OREGON TRAIL ELECTRIC

CONSUMERS COOPERATIVE, INC.

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October 3, 2006

Public Utility Commission of Oregon
Attn: Filing Center
550 Capitol Street NE #215
Salem, OR 97308-2148

Attached is the testimony on e-docket AR 506 submitted by Oregon Trail Electric Consumers Cooperative, Inc. concerning calculation of the cost of money for consumer-owned utilities. This information is to be used in calculating the carrying charge portion of the pole attachment rate.

Sincerely,

Anthony Bailey, CPA
Manager of Accounting and Finance

AB:jm

enclosure

Prepared Direct Testimony of
William K. Edwards
On Behalf Of
Oregon Trail Electric Consumers Cooperative
Before the
Oregon Public Utility Commission
Docket No. AR 506

Q. Please state your name, occupation, and business address?

A. My name is William K. Edwards. My business address is 2201 Cooperative Way, Herndon, Virginia 20171.

Q. With whom are you employed and what are your responsibilities?

A. I am employed by with the National Rural Utilities Cooperative Finance Corporation (CFC) as an economist and Vice President of Regulatory Affairs. In that capacity I am responsible for regulatory issues of cooperatives before the FERC and many state commissions.

Q. What is your educational background and experience?

A. I received my BS degree in Business with a concentration in economics from Christopher Newport College of the College of William & Mary in 1977, and a MA degree in economics from Old Dominion University in 1979. My major field of study included, mathematical economics, econometrics, and microeconomics. I have completed a number of courses for a Ph.D. in economics from the Virginia Polytechnic Institute & State University. I have worked for the firm of Ernst & Ernst as a consultant principally in the electric utility industry. From 1982 to 1985, I was employed by Mississippi Power & Light Company (Entergy - Mississippi) as an

economist responsible for rate research. From January 1986 until early 1995 I was employed by Central Louisiana Electric Company, Inc. as Manager of Rate Research and subsequently as Director of Rates. In that capacity I was responsible for regulatory affairs, regulatory accounting, rate design, cost of service studies, rate administration, and the attendant litigation associated with regulatory issues before both the Louisiana Public Service Commission, and the Federal Energy Regulatory Commission. A more comprehensive history of my experience is contained as Exhibit No. CFC-1 Schedule 1.

Q. What is the purpose of your testimony?

A. My testimony will provide the method and calculations that should be employed to calculate the cost of capital for Oregon Trail Electric Consumers Cooperative ("Oregon Trail").

Q. What is the appropriate ratemaking methodology that should be employed to pole attachment rates for third party non-members?

A. I believe the use of a return on rate base methodology is the best method for evaluating the rates for such customers. This method can be utilized through a formulary mechanism that is also appropriate. This methodology has several benefits. First, it is the preferred method of most Commissions. Second, it allows for comparisons of returns across utilities, which is important from the perspective of the regulator, the regulated, and the credit community. Third, it recognizes all costs, capital as well as operating costs. Fourth, it allows the equity owners to seek a return that is comparable to investments of other equity holders of utilities.

There may be income tax consequences from the application of any rate methodology when applied to third party non-members of Oregon Trail. To the extent that such consequences produce increases in income tax liabilities, these costs should be directly assigned to this group of customers.

Q. What was the first step you performed when determining the cost of capital?

A. The first step I performed was to examine the capital structure of Oregon Trail. Exhibit No. CFC-1 Schedule 2 illustrated the capital structure at the end of 2004.

Q. How is a "fair rate of return" on equity and debt determined?

A. The fair rate of return on debt is straightforward. The utility should be allowed to earn a return sufficient to allow for the payment of principal and interest on the long-term debt the company incurs to provide electric utility service.

I have computed the cost of debt for the twelve months ending December 31, 2004. To make this calculation, I have used the 2004 long-term interest expense divided by the average debt outstanding for the end of year 2003 and 2004 as shown below. The result is a 2004 cost of long-term debt of 5.54%.

Table 1
Oregon Trail Electric L.T. Cost of Debt

Line No.		Amount
1	Long-Term Interest Exp. (2004)	$2,739,517
2	L.T. Debt Outstanding (12/31/2004)	$48,820,885
3	L.T. Debt Outstanding (12/31/2003)	$50,137,494
4	Average Debt Outstanding For 2004	$49,479,190
5	Cost of L.T. Debt (Line 1/Line 4)	5.54%

The return on equity is more difficult to determine, and is particularly more difficult when applied to a cooperative. Equity

capital, like any resource, has a cost with its usage. The cost of equity is a function of the risk to which the equity capital is exposed and the returns available from other investment alternatives. Because it cannot be directly measured, it therefore must be estimated by analyzing information concerning present capital markets, investor expectations, and specific risks associated with Oregon Trail.

Q. Why should the distribution companies be entitled to an equity return from Oregon Trail, isn't Oregon Trail a non-profit cooperative?

A. Oregon Trail is a non-profit, non-taxable, cooperative. As such, Oregon Trail provides service to its members at rates that are essentially at costs. But Oregon Trail has the ability to sell not only capacity on its electric system, but also ancillary services like pole attachments to other third party non-members. Therefore, sales of additional capacity, or attachment services which rents space on Oregon Trail's distribution poles to non-members are opportunity sales, which are made at the benefit of the equity owners. Oregon Trail's equity holders are entitled to the opportunity to earn a return on these opportunity sales to non-members just as equity holders of investor owned utilities have the opportunity to earn a profit on sales to customers. The equity members of Oregon Trail have invested equity capital, capital has additionally been provided by CFC, in order to finance the utility's plant. As non-members, these third party customers sometimes seek to lower their rates, in part, because it argues that it wants to achieve rate levels as low as the equity member's rates. However, equity members and third party non-members like pole attachment customers are not similarly situated. Third party non-members have no equity interest in Oregon Trail. At the end of the term of the agreement, Oregon Trail's obligation to provide attachment space ends and the customer may exit the relationship without investing any equity in the system. Alternatively, the equity members have made equity investments in Oregon Trail as well as pay for the services they consume, which includes power purchases as well as the investment and operating costs associated with the same distribution

plant that the pole attachment customers want to lease. Absent an appropriate equity return, the equity owners of Oregon Trail will be deprived of any return on the lease of part of their assets.

Q. How do you regard the riskiness of Oregon Trail?

A. I would like to identify the following categories of risk which any electric utility could be evaluated under:

- Regulatory,
- Relevant Markets,
- Operations,
- Economic Conditions,
- Financial
- Competitiveness, and
- Management.

These criteria are constantly being scrutinized. CFC has a considerable credit exposure with Oregon Trail that needs to be constantly reviewed.

In short, I believe that Oregon Trail's regulatory risks are average for the industry. Therefore, I have used an industry average approach to ascertaining the cost of equity.

