

**SAMUEL C. HADAWAY**

**FINANCO, Inc.  
Financial Analysis Consultants**

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Austin, Texas 78731  
(512) 346-9317**

**SUMMARY OF QUALIFICATIONS**

- Principal, Financial Analysis Consultants (FINANCO, Inc.).
- Ph.D. in Finance and Economics.
- Extensive expert witness testimony in court and before regulatory agencies.
- Management of professional research staff in academic and regulatory organizations.
- Professional presentations before executive development groups, the National Rate of Return Analysts' Forum, and the New York Society of Security Analysts.
- Financial Management Association, previously Vice President for Practitioner Services.

**EDUCATION**

**The University of Texas at Austin  
Ph.D., Finance and Econometrics  
January 1975**

Dissertation: *An Evaluation of the Original and Recent Variants of the Capital Asset Pricing Model.*

**The University of Texas at Austin  
MBA, Finance  
June 1973**

Thesis: *The Pricing of Risk on the New York Stock Exchange.*

**Southern Methodist University  
BA, Economics  
June 1969**

Honors program. Departmental distinction.

**OTHER EXPERIENCE**

**University of Texas at Austin  
Adjunct Associate Professor  
1985-1988, 2004-Present**

Corporate Financial Management, Investments, and Integrative Finance Cases.

**Texas State University San Marcos  
Associate Professor of Finance  
1983-1984, 2003-2004**

Graduate and undergraduate courses in Financial Management, Managerial Economics, and Investment Analysis.

**Public Utility Commission of Texas  
Chief Economist and Director of Economic Research Division  
August 1980-August 1983**

Lead financial witness. Supervised Commission staff in research and testimony on rate of return, financial condition, and economic analysis.

**Assistant Professor of Finance  
Texas Tech University  
July 1978-July 1980  
University of Alabama  
January 1975-June 1978**

Member of graduate faculty. Conducted Ph.D. seminars and directed doctoral dissertations in capital market theory. Served as consultant to industry, church and governmental organizations.

**FINANCIAL AND ECONOMIC TESTIMONY IN REGULATORY  
PROCEEDINGS (Client in parenthesis)**

**Cost of Money Testimony:**

- Arizona Corporation Commission, Docket No. G-04204A-11-\_, April 7, 2011 (UNS Gas, Inc.)
- Utah Public Service Commission, Docket No. 10-035-124, January 24, 2011 (Rocky Mountain Power/PacifiCorp).
- Massachusetts Department of Public Utilities, D.P.U. 11.01 (Electric) and D.P.U. 11.02 (Gas), January 14, 2011, (Fitchburg Gas and Electric Light Company d/b/a/ Unutil)
- Wyoming Public Service Commission, Docket No. 20000-384-ER-10, November 22, 2010 (Rocky Mountain Power dba/PacifiCorp).
- Illinois Commerce Commission, Docket No. 10-0467, July 28, 2010 (Commonwealth Edison Company).
- Missouri Public Service Commission, Case No. ER-2010-0355, June 4, 2010 (Kansas City Power & Light Company).
- Missouri Public Service Commission, Case No. ER-2010-0356, June 4, 2010 (KCP&L Greater Missouri Operations Company).
- Idaho Public Utilities Commission, Case No. PAC-E-10-07, May 28, 2010 (Rocky Mountain Power/PacifiCorp).
- Washington Utilities and Transportation Commission, Docket UE-100749, May 4, 2010 (PacifiCorp).
- New Hampshire Public Utilities Commission, Docket No. DE 10-055, April 15, 2010 (Unitil Energy Systems)
- Oregon Public Utility Commission, Docket No. UE-217, March 1, 2010 (PacifiCorp).
- Texas Public Utility Commission, Docket No. 37744, December 30, 2009,(Entergy Texas, Inc.)
- Kansas Corporation Commission, Docket No. 10-KCPE-415-RTS, December 17, 2009 (Kansas City Power & Light Company).
- Texas Public Utility Commission, Docket No. 37690, December 9, 2009,(El Paso Electric Company).
- California Public Utilities Commission, Application No. 09-11-015, November 20, 2009 (PacifiCorp).
- Federal Energy Regulatory Commission, Docket No. ER10-230-000, November 6, 2009 (Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company).
- Wyoming Public Service Commission, Docket No. 20000-352-ER-09, October 2, 2009 (Rocky Mountain Power dba/PacifiCorp).
- Arkansas Public Service Commission, Docket No. 09-084-U, September 4, 2009, (Entergy-Arkansas)
- Texas Public Utility Commission, Docket No. 37364, August 28, 2009,(American Electric Power-SWEPCO)
- Utah Public Service Commission, Docket No. 09-035-23, June 23, 2009 (Rocky Mountain Power/PacifiCorp).
- New Mexico Public Regulation Commission, Case No. 09-00171-UT, May 2009, (El Paso Electric Company).
- Oregon Public Utility Commission, Docket No. UE-207, April 2, 2009 (PacifiCorp).
- Arkansas Public Service Commission, Docket No. 09-008-U, February 19, 2009 (American Electric Power-SWEPCO).
- Washington Utilities and Transportation Commission, Docket UE-090205, February 9, 2009 (PacifiCorp).
- Idaho Public Utilities Commission, Case No. PAC-E-08-07, September 19, 2008 (Rocky Mountain Power/PacifiCorp).
- Missouri Public Service Commission, Case No. ER-2009-089, September 5, 2008 (Kansas City Power & Light Company).

- Kansas Corporation Commission, Docket No. 09-KCPE-246-RTS, September 5, 2008 (Kansas City Power & Light Company).
- Missouri Public Service Commission, Case No. ER-2009-090, September 5, 2008 (Aquila, Inc. dba/KCP&L Greater Missouri Operations Company).
- Utah Public Service Commission, Docket No. 08-035-38, July 17, 2008 (Rocky Mountain Power/PacifiCorp).
- Wyoming Public Service Commission, Docket No. 20000-333-ER-08, July 2008 (Rocky Mountain Power dba/PacifiCorp).
- Texas Public Utility Commission, Docket No. 35717, June 27, 2008, (Oncor Electric Delivery Company LLC).
- Washington Utilities and Transportation Commission, Docket UG-080546, March 28, 2008 (NW Natural).
- Washington Utilities and Transportation Commission, Docket UE-080220, February 6, 2008 (PacifiCorp).
- Utah Public Service Commission, Docket No. 07-035-93, December 17, 2007 (PacifiCorp).
- Illinois Commerce Commission, Docket No. 07-0566, October 17, 2007 (Commonwealth Edison Company).
- Texas Public Utility Commission, Docket No. 34800, September 26, 2007, (Entergy Gulf States, Inc.)
- Texas Public Utility Commission, Docket No. 34040, August 28, 2007, (Oncor/TXU Electric Delivery Company)
- Massachusetts Department of Public Utilities, D.P.U. 07-71, August 17, 2007, (Fitchburg Gas and Electric Light Company d/b/a/ Unitil)
- Arizona Corporation Commission, Docket No. E-01933A-07-0402, July 2, 2007, (Tucson Electric Power Company).
- Wyoming Public Service Commission, Docket No. 20000-277-ER-07, June 29, 2007 (Rocky Mountain Power dba/PacifiCorp).
- Idaho Public Utilities Commission, Case No. PAC-E-05-1, June 8, 2007 (Rocky Mountain Power dba/PacifiCorp).
- Kansas Corporation Commission, Docket No. 07-KCPE-905-RTS, March 1, 2007 (Kansas City Power & Light Company).
- New Mexico Public Regulation Commission, Case No. 07-00077-UT, February 21, 2007, (Public Service Company of New Mexico).
- Missouri Public Service Commission, Case No. ER-2006-0291, February 1, 2007 (Kansas City Power & Light Company).
- Texas PUC Docket Nos. 33734, January 22, 2007 (Electric Transmission Texas, LLC).
- Texas PUC Docket Nos. 33309 and 33310, November 2006, (AEP Texas Central Company and AEP Texas North Company).
- Louisiana Public Service Commission, Docket No. U-23327, October 2006 and January 2005 (Southwestern Electric Power Company, American Electric Power Company)
- Missouri Public Service Commission, Case No. ER-2007-0004, July 3, 2006 (Aquila, Inc.).
- New Mexico Public Regulation Commission, Case No. 06-00258-UT, June 30, 2006 (El Paso Electric Company).
- New Mexico Public Regulation Commission, Case No. 06-00210-UT, May 30, 2006 (Public Service Company of New Mexico).
- Texas Public Utility Commission, Docket No. 32093, April 14, 2006 (CenterPoint Energy-Houston Electric, LLC).
- Utah Public Service Commission, Docket No. 06-035-21, March 7, 2006 (PacifiCorp).
- Oregon Public Utility Commission, Case No. UE-179, February 23, 2006 (PacifiCorp).

- Kansas Corporation Commission, Docket No. 06-KCPE-828-RTS, January 31, 2006 (Kansas City Power & Light Company).
- Missouri Public Service Commission, Case No. ER-2006-0314, January 27, 2006 (Kansas City Power & Light Company).
- California Public Utilities Commission, Docket No. 05-11-022, November 29, 2005 (PacifiCorp).
- Texas Public Utility Commission, Docket No. 31994, November 5, 2005 (Texas-New Mexico Power Company).
- New Hampshire Public Utilities Commission, Docket No. DE 05-178, November 4, 2005 (Unitil Energy Systems).
- Wyoming Public Service Commission, Docket No. 20000-ER-05-230, October 14, 2005 (PacifiCorp).
- Minnesota Public Utilities Commission, Docket. No. G-008/GR-05-1380, October 2005 (CenterPoint Energy Minnegasco).
- Texas Railroad Commission, Gas Utilities Division No. 9625, September 2005 (CenterPoint Energy Entex).
- Illinois Commerce Commission, Docket No. 05-0597, August 31, 2005 (Commonwealth Edison Company).
- Washington Utilities and Transportation Commission, Docket ,UE-050684/General Rate Case, May 2005 (PacifiCorp).
- Missouri Public Service Commission, Case No. ER-2005-0436, May 2005 (Aquila, Inc.).
- Idaho Public Utilities Commission, Case No. PAC-E-05-1, January 14, 2005 (PacifiCorp).
- Arkansas Public Service Commission, Docket No. 04-121-U, December 3, 2004 (CenterPoint Energy Arkla).
- Oregon Public Utility Commission, Case No. UE-170, November 12, 2004 (PacifiCorp).
- Texas Public Utility Commission, Docket No. 29206, November 8, 2004 (Texas-New Mexico Power Company).
- Texas Railroad Commission, Gas Utilities Division Nos. 9533 and 9534, October 13, 2004 (CenterPoint Energy Entex).
- Texas Public Utility Commission, Docket No. 29526, August 18 and September 2, 2004 (CenterPoint Energy Houston Electric).
- Utah Public Service Commission, Docket No. 04-2035-, August 4, 2004 (PacifiCorp).
- Oklahoma Corporation Commission, Cause No. PUD-200400187, July 2, 2004, (CenterPoint Energy Arkla).
- Minnesota Public Utilities Commission, Docket No. G-008/GR-04-901, July 2004, (CenterPoint Energy Minnegasco).
- Washington Utilities and Transportation Commission, Docket ,UE-032065/General Rate Case, December 2003 (PacifiCorp).
- Washington Utilities and Transportation Commission, Docket ,UG-031885, November 2003 (Northwest Natural Gas Company.).
- Wyoming Public Service Commission, Docket No. 20000-ER-03-198, May 2003 (PacifiCorp).
- Public Service Commission of Utah, Docket No. 03-2035-02, May 2003 (PacifiCorp).
- Public Utility Commission of Oregon, Case. UE-147, March 2003 (PacifiCorp).
- Wyoming Public Service Commission, Docket No. 20000-ER-00-162, May 2002 (PacifiCorp).
- Public Utility Commission of Oregon, UG-152, November 2002 (Northwest Natural).
- Massachusetts Department of Telecommunications and Energy, D.T.E. 02-24/24, May 2002 (Fitchburg Gas and Electric Light Company).
- New Hampshire Public Utilities Commission, Docket No. DE 01-247, January 2002 (Unitil Corporation).

- Washington Utilities and Transportation Commission, Docket UE-011569,70,UG-011571, November 2001 (Puget Sound Energy, Inc.).
- California Public Utilities Commission, Docket No. 01-03-026, September and December 2001 (PacifiCorp).
- New Mexico Public Regulation Commission, Docket No. 3643, July 2001 (Texas-New Mexico Power Company).
- Texas Natural Resources Conservation Commission, Docket No. 2001-1074/5-URC, May 2001 (AquaSource Utility, Inc.).
- Massachusetts Department of Telecommunications and Energy, Docket No. 99-118, May 2001 (Fitchburg Gas and Electric Light Company).
- Public Service Commission of Utah, Docket No. 01-035-01, January 2001 (PacifiCorp)
- Federal Energy Regulatory Commission, Docket No. ER-01-651, January 2001 (Southwestern Electric Power Company).
- Wyoming Public Service Commission, Docket No. 20000-ER-00-162, December 2000 (PacifiCorp).
- Public Utility Commission of Oregon, Case. UE-116, November 2000, (PacifiCorp)
- Public Utility Commission of Texas, Docket No. 22344, September 2000, (AEP Texas Companies, Entergy Gulf States, Inc., Reliant Energy HL&P, Texas-New Mexico Power Company, TXU Electric Company)
- Public Utility Commission of Oregon, Case UE-111, August 2000, (PacifiCorp)
- Texas Public Utility Commission, Docket Nos. 22352,3,4, March 2000 (Central Power and Light Co., Southwestern Electric Power Co., West Texas Utilities Co.).
- Texas Public Utility Commission, Docket No. 22355, March 2000 (Reliant Energy, Inc.).
- Texas Public Utility Commission, Docket No. 22349, March 2000 (Texas-New Mexico Power Co.).
- Texas Public Utility Commission, Docket No. 22350, March 2000 (TXU Electric).
- Washington Utilities and Transportation Commission, Docket UE-991831, November 1999 (PacifiCorp).
- Public Service Commission of Utah, Docket No. 99-035-10, September 1999 (PacifiCorp)
- Louisiana Public Service Commission Docket No. U-23029, August 1999 (Southwestern Electric Power Company)
- Wyoming Public Service Commission, Docket No. 2000-ER-99-145, July 1999, January 2000 (PacifiCorp, dba Pacific Power and Light Company).
- Texas PUC Docket No. 20150, March 1999 (Entergy Gulf States, Inc.)
- Federal Energy Regulatory Commission Docket No. ER-98-3177-00, May and December 1998 (Southwestern Electric Power Company).
- Public Service Commission of Utah, Docket No. 97-035-01, June 1998 (PacifiCorp, dba Utah Power and Light Company).
- Massachusetts Dept. of Telecommunications and Energy, Docket No. DTE 98-51, May 1998, (Fitchburg Gas and Electric Light Company, a subsidiary of Unitil Corp.)
- Texas PUC, Docket No. 18490, March 1998, (Texas Utilities Electric Company)
- Texas PUC Docket No. 17751, March 1998 and July 1997 (Texas-New Mexico Power Company).
- Federal Energy Regulatory Commission Docket No. RP-97, February 1998 and May 1997 (Koch Gateway Pipeline Company).
- Federal Energy Regulatory Commission Docket No. ER-97-4468-000, December 1997 (Puget Sound Power & Light).
- Oklahoma Corporation Commission, Cause No. PUD 960000214, August 1997 (Public Service Company of Oklahoma).
- Oregon Public Utility Commission Docket No. UE-94, April 1996, (PacifiCorp).
- Texas PUC Docket No. 15643, May and September 1996, (Central Power and Light and West Texas Utilities Company).

- Federal Energy Regulatory Commission Docket No. ER-96, April 1996 (Puget Sound Power & Light).
- Federal Energy Regulatory Commission Docket No. ER96, February 1996, (Central and South West Corporation).
- Washington Utilities & Transportation Commission Docket No. UE-951270, November 1995 (Puget Sound Power & Light).
- Texas PUC Docket No. 14965, November 1995, (Central Power and Light).
- Texas PUC Docket No. 13369, February 1995 (West Texas Utilities).
- Texas PUC Docket No. 12065, July and December 1994, (Houston Lighting & Power).
- Texas PUC, Docket No. 12820, July and November 1994, (Central Power and Light).
- Texas PUC Docket No. 12900, March 1994, and New Mexico PUC Case No. 2531, August 1993, (TNP Enterprises).
- Texas PUC, Docket No. 12815, March 1994, (Pedernales Electric Cooperative).
- Florida Public Service Commission, Docket No. 930987-EI, December 1993, (TECO Energy).
- Iowa Department of Commerce, Docket No. RPU-93-9, December 1993, (US West Communications).
- Texas PUC Dkt. No. 11735, May and September 1993, (Texas Utilities Electric Company)
- Oklahoma Corporation Commission, Cause No. PUD 001342, October 1992 (Public Service Company of Oklahoma).
- Texas PUC Dkt. No. 9983, November 1991, (Southwest Texas Telephone Company).
- Texas PUC Dkt. No. 9850, November 1990, Houston Lighting & Power Company).
- Texas PUC Dkt. Nos. 8480/8482, January 1989; City of Austin Dkt. No. 1, August 1988 and July 1987, (City of Austin Electric Department).
- Missouri Public Service Commission Case No. ER-90-101, July 1990 (UtiliCorp).
- Texas PUC Dkt. No. 9945, December 1990; Texas PUC Dkt. No. 9165, November 1989, (El Paso Electric Company).
- Texas PUC Dkt. No. 9427, July 1990, (Lower Colorado River Authority Association of Wholesale Customers).
- Oregon Public Utility Commission, March 1990, (Pacific Power & Light Company).
- Utah Public Service Commission, November 1989, (Utah Power & Light Company).
- Texas PUC Dkt. No. 5610, September 1988, (GTE Southwest).
- Iowa State Utilities Board, September 1988, (Northwestern Bell Telephone Company).
- Texas Water Commission, Dkt. Nos. RC-022 and RC-023, November 1986, (City of Houston Water Department).
- Pennsylvania PUC Dkt. Nos. R-842770 and R-842771, May 1985, (Bethlehem Steel).

**Capital Structure Testimony:**

- Federal Energy Regulatory Commission Docket No. RP-97, May 1997 (Koch Gateway Pipeline Company).
- Illinois Commerce Commission Dkt. No. 93-0252 Remand, July 1996, (Sprint).
- California PUC (Appl. No. 92-05-004) April 1993 and May 1993, (Pacific Telesis).
- Montana PSC, Dkt. No. 90.12.86, November 1991, (US West Communications).
- Massachusetts PUC Dkt. No. 86-33, June 1987, (New England Telephone Company).
- Maine PUC Dkt. No. 85-159, February 1987, (New England Telephone Company).
- New Hampshire PUC Dkt. No. 85-181, September 1986, (New England Telephone Company).
- Maine PUC Dkt. No. 83-213, March 1984, (New England Telephone Company).

**Regulatory Policy and Other Regulatory Issues:**

- Texas PUC Docket No. 31056, September 16, 2005, (AEP Texas Central Company).
- New Hampshire PUC Docket No. DE 03-086, May 2003, (Unitil Corporation).
- Texas PUC Docket No. 26194, May 2003 (El Paso Electric Company)
- Texas PUC Docket No. 22622, June 15, 2001 (TXU Electric)
- Texas PUC Docket No. 20125, November 1999 (Entergy Gulf States, Inc.)
- Texas PUC Docket No. 21112, July 1999 and New Mexico Public Regulation Commission Case No. 3103, July 1999 (Texas-New Mexico Power Company)
- Texas PUC Docket No. 20292, May 1999 (Central Power and Light Co.)
- Texas PUC Docket No. 20150, November 1998 (Entergy Gulf States, Inc.)
- New Mexico PUC Case No. 2769, May 1997, (Texas-New Mexico Power Company).
- Texas PUC Dkt. No. 15296, September 1996, (City of College Station, Texas).
- Texas PUC Dkt. No. 14965 Competitive Issues Phase, August 1996 (Central Power and Light Company).
- Texas PUC Dkt. No. 12456, May 1994, (Texas Utilities Electric Company).
- Texas PUC, Dkt. No. 12700/12701 and Federal Energy Regulatory Commission, Docket No. EC94-000, January 1994, (El Paso Electric Company).
- Florida Public Service Commission Generic Purchased Power Proceedings, October 1993 (TECO Energy).
- Texas PUC, Docket No. 11248, December 1992 (Barbara Faskins).
- Texas PUC Dkt. No. 10894, January and June 1992, (Gulf States Utilities Company).
- State Corporation Commission of Kansas, Dkt. No. 175,456-U, August 1991, (UtiliCorp United).
- Texas PUC Dkt. No. 9561, May 1990; Texas PUC Dkt. Nos. 6668/8646, July 1989 and February 1990, (Central Power and Light Company).
- Texas PUC Dkt. No. 9300, April 1990 and June 1990, (Texas Utilities Electric Co.).
- Texas PUC Dkt. No. 10200, August 1991, (Texas-New Mexico Power Company).
- Texas PUC Dkt. No. 7289, May 1987, (West Texas Utilities Company).
- Texas PUC Dkt. No. 7195, January 1987, (North Star Steel Texas).
- New Mexico PSC Case No. 1916, April 1986, (Public Service Company of New Mexico).
- Texas PUC Dkt. No. 6525, March 1986, (North Star Steel Texas).
- Texas PUC Dkt. No. 6375, November 1985, (Valley Industrial Council).
- Texas PUC Dkt. No. 6220, April 1985, (North Star Steel Texas).
- Texas PUC Dkt. No. 5940, March 1985, (West Texas Municipal Power Agency).
- Texas PUC Dkt. No. 5820, October 1984, (North Star Steel Texas).
- Texas PUC Dkt. No. 5779, September 1984, (Texas Industrial Energy Consumers).
- Texas PUC Dkt. No. 5560, April 1984, (North Star Steel Texas).
- Arizona PSC Dkt. No. U-1345-83-155, January 1984 and May 1984 (Arizona Public Service Company Shareholders Association).

**Insurance Rate Testimony:**

- Texas Department of Insurance, Docket No. 2673, January 2008, (Texas Land Title Association).
- Texas Department of Insurance, Docket No. 2601, December 2006, (Texas Land Title Association).
- Texas Department of Insurance, Docket No. 2394, November 1999, (Texas Title Insurance Agents).
- Senate Interim Committee on Title Insurance of the Texas Legislature, February 6, 1998

- Texas Department of Insurance, Docket No. 2279, October 1997, (Texas Title Insurance Agents).
- Texas Department of Insurance, January 1996, (Independent Metropolitan Title Insurance Agents of Texas).
- Texas Insurance Board, January 1992, (Texas Land Title Association).
- Texas Insurance Board, December 1990, (Texas Land Title Association).
- Texas Insurance Board, November 1989, (Texas Land Title Association).
- Texas Insurance Board, December 1987, (Texas Land Title Association).

**Testimony On Behalf Of Texas PUC Staff:**

- Texland Electric Cooperative, Dkt. No. 3896, February 1983
- El Paso Electric Company, Dkt. No. 4620, September 1982.
- Southwestern Bell Telephone Company, Dkt. No. 4545, August 1982.
- Central Power and Light Company, Dkt. No. 4400, May 1982.
- Texas-New Mexico Power Company, Dkt. 4240, March 1982.
- Texas Power and Light Company, Dkt. No. 3780, May 1981.
- General Telephone Company of the Southwest, Dkt. No. 3690, April 1981.
- Mid-South Electric Cooperative, Dkt. No. 3656, March 1981.
- West Texas Utilities Company, Dkt. No. 3473, December 1980.
- Houston Lighting & Power Company, Dkt. No. 3320, September 1980.

**ECONOMIC ANALYSIS AND TESTIMONY**

**Antitrust Litigation:**

- Marginal Cost Analysis of Concrete Production/Predatory Pricing (Stiles)
- Analysis of Lost Business Opportunity due to denial of Waste Disposal Site Permit (Browning-Ferris Industries, Inc.).
- Analysis of Electric Power Transmission Costs in Purchased Power Dispute, 1995, (City of College Station, Texas).

**Contract Litigation:**

- Analysis of Cogeneration Contract/Economic Viability Issues(Texas-New Mexico Power Company)
- Definition of Electric Sales/Franchise Fee Contract Dispute (Reliant Energy HL&P)
- Analysis of Purchased Power Agreement/Breach of Contract (Texas-New Mexico Power Company)
- Regulatory Commission Provisions in Franchise Fee Ordinance Dispute (Central Power & Light Company)
- Analysis of Economic Damages resulting from attempted Acquisition of Highway Construction Company (Dillingham Construction Corporation).
- Analysis of Economic Damages due to Contract Interference in Acquisition of Electric Utility Cooperative (PacifiCorp).
- Analysis of Economic Damages due to Patent Infringement of Boiler Cleaning Process (Dowell-Schlumberger/The Dow Chemical Company).
- Analysis of Lost Profits in Highway Construction Dispute, Jones Bros., Plaintiff, v. Flour Daniel, Balfour Beatty, Lambrecht, and Lone Star Infrastructure, LLC, Defendants, 53rd Judicial District Court of Travis County, Texas, Cause No. GN204386, 2005, (Flour, et al)
- Analysis of Lost Profits in Insurance Dispute, Nickelson v. International Shipbreaking Ltd., LLC, et al, 332<sup>nd</sup> District Court, Hidalgo County, Texas, Cause No. C-482-01-F, 2005, (Great American Insurance Company).

- Analysis of Lost Profits and Other Economic Damages due to Patent Infringement, Climb Tech, Guthrie, & Schwartz Design, Plaintiffs, v. Verble, Hagler, Reeves, Valcor Industries, Inc., Defendants, U.S. District Court, Western District, Austin, Texas, Civil Action No. 1:05-cv-864-LY, 2008, (Verble, Hagler, et al).

**Lender Liability/Securities Litigation:**

- ERISA Valuation of Retail Drug Store Chain (Sommers Drug Stores Company).
- Analysis of Lost Business Opportunities in Failed Businesses where Lenders Refused to Extend or Foreclosed Loans (FirstCity Bank Texas, McAllen State Bank, General Electric Credit Corporation).
- Usury and Punitive Damages Analysis based on Property Valuation in Failed Real Estate Venture, 1995, (Tomen America, Inc.).

**Personal Injury/Wrongful Death/Lost Earnings Capacity Litigation:**

- Analysis of Lost Earnings Capacity and Punitive Damages due to Industrial Accident (Worsham, Forsythe and Wooldridge).
- Analