "Disclosure of Long-Term Leases." The Journal of Accountancy, February, 1961.

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