Q. Why is a return on equity appropriate for Oregon Trail?

A. Oregon Trail's equity holders should have the opportunity to earn a profit commensurate with that provided for investor owned utilities for sales to non-members because these are long-term firm opportunity sales with the specific intent to make a profit. To deny Oregon Trail the opportunity to make a profit on sales to non-members is to treat non-members similarly to equity members who have accepted risks, which the non-members have not accepted.

As Oregon Trail is a closely held and not publicly traded, determining the appropriate equity cost is difficult. Discounted Cash Flow (DCF) techniques are not directly appropriate for Oregon Trail since it is equity is not publicly traded. Although I have used the DCF method applied to the investor owned electric utility industry as a measure of equity costs, there are concerns with the DCF model applied to many utilities that result from the heroic assumptions relied on to achieve the reduced form of the model. The following discussion provides the reasons why the DCF model is restrictive for many utilities. The DCF model is expressed in equations 1 and 2 below.

$$(1) \quad PV = \sum_{t=1}^{\infty} D_0(1+g)/(1+k)^t$$

Where k is the cost of capital, g is the sustainable growth rate, and D is the dividend.

Equation 2 can be reduced to the familiar form of the DCF model by making a number of restrictive assumptions some of which are listed here, which are not often present among either the investor owned or cooperatives utilities.

- Constant growth in earnings and dividends
- The presence of dividends (or return of equity capital)
- Constant growth of Dividends over time
- Cost of capital greater than growth rate
- Constant growth rate in Book Value.
- All these assumptions continue over time

The reduced form of the DCF model is then shown as equation 2.

$$(3) \quad k = (D_t(1+g))/P_t)+g = (D_1/P_t)+g$$

I have used the DCF methodology to estimate an average cost of equity for the investor owned industry based on information collected and published by Value Line. These calculations are illustrated in Exhibit CFC-1, Schedules 3, 4, and 5. This data suggests that the industry wide (average) return on equity is 10.87%.

Q. Are there other ways to determine a compensatory return for equity.

A. Yes. There are several ways to estimate the return on equity; however, because Oregon Trail's equity is not traded, some form of proxy must be used. The following methods are available for the determination of equity capital; I will endeavor to discuss the merits of each.

- Comparable Earnings,
- Risk Premiums, including the
- Capital Asset Pricing Model (CAPM).

A central assumption with the comparable earnings method is that one or more companies can be found that are comparable. Comparable earnings methods rest upon the assumption that there are comparable entities whose return can be calculated. This method would be difficult to use for Oregon Trail for several reasons. First, finding comparable companies to Oregon Trail is difficult. Although risk is can be more easily compared, company characteristics are less comparable. Second, book returns are not necessarily representative of the cost of equity and historical values are also not necessarily indicative of expected returns. For these reasons, I have not attempted to use this method.

Risk premiums and its more restrictive sibling the Capital Assets Pricing Model (CAPM) seek to determine the premium over debt costs required to meet the threshold cost of equity. I have examined Ibbotson & Associates data and my own research for CAPM data and have included these results in Exhibit CFC-1 Schedules 6, 7, and 8. The CAPM analysis relates the overall market return, risks associated with Oregon Trail, and the risk free cost of money to determine the appropriate return on equity for Oregon Trail. Exhibit No. CFC-2 Schedule 9 page 2 illustrates the Ibbotson data from its inception in 1926 through 1997. Equation 4 is a simple algebraic representation of the CAPM model.

(4) $R_i = R_f + \beta_i(R_m - R_f)$

Where: R_i = expected company specific return on equity
R_f = risk free rate of return
β_i = beta for the specific company
R_m = expected return on the market portfolio

As the market return, I have used the total returns from the Ibbotson data for the S&P 500. In my primary scenario, I have used as the risk free cost of money the one-month T-Bill rate and in my alternative scenario, the total return on a long-tern government bond. The alternative scenario is presented for several reasons. First, a long-term measure of the risk free return smoothes out short-run fluctuations from the T-Bill rate. Second, since companies compete for funds in a relatively efficient market, and as such, returns reflect investor's long-term expectations, a longer-term measure of the risk free cost of money is arguably a better representation of the risk free rate than is the short-run version.

The difference between the total return on the S&P 500 and the risk free cost of money is the market risk premium. I have computed average returns using this method and found the following results.

Time Interval	Scenario 1 Using T-Bill Rate	Scenario 2 Using L-T Gov't Bonds
1926-1997	11.10%	11.41%
1947-1997	11.97%	12.20%
1987-1997	11.50%	12.22%

The measure of company specific risk relative to the market is the company specific beta as illustrated in equation 5 below.

(5) $\beta_i = \text{Covariance}(R_i, R_m)/\sigma_m^2$

Where: R_i = expected company specific return on equity
R_m = expected return on the market portfolio
σ_m^2 = variance of the returns for the market

Because the Oregon Trail's securities are not rated by any agency, I am unaware that any agency has estimated an Oregon Trail specific beta. Exhibit No. CFC-2 Schedule 4 page three contains betas for the utilities for which Value Line complies statistics. This exhibit

shows that the average beta for this sample of investor owned utilities is approximately 0.85 and the standard deviation for this sample is approximately 0.21. Since I believe that Oregon Trail is no more or less risky than the overall electric utility industry, I have used the average betas to represent the risk associated with Oregon Trail (0.85).

In order to provide an estimate of equity cost that is conservative, I have eliminated Scenario 2, relying instead on the more traditional CAPM model. Also, I have relied upon the shorter-term estimate (1987-2004) because it represents more of the current environment that Oregon Trail operates in. Therefore, I believe the CAPM estimate of equity cost to Oregon Trail is approximately 11.50%.

Q. How then did you arrive at a return on equity?

A. I have averaged the DCF result (10.87%) to the CAPM result (11.50%) to obtain an average equity cost of 11.19%. Given the direction of interest rates, I believe this estimate to be both conservative and fair. Exhibit CFC-1 Schedule 9 illustrates the weighted cost of capital based on the previously identified capital structure. This exhibit shows that the weighted cost of capital is 8.27%.

Q. Does this conclude your testimony for now?

A. Yes.

WILLIAM K. EDWARDS

Mr. Edwards the Vice President of Regulatory Affairs at the National Rural Utilities Cooperative Finance Corporation. Mr. Edwards' primary focus is the public utility industry. His areas of expertise include utility regulation, load forecasting, planning, cost and rate design, and mergers & acquisitions. Mr. Edwards has previously worked for the firm of Ernst & Whinney as a consultant, Mississippi Power & Light Company an operating company of Entergy as a supervisor in the Rate Department, Central Louisiana Electric Company as Director of Rates & Regulation, and Air Liquide America Corporation as an Energy Manager.

PROFESSIONAL EXPERIENCE

Mr. Edwards has extensive experience in the above listed areas. Representative projects are listed below for each of these areas.

Regulation. Mr. Edwards has broad and extensive experience in regulatory matters both as a consultant and as a utility executive. As Director of Rates for Central Louisiana Electric Company, Mr. Edwards had the responsibility for planning and successful execution of a number of dockets before both the Louisiana Commission and the FERC. Such experience includes, but is not limited to the following projects.

- Indiana Power & Light Rate Design Efforts Before the Indiana Commission
- ISES 1 & 2 rate proceedings before the Mississippi Public Service Commission
- Grand Gulf Rate proceeding before the Mississippi Public Service Commission
- Dolet Hills rate proceeding before the Louisiana Public Service Commission
- Wholesale rate proceeding before the FERC on behalf of Mississippi Power & Light Company
- Wholesale rate proceeding before the FERC on behalf of Central Louisiana Electric Company
- Transmission rate proceeding before the FERC on behalf of Central Louisiana Electric Company
- Antitrust case before the FERC on behalf of Central Louisiana Electric Company
- Deseret Rate complaint before the FERC involving rate of return and cost support.
- Electric industry restructuring.

Load Forecasting. Mr. Edwards has been involved in many load forecasting efforts with the utility industry and has participated in the industry debates regarding the evolution of methodologies for forecasting. Some of the companies Mr. Edwards has been involved with include the following.

- Wisconsin Public Service Commission - A review of the forecasting methodologies of the Wisconsin Utilities
- Delmarva Power & Light - Advance Plan Proceedings before the Delaware Commission

- Entergy - Forecasting Committee
- Central Louisiana Electric Company - Development of an econometric load forecast 1985-1995
- Aluminum Association of America - electric end-use and econometric approaches to load forecasting.

Planning. Mr. Edwards has extensive knowledge and experience with production costing models (e.g. PROMOD and POWRSYM) and load flow models (PTI and Westinghouse). Mr. Edwards has experience with GE-MAPS software and frequently uses it for the evaluation of generation additions at CFC.

- Entergy - determination of fuel savings attributable to load and unit changes
- Central Louisiana Electric Company:
  - Fuel Budgets,
  - Analysis of Savings from Joint Dispatching,
  - Generation Planning
  - Rate Studies, and
  - Loss Studies.
- NRUCFC:
  - Market Evaluation of New/Proposed Generation Additions
  - Transmission Pricing Evaluation

Cost & Rate Design. Mr. Edwards has had extensive experience with cost analysis/determination and rate design for a number of companies including:

- Northern Indiana Public Service Company
- Delmarva Power & Light
- Arkansas Power & Light
- Mississippi Power & Light
- Louisiana Power & Light
- New Orleans Public Service Company
- Missouri Public Service Company
- Iowa Public Service Company
- Wisconsin Public Service Company
- Empire District Power Company
- New York State Gas & Electric Company
- Iowa Power & Light Company
- Allegheny Power System
- Central Louisiana Electric Company
- Air Liquide America Corporation
- Numerous Electric Cooperatives

Mergers & Acquisitions. Mr. Edwards has performed a number of merger & acquisitions studies for various clients including:

- Central Louisiana Electric Company
- MidWest Energy

- Acquisition of Montana Power Company's hydroelectric facilities

TESTIMONY

Mr. Edwards has testified before the following Commissions on a broad range of topics:

Company	Jurisdiction	Subject
NIPSCO	Indiana	Long-Run Marginal Cost
IP&L	Indiana	Long-Run Marginal Cost
MP&L	Mississippi	Econometric Forecasts
MP&L	FERC	Financial Model/Rate of Return
CLECO	Louisiana	Rate Design/Revenue Recovery
CLECO	Louisiana	FASB 106 Issues
CLECO	Louisiana	Securities Issuances
CLECO	Louisiana	Securities Issuances
CLECO	Louisiana	Securities Issuances
CLECO	FERC	Cost of Service/Rate of Return
CLECO	FERC	Cost of Service/Rate of Return
CLECO	FERC	Cost of Service
CLECO	FERC	Antitrust Issues
CLECO	FERC	Antitrust Issues
Air Liquide	Washington	Restructuring
Air Liquide	Texas	Restructuring
Air Liquide	Arizona	Rates/Corporate Structure
Air Liquide	Louisiana	Short-Run Marginal Costs and Non-Firm Rates
Idaho Co-ops	Idaho	Restructuring
Central Elect Co-op	Montana	Antitrust
Arizona Elect Power	Arizona	Stranded Costs
Montana Co-ops	Montana	Restructuring
Four County Elect	North Carolina Superior Court	Monopolization
CFC/Deseret G&T	FERC	Return, Cost of Service
Wayne-White Co-op	FERC	Market Power
Wayne-White	FERC	Sale for Resale Rates
Wayne-White	FERC	Transmission Rates
Vermont Electric	Vermont	Return on Equity

Mr. Edwards has testified before the Idaho Legislature regarding electric utility restructuring and before the Transition Advisory Committee of the Montana Legislature regarding restructuring of electric distribution companies.

EDUCATION

Mr. Edwards holds a B.S. degree in Economics from Christopher Newport College of the College of William & Mary (with distinction) and a M.A. degree from Old Dominion University in Economics. Mr. Edwards has completed the majority of requirements for the Ph.D. degree in economics at Virginia Polytechnic Institute & State University in economics. Mr. Edwards' fields of concentration include econometrics, mathematical economics, and microeconomics.

PUBLICATIONS AND PRESENTATIONS

Mr. Edwards has published or has spoken at the following industry conferences:

- "Ratemaking Trends And Methods", NRECA Issues Forum, December 2005, Nashville, TN and Denver, CO.
- "Equity Management and the Ratemaking Process: An Overview of Theory and Practice", CFC's Independent Borrowers Meeting, June 2004, Boston, Massachusetts.
- "Restructuring at the Crossroads: In the Wake of SMD." CFC Forum, June 2003.
- "Ratemaking and Restructuring", CFC's Forum, June 27-29, 2001, Chicago, Illinois.
- "Restructuring and Antitrust: Issues Facing An Industry", South Dakota Legal Seminar, November 2000, Pierre, South Dakota.
- "RTOs: Rates & Regulatory Issues", CFC's Independent Borrowers Meeting, November 8-10, 2000, San Diego, California.
- "FERC & Distribution Cooperatives", Tri-State Office Managers & Accountants Meeting, Sponsored by the South Dakota Rural Electric Association, Inc. August 24, 2000.
- "Inferences of Restructuring On The Electric Utility Industry", Association of Illinois Cooperatives, Springfield, Illinois, July 2000.
- "Strategic Planning And Recent Changes In FERC Policy Regarding The Regulation Of Cooperatives", Comments before the Arkansas Electric Cooperative Corporation, Little Rock, Arkansas, December 1999.
- "Cooperative Regulatory Issues at the FERC", National Rural Utilities Cooperative Finance Corporation Forum in New York, New York, 1999.
- "Changes In Regulatory Jurisdiction Resulting From Restructuring", Montana Association of Electric Cooperatives, June 1999.
- "Regulatory Restructuring and Economies of Scale & Scope", Montana Association of Electric Cooperatives, June 1998.
- "Role of Antitrust Laws in the Restructuring Process", Kentucky Association of Electric Cooperatives, September 1997.
- "FERC Regulation of Cooperatives", National Rural Utilities Cooperative Finance Corporation Seminars in Denver, Washington, and Atlanta February/March 1997.
- "FERC Regulation: Services & Financial Solutions, Proceedings from CFC Borrowers Interim Meetings", In conjunction with John T. Stough, Jr. Esq., N. Beth Emery, Esq., Geoffry Hobday, Esq., March 1997.
- "The Essentials of FERC Regulation of Cooperatives", In conjunction with N. Beth Emery, Esq. And Daniel E. Frank, Esq. On behalf of the National Rural Utilities Cooperative Finance Corporation, February 1997.

- "Unresolved FERC Rate Making Issues", National Rural Utilities Cooperative Finance Corporation Independent Borrowers Conference, July 2, 1997.
- "Major Issues Facing the Electric Utility Industry As A Result of Restructuring", Texas Cooperative Accounting Association, June 1997.
- "FERC's New Merger Policy", National Rural Utilities Cooperative Finance Corporation, March 1997.
- Acquisitions and the Future of Electric Distribution Cooperatives", Presentation Before the Indiana Statewide Association of Electric Cooperatives, August, 1996.
- The Economics of Acquisitions, Presentation Before the National Rural Electric Cooperative Association, June 1996.
- "Comments Regarding Electric Industry Restructuring", on behalf of Air Liquide America Corporation for the FERC 1995.
- "Non-Firm Industrial Rates: Economic Justification Vs Marketing Justification", Presentation Before the Southeastern Electric Exchange, April 1992.
- "Econometric Elasticity Measures Using Directly Estimated Differential Equations", Presentation Before the Southeastern Electric Exchange, October 1989.
- "Role of Marginal Costs in the Rate Making Process", Entergy Rate Conference, June 1984.
- "An Inverse Limit Theorem to the Core of the Economy", Old Dominion University Thesis for the Degree of Master of Arts in Economics, Summer 1979.

PROFESSIONAL AFFILIATIONS

Mr. Edwards is a member of the American Economic Association (AEA), and the American Statistical Association. In 1993, Mr. Edwards served as chairman of the Southeastern Electric Exchange's Rate Section. Mr. Edwards has additionally been a member of the Edison Electric Institute's Rate Committee.

Oregon Trail Electric
Capitalization As Of December 31, 2004

Line No.	Capitalization	Capitalization	Capitalization Percent
1	Long-Term Debt	$48,820,885	51.69%
2	Equity	$45,630,140	48.31%
3	Total	$94,451,025	100.00%

Data For DCF Methodology

Line No.	Company	Stock Price	Earnings Per Share	Dividends Per Share	Book Value Per Share	52 Week High Stock Price	52 Week Low Stock Price	52 Week Average Price	Equity Ratio
1	Allegheny Energy	$29.04	$1.00	$0.00	$9.85	$27.18	$13.99	$20.59	22.60%
2	ALLETE	$48.70	$2.00	$1.26	$21.23	$86.49	$30.76	$58.63	61.80%
3	Alliant Energy	$29.05	$1.50	$1.05	$22.13	$29.24	$24.34	$26.79	50.20%
4	Amer. Elec. Power	$38.50	$2.60	$1.40	$21.32	$39.34	$30.27	$34.81	43.10%
5	Ameren Corp.	$55.79	$3.10	$2.54	$29.71	$56.16	$43.22	$49.69	52.60%
6	Aquila, Inc.	$3.77	($0.25)	$0.00	$4.68	$4.24	$2.25	$3.24	32.70%
7	Avista Corp.	$19.37	$1.00	$0.54	$15.54	$19.05	$16.31	$17.68	41.90%
8	Black Hills	$40.08	$1.90	$1.28	$22.43	$40.50	$26.52	$33.51	49.60%
9	Cen. Vermont Pub. Serv.	$19.33	($0.05)	$0.92	$18.49	$24.03	$18.02	$21.03	60.40%
10	CenterPoint Energy	$13.88	$0.70	$0.28	$3.59	$13.80	$9.78	$11.79	13.30%
11	CH Energy Group	$49.85	$2.60	$2.16	$31.31	$49.73	$42.07	$45.90	59.10%
12	Cinergy Corp.	$44.58	$2.70	$1.92	$21.95	$45.95	$36.95	$41.45	49.00%
13	Cleco Corp.	$22.77	$1.30	$0.90	$10.84	$22.58	$16.45	$19.52	53.10%
14	CMS Energy Corp.	$15.88	$0.90	$0.00	$10.63	$15.85	$8.58	$12.22	21.50%
15	Consol. Edison	$48.37	$2.85	$2.28	$29.09	$48.74	$39.42	$44.08	51.00%
16	Constellation Energy	$60.57	$3.45	$1.34	$26.81	$59.50	$36.76	$48.13	48.60%
17	Dominion Resources	$77.04	$4.80	$2.68	$33.61	$76.87	$62.07	$69.47	42.00%
18	DPL Inc.	$27.91	$1.00	$0.96	$8.25	$27.97	$18.98	$23.48	32.80%
19	DTE Energy	$46.69	$3.30	$2.06	$31.85	$48.31	$39.31	$43.81	42.20%
20	Duke Energy	$29.87	$1.60	$1.10	$17.18	$30.55	$20.45	$25.50	49.10%
21	Duquesne Light Hldgs	$19.41	$1.20	$1.00	$7.93	$19.44	$16.93	$18.19	35.60%
22	Edison Int'l	$41.09	$2.35	$1.00	$18.57	$41.37	$25.14	$33.26	37.80%
23	El Paso Electric	$21.89	$1.00	$0.00	$11.25	$22.10	$14.59	$18.35	58.40%
24	Empire Dist. Elec.	$23.56	$1.25	$1.28	$14.76	$25.01	$19.53	$22.27	48.70%
25	Energy East Corp.	$27.39	$1.80	$1.10	$17.89	$30.07	$23.48	$26.78	40.60%
26	Entergy Corp.	$77.82	$4.60	$2.16	$38.26	$77.75	$54.43	$66.09	52.90%
27	Exelon Corp.	$53.72	$3.05	$1.60	$14.19	$54.12	$32.85	$43.49	43.50%
28	FirstEnergy Corp.	$49.71	$2.85	$1.65	$26.04	$50.00	$37.61	$43.81	45.40%
29	FPL Group	$43.37	$2.50	$1.42	$10.12	$44.59	$32.59	$38.59	48.40%

Data For DCF Methodology

Line No.	Company	Stock Price	Earnings Per Share	Dividends Per Share	Book Value Per Share	52 Week High Stock Price	52 Week Low Stock Price	52 Week Average Price	Equity Ratio
30	G't Plains Energy	$32.29	$2.05	$1.66	$15.35	$32.78	$27.86	$30.32	53.40%
31	Green Mountain Pwr.	$29.14	$2.15	$1.00	$21.32	$30.88	$24.80	$27.84	52.90%
32	Hawaiian Elec.	$27.43	$1.55	$1.24	$15.01	$29.79	$24.60	$27.20	51.00%
33	IDACORP, Inc.	$31.28	$1.90	$1.20	$23.88	$32.95	$26.22	$29.59	50.70%
34	MDU Resources	$30.90	$1.90	$0.72	$14.09	$31.00	$23.85	$27.43	65.20%
35	MGE Energy	$37.77	$1.85	$1.37	$16.59	$38.67	$30.50	$34.59	62.60%
36	NiSource Inc.	$24.39	$1.25	$0.92	$17.69	$25.50	$20.50	$23.00	49.30%
37	Northeast Utilities	$21.77	$1.15	$0.65	$17.80	$21.74	$17.17	$19.46	34.00%
38	NSTAR	$30.00	$1.85	$1.16	$13.52	$31.46	$23.01	$27.23	40.20%
39	OGE Energy	$30.21	$1.70	$1.33	$14.28	$29.99	$24.10	$27.05	47.40%
40	Otter Tail Corp.	$29.90	$1.60	$1.12	$14.81	$29.30	$23.77	$26.54	60.70%
41	Pepco Holdings	$24.04	$1.50	$1.00	$17.88	$24.35	$17.90	$21.13	39.60%
42	Pinnacle West Capital	$46.40	$3.00	$1.90	$32.14	$46.16	$39.63	$42.90	53.30%
43	PNM Resources	$29.77	$1.40	$0.74	$18.19	$30.38	$20.38	$25.38	52.40%
44	PPL Corp.	$64.44	$3.75	$1.84	$22.42	$61.79	$44.70	$53.25	37.90%
45	Progress Energy	$44.39	$3.10	$2.36	$30.90	$46.10	$40.47	$43.29	44.30%
46	Public Serv. Enterprise	$63.85	$3.20	$2.24	$24.10	$64.32	$38.10	$51.21	30.60%
47	Puget Energy Inc.	$23.37	$1.40	$1.00	$16.24	$24.81	$20.73	$22.77	39.40%
48	SCANA Corp.	$41.65	$2.85	$1.56	$21.69	$43.65	$35.73	$39.69	42.60%
49	Sempra Energy	$42.66	$3.30	$1.16	$20.78	$42.93	$31.00	$36.97	52.60%
50	Sierra Pacific Res.	$12.97	$0.55	$0.00	$12.76	$13.14	$7.70	$10.42	26.60%
51	Southern Co.	$34.99	$2.07	$1.49	$13.86	$35.93	$29.10	$32.52	44.10%
52	TECO Energy	$18.98	$1.10	$0.76	$6.84	$19.30	$12.18	$15.74	24.90%
53	TXU Corp.	$89.34	$6.35	$2.25	$2.66	$87.25	$39.12	$63.19	4.90%
54	UIL Holdings	$54.99	$2.20	$0.00	$38.07	$56.11	$44.50	$50.31	52.80%
55	UniSource Energy	$32.48	$1.60	$0.76	$16.95	$34.80	$22.90	$28.85	22.90%
56	Vectren Corp.	$28.96	$1.75	$1.18	$14.42	$29.46	$24.08	$26.77	51.80%
57	Westar Energy	$24.50	$1.50	$0.92	$16.13	$24.47	$19.58	$22.03	45.50%
58	Wisconsin Energy	$40.31	$2.30	$0.88	$21.31	$39.77	$31.12	$35.45	43.30%
59	WPS Resources	$58.23	$3.75	$2.22	$29.30	$58.19	$44.85	$51.52	54.40%
60	Xcel Energy Inc.	$19.45	$1.20	$0.86	$12.99	$19.70	$16.32	$18.01	44.10%

Computation of Growth Rates

Line No.	Company	Earnings Per Share	Dividends Per Share	Book Value Per Share	Earnings Retention Rate b	Return On Book Value r	Growth Rate g=br
1	Allegheny Energy	$1.00	$0.00	$9.85	100.00%	10.15%	10.15%
2	ALLETE	$2.00	$1.26	$21.23	37.00%	9.42%	3.49%
3	Alliant Energy	$1.50	$1.05	$22.13	30.00%	6.78%	2.03%
4	Amer. Elec. Power	$2.60	$1.40	$21.32	46.15%	12.20%	5.63%
5	Ameren Corp.	$3.10	$2.54	$29.71	18.06%	10.43%	1.88%
6	Aquila, Inc.	($0.25)	$0.00	$4.68	100.00%	-5.35%	-5.35%
7	Avista Corp.	$1.00	$0.54	$15.54	46.00%	6.44%	2.96%
8	Black Hills	$1.90	$1.28	$22.43	32.63%	8.47%	2.76%
9	Cen. Vermont Pub. Serv.	($0.05)	$0.92	$18.49	1940.00%	-0.27%	-5.25%
10	CenterPoint Energy	$0.70	$0.28	$3.59	60.00%	19.50%	11.70%
11	CH Energy Group	$2.60	$2.16	$31.31	16.92%	8.30%	1.41%
12	Cinergy Corp.	$2.70	$1.92	$21.95	28.89%	12.30%	3.55%
13	Cleco Corp.	$1.30	$0.90	$10.84	30.77%	12.00%	3.69%
14	CMS Energy Corp.	$0.90	$0.00	$10.63	100.00%	8.47%	8.47%
15	Consol. Edison	$2.85	$2.28	$29.09	20.00%	9.80%	1.96%
16	Constellation Energy	$3.45	$1.34	$26.81	61.16%	12.87%	7.87%
17	Dominion Resources	$4.80	$2.68	$33.61	44.17%	14.28%	6.31%
18	DPL Inc.	$1.00	$0.96	$8.25	4.00%	12.12%	0.48%
19	DTE Energy	$3.30	$2.06	$31.85	37.58%	10.36%	3.89%
20	Duke Energy	$1.60	$1.10	$17.18	31.25%	9.31%	2.91%
21	Duquesne Light Hldgs	$1.20	$1.00	$7.93	16.67%	15.14%	2.52%
22	Edison Int'l	$2.35	$1.00	$18.57	57.45%	12.66%	7.27%
23	El Paso Electric	$1.00	$0.00	$11.25	100.00%	8.89%	8.89%
24	Empire Dist. Elec.	$1.25	$1.28	$14.76	-2.40%	8.47%	-0.20%
25	Energy East Corp.	$1.80	$1.10	$17.89	38.89%	10.06%	3.91%
26	Entergy Corp.	$4.60	$2.16	$38.26	53.04%	12.02%	6.38%
27	Exelon Corp.	$3.05	$1.60	$14.19	47.54%	21.50%	10.22%
28	FirstEnergy Corp.	$2.85	$1.65	$26.04	42.11%	10.94%	4.61%
29	FPL Group	$2.50	$1.42	$10.12	43.20%	24.69%	10.67%
30	G't Plains Energy	$2.05	$1.66	$15.35	19.02%	13.35%	2.54%
31	Green Mountain Pwr.	$2.15	$1.00	$21.32	53.49%	10.09%	5.39%

Computation of Growth Rates

Line No.	Company	Earnings Per Share	Dividends Per Share	Book Value Per Share	Earnings Retention Rate b	Return On Book Value r	Growth Rate g=br
32	Hawaiian Elec.	$1.55	$1.24	$15.01	20.00%	10.33%	2.07%
33	IDACORP, Inc.	$1.90	$1.20	$23.88	36.84%	7.96%	2.93%
34	MDU Resources	$1.90	$0.72	$14.09	62.11%	13.48%	8.37%
35	MGE Energy	$1.85	$1.37	$16.59	26.11%	11.15%	2.91%
36	NiSource Inc.	$1.25	$0.92	$17.69	26.40%	7.07%	1.87%
37	Northeast Utilities	$1.15	$0.65	$17.80	43.48%	6.46%	2.81%
38	NSTAR	$1.85	$1.16	$13.52	37.30%	13.68%	5.10%
39	OGE Energy	$1.70	$1.33	$14.28	21.76%	11.90%	2.59%
40	Otter Tail Corp.	$1.60	$1.12	$14.81	30.00%	10.80%	3.24%
41	Pepco Holdings	$1.50	$1.00	$17.88	33.33%	8.39%	2.80%
42	Pinnacle West Capital	$3.00	$1.90	$32.14	36.67%	9.33%	3.42%
43	PNM Resources	$1.40	$0.74	$18.19	47.14%	7.70%	3.63%
44	PPL Corp.	$3.75	$1.84	$22.42	50.93%	16.73%	8.52%
45	Progress Energy	$3.10	$2.36	$30.90	23.87%	10.03%	2.39%
46	Public Serv. Enterprise	$3.20	$2.24	$24.10	30.00%	13.28%	3.98%
47	Puget Energy Inc.	$1.40	$1.00	$16.24	28.57%	8.62%	2.46%
48	SCANA Corp.	$2.85	$1.56	$21.69	45.26%	13.14%	5.95%
49	Sempra Energy	$3.30	$1.16	$20.78	64.85%	15.88%	10.30%
50	Sierra Pacific Res.	$0.55	$0.00	$12.76	100.00%	4.31%	4.31%
51	Southern Co.	$2.07	$1.49	$13.86	28.02%	14.94%	4.19%
52	TECO Energy	$1.10	$0.76	$6.84	30.91%	16.09%	4.97%
53	TXU Corp.	$6.35	$2.25	$2.66	64.57%	238.36%	153.90%
54	UIL Holdings	$2.20	$0.00	$38.07	100.00%	5.78%	5.78%
55	UniSource Energy	$1.60	$0.76	$16.95	52.50%	9.44%	4.95%
56	Vectren Corp.	$1.75	$1.18	$14.42	32.57%	12.13%	3.95%
57	Westar Energy	$1.50	$0.92	$16.13	38.67%	9.30%	3.60%
58	Wisconsin Energy	$2.30	$0.88	$21.31	61.74%	10.80%	6.67%
59	WPS Resources	$3.75	$2.22	$29.30	40.80%	12.80%	5.22%
60	Xcel Energy Inc.	$1.20	$0.86	$12.99	28.33%	9.24%	2.62%
	Average						6.80%

Computation of Rate of Return

Line No.	Company	Dividends Per Share	52 Week Average Price	Rate of Return k
1	Allegheny Energy	$0.00	$20.59	10.15%
2	ALLETE	$1.26	$58.63	5.83%
3	Alliant Energy	$1.05	$26.79	6.24%
4	Amer. Elec. Power	$1.40	$34.81	10.10%
5	Ameren Corp.	$2.54	$49.69	7.37%
6	Aquila, Inc.	$0.00	$3.24	-5.35%
7	Avista Corp.	$0.54	$17.68	6.27%
8	Black Hills	$1.28	$33.51	6.90%
9	Cen. Vermont Pub. Serv.	$0.92	$21.03	-0.88%
10	CenterPoint Energy	$0.28	$11.79	14.49%
11	CH Energy Group	$2.16	$45.90	6.43%
12	Cinergy Corp.	$1.92	$41.45	8.60%
13	Cleco Corp.	$0.90	$19.52	8.73%
14	CMS Energy Corp.	$0.00	$12.22	8.47%
15	Consol. Edison	$2.28	$44.08	7.51%
16	Constellation Energy	$1.34	$48.13	11.03%
17	Dominion Resources	$2.68	$69.47	10.63%
18	DPL Inc.	$0.96	$23.48	4.81%
19	DTE Energy	$2.06	$43.81	9.04%
20	Duke Energy	$1.10	$25.50	7.58%
21	Duquesne Light Hldgs	$1.00	$18.19	8.46%
22	Edison Int'l	$1.00	$33.26	10.67%
23	El Paso Electric	$0.00	$18.35	8.89%
24	Empire Dist. Elec.	$1.28	$22.27	5.83%
25	Energy East Corp.	$1.10	$26.78	8.41%
26	Entergy Corp.	$2.16	$66.09	10.04%
27	Exelon Corp.	$1.60	$43.49	14.49%
28	FirstEnergy Corp.	$1.65	$43.81	8.76%
29	FPL Group	$1.42	$38.59	14.95%
30	G't Plains Energy	$1.66	$30.32	8.45%
31	Green Mountain Pwr.	$1.00	$27.84	9.38%
32	Hawaiian Elec.	$1.24	$27.20	6.96%
33	IDACORP, Inc.	$1.20	$29.59	7.33%
34	MDU Resources	$0.72	$27.43	11.37%
35	MGE Energy	$1.37	$34.59	7.19%
36	NiSource Inc.	$0.92	$23.00	6.15%
37	Northeast Utilities	$0.65	$19.46	6.42%
38	NSTAR	$1.16	$27.23	9.82%
39	OGE Energy	$1.33	$27.05	7.90%
40	Otter Tail Corp.	$1.12	$26.54	7.83%
41	Pepco Holdings	$1.00	$21.13	7.92%
42	Pinnacle West Capital	$1.90	$42.90	8.24%
43	PNM Resources	$0.74	$25.38	6.81%
44	PPL Corp.	$1.84	$53.25	12.47%
45	Progress Energy	$2.36	$43.29	8.27%
46	Public Serv. Enterprise	$2.24	$51.21	8.77%
47	Puget Energy Inc.	$1.00	$22.77	7.20%

Computation of Rate of Return

Line No.	Company	Dividends Per Share	52 Week Average Price	Rate of Return k
48	SCANA Corp.	$1.56	$39.69	10.33%
49	Sempra Energy	$1.16	$36.97	13.94%
50	Sierra Pacific Res.	$0.00	$10.42	4.31%
51	Southern Co.	$1.49	$32.52	9.21%
52	TECO Energy	$0.76	$15.74	10.31%
53	TXU Corp.	$2.25	$63.19	163.42%
54	UIL Holdings	$0.00	$50.31	5.78%
55	UniSource Energy	$0.76	$28.85	7.87%
56	Vectren Corp.	$1.18	$26.77	8.78%
57	Westar Energy	$0.92	$22.03	8.15%
58	Wisconsin Energy	$0.88	$35.45	9.45%
59	WPS Resources	$2.22	$51.52	9.99%
60	Xcel Energy Inc.	$0.86	$18.01	7.77%
	Average			10.87%

IOU Industry Beta (β)

Line No.	Company	Beta
1	Allegheny Energy	1.70
2	ALLETE	
3	Alliant Energy	0.85
4	Amer. Elec. Power	1.15
5	Ameren Corp.	0.75
6	Aquila, Inc.	1.35
7	Avista Corp.	0.90
8	Black Hills	1.00
9	Cen. Vermont Pub. Serv.	0.50
10	CenterPoint Energy	0.60
11	CH Energy Group	0.80
12	Cinergy Corp.	0.85
13	Cleco Corp.	1.15
14	CMS Energy Corp.	1.40
15	Consol. Edison	0.60
16	Constellation Energy	0.90
17	Dominion Resources	0.90
18	DPL Inc.	0.95
19	DTE Energy	0.70
20	Duke Energy	1.15
21	Duquesne Light Hldgs	0.80
22	Edison Int'l	1.05
23	El Paso Electric	0.65
24	Empire Dist. Elec.	0.70
25	Energy East Corp.	0.85
26	Entergy Corp.	0.75
27	Exelon Corp.	0.75
28	FirstEnergy Corp.	0.75
29	FPL Group	0.75
30	G't Plains Energy	0.85
31	Green Mountain Pwr.	0.60
32	Hawaiian Elec.	0.70
33	IDACORP, Inc.	0.90
34	MDU Resources	0.90
35	MGE Energy	0.65
36	NiSource Inc.	0.80
37	Northeast Utilities	0.80
38	NSTAR	0.70
39	OGE Energy	0.70
40	Otter Tail Corp.	0.55
41	Pepco Holdings	0.90
42	Pinnacle West Capital	0.85
43	PNM Resources	0.90
44	PPL Corp.	0.95
45	Progress Energy	0.85
46	Public Serv. Enterprise	0.85
47	Puget Energy Inc.	0.80
48	SCANA Corp.	0.75

Line No.	Company	Beta
49	Sempra Energy	1.00
50	Sierra Pacific Res.	1.10
51	Southern Co.	0.65
52	TECO Energy	0.95
53	TXU Corp.	1.00
54	UIL Holdings	0.80
55	UniSource Energy	0.65
56	Vectren Corp.	0.80
57	Westar Energy	0.85
58	Wisconsin Energy	0.70
59	WPS Resources	0.75
60	Xcel Energy Inc.	0.80
	Average	0.85
	Standard Deviation	0.21

Ibbotson Data For CAPM Analysis

Line No.	Year	S&P 500 Total Return	One-Month T-Bill Total Return	Excess Ret.	S&P 500 Total Return	LT Gvt Tot Ret	MRP
1	1926	11.62%	3.27%	8.36%	11.62%	7.77%	3.85%
2	1927	37.49%	3.12%	34.36%	37.49%	8.93%	28.56%
3	1928	43.61%	3.56%	40.05%	43.61%	0.10%	43.50%
4	1929	-8.42%	4.75%	-13.16%	-8.42%	3.42%	-11.84%
5	1930	-24.90%	2.41%	-27.31%	-24.90%	4.66%	-29.56%
6	1931	-43.34%	1.07%	-44.41%	-43.34%	-5.31%	-38.03%
7	1932	-8.19%	0.96%	-9.15%	-8.19%	16.84%	-25.04%
8	1933	53.99%	0.30%	53.69%	53.99%	-0.07%	54.06%
9	1934	-1.44%	0.16%	-1.61%	-1.44%	10.03%	-11.47%
10	1935	47.67%	0.17%	47.50%	47.67%	4.98%	42.68%
11	1936	33.92%	0.18%	33.74%	33.92%	7.52%	26.41%
12	1937	-35.03%	0.31%	-35.33%	-35.03%	0.23%	-35.26%
13	1938	31.12%	-0.02%	31.14%	31.12%	5.53%	25.59%
14	1939	-0.41%	0.02%	-0.43%	-0.41%	5.94%	-6.35%
15	1940	-9.78%	0.00%	-9.79%	-9.78%	6.09%	-15.87%
16	1941	-11.59%	0.06%	-11.65%	-11.59%	0.93%	-12.52%
17	1942	20.34%	0.27%	20.07%	20.34%	3.22%	17.12%
18	1943	25.90%	0.35%	25.55%	25.90%	2.08%	23.82%
19	1944	19.75%	0.33%	19.42%	19.75%	2.81%	16.94%
20	1945	36.44%	0.33%	36.11%	36.44%	10.73%	25.70%
21	1946	-8.07%	0.35%	-8.42%	-8.07%	-0.10%	-7.97%
22	1947	5.71%	0.50%	5.20%	5.71%	-2.62%	8.33%
23	1948	5.50%	0.81%	4.69%	5.50%	3.40%	2.10%

Ibbotson Data For CAPM Analysis

Line No.	Year	S&P 500 Total Return	One-Month T-Bill Total Return	Excess Ret.	S&P 500 Total Return	LT Gvt Tot Ret	MRP
24	1949	18.79%	1.10%	17.69%	18.79%	6.45%	12.34%
25	1950	31.71%	1.20%	30.52%	31.71%	0.06%	31.65%
26	1951	24.02%	1.49%	22.52%	24.02%	-3.93%	27.95%
27	1952	18.37%	1.66%	16.71%	18.37%	1.16%	17.21%
28	1953	-0.99%	1.82%	-2.81%	-0.99%	3.64%	-4.63%
29	1954	52.62%	0.86%	51.76%	52.62%	7.19%	45.44%
30	1955	31.56%	1.57%	29.99%	31.56%	-1.29%	32.86%
31	1956	6.56%	2.46%	4.10%	6.56%	-5.59%	12.14%
32	1957	-10.78%	3.14%	-13.92%	-10.78%	7.46%	-18.24%
33	1958	43.36%	1.54%	41.82%	43.36%	-6.09%	49.46%
34	1959	11.96%	2.95%	9.00%	11.96%	-2.26%	14.21%
35	1960	0.47%	2.66%	-2.19%	0.47%	13.78%	-13.31%
36	1961	26.89%	2.13%	24.76%	26.89%	0.97%	25.92%
37	1962	-8.73%	2.73%	-11.46%	-8.73%	6.89%	-15.62%
38	1963	22.80%	3.12%	19.68%	22.80%	1.21%	21.59%
39	1964	16.48%	3.54%	12.95%	16.48%	3.51%	12.98%
40	1965	12.45%	3.93%	8.52%	12.45%	0.71%	11.74%
41	1966	-10.06%	4.76%	-14.82%	-10.06%	3.65%	-13.72%
42	1967	23.98%	4.21%	19.77%	23.98%	-9.18%	33.16%
43	1968	11.06%	5.21%	5.86%	11.06%	-0.26%	11.32%
44	1969	-8.50%	6.58%	-15.09%	-8.50%	-5.07%	-3.43%
45	1970	4.01%	6.52%	-2.52%	4.01%	12.11%	-8.10%
46	1971	14.31%	4.39%	9.93%	14.31%	13.23%	1.08%
47	1972	18.98%	3.84%	15.14%	18.98%	5.69%	13.29%
48	1973	-14.66%	6.93%	-21.59%	-14.66%	-1.11%	-13.55%

Ibbotson Data For CAPM Analysis

Line No.	Year	S&P 500 Total Return	One-Month T-Bill Total Return	Excess Ret.	S&P 500 Total Return	LT Gvt Tot Ret	MRP
49	1974	-26.47%	8.00%	-34.47%	-26.47%	4.35%	-30.82%
50	1975	37.20%	5.80%	31.40%	37.20%	9.20%	28.01%
51	1976	23.84%	5.08%	18.76%	23.84%	16.75%	7.09%
52	1977	-7.18%	5.12%	-12.30%	-7.18%	-0.69%	-6.50%
53	1978	6.56%	7.18%	-0.62%	6.56%	-1.18%	7.74%
54	1979	18.44%	10.38%	8.06%	18.44%	-1.23%	19.67%
55	1980	32.42%	11.24%	21.18%	32.42%	-3.95%	36.37%
56	1981	-4.91%	14.71%	-19.62%	-4.91%	1.86%	-6.77%
57	1982	21.41%	10.54%	10.87%	21.41%	40.36%	-18.95%
58	1983	22.51%	8.80%	13.72%	22.51%	0.65%	21.86%
59	1984	6.27%	9.85%	-3.58%	6.27%	15.48%	-9.21%
60	1985	32.16%	7.72%	24.43%	32.16%	30.97%	1.19%
61	1986	18.47%	6.16%	12.31%	18.47%	24.53%	-6.06%
62	1987	5.23%	5.47%	-0.23%	5.23%	-2.71%	7.94%
63	1988	16.81%	6.35%	10.46%	16.81%	9.67%	7.14%
64	1989	31.49%	8.37%	23.12%	31.49%	18.11%	13.38%
65	1990	-3.17%	7.81%	-10.99%	-3.17%	6.18%	-9.36%
66	1991	30.55%	5.60%	24.95%	30.55%	19.30%	11.25%
67	1992	7.67%	3.51%	4.16%	7.67%	8.05%	-0.38%
68	1993	9.99%	2.90%	7.09%	9.99%	18.24%	-8.25%
69	1994	1.31%	3.90%	-2.59%	1.31%	-7.77%	9.08%
70	1995	37.43%	5.60%	31.83%	37.43%	31.67%	5.76%
71	1996	23.07%	5.21%	17.86%	23.07%	-0.93%	24.00%
72	1997	33.36%	5.26%	28.10%	33.36%	15.85%	17.51%
73	1998	28.58%	4.86%	23.72%	28.58%	13.06%	15.52%

Ibbotson Data For CAPM Analysis

Line No.	Year	S&P 500 Total Return	One-Month T-Bill Total Return	Excess Ret.	S&P 500 Total Return	LT Gvt Tot Ret	MRP
74	1999	21.04%	4.68%	16.36%	21.04%	-8.96%	30.00%
75	2000	-9.11%	5.89%	-15.00%	-9.11%	21.48%	-30.59%
76	2001	-11.88%	3.83%	-15.71%	-11.88%	3.70%	-15.58%
77	2002	-22.10%	1.65%	-23.75%	-22.10%	17.84%	-39.94%
78	2003	28.70%	1.02%	27.68%	28.70%	1.45%	27.25%
79	2004	10.87%	1.20%	9.67%	10.87%	8.51%	2.36%
				Averages			Est. MRP
	1926-04	12.39%	3.76%	8.63%	12.39%	5.82%	6.57%
	1947-04	13.25%	4.75%	8.50%	13.25%	6.27%	6.98%
				Std. Dev			
	1926-04	20.18%	3.12%	20.50%	20.18%	9.24%	21.15%
	1947-04	13.25%	4.75%	17.38%	13.25%	6.27%	6.98%
	94-04	12.84%	3.92%	8.92%	12.84%	8.72%	4.12%
	94-04	19.42%	1.72%	19.02%	19.42%	12.05%	22.31%

Capital Assets Pricing Model Results
Expected Equity Returns

Scenario 1
Results Using One Month T-Bills
As Risk Free Rate

Line No.	Time Period	Beta 0.65	Beta 0.85	Beta 1.05
1	1926-2004	9.37%	11.10%	12.83%
2	1947-2004	10.27%	11.97%	13.67%
3	1987-2004	9.72%	11.50%	13.29%
4	Average	9.79%	11.53%	13.26%

Scenario 2
Results Using Long-Term Government Bonds
As Risk Free Rate

	Time Period	Beta 0.65	Beta 0.85	Beta 1.05
5	1926-2004	10.09%	11.41%	12.72%
6	1947-2004	10.81%	12.20%	13.60%
7	1987-2004	11.40%	12.22%	13.05%
8	Average	10.77%	11.94%	13.12%

Oregon Trail Electric
Weighted Cost of Capital

Line No.	Capitalization	Capitalization	Capitalization Percent	Cost	Weighted Cost
1	Long-Term Debt	$48,820,885	51.69%	5.54%	2.86%
2	Equity	$45,630,140	48.31%	11.19%	5.41%
3	Total	$94,451,025	100.00%		8.27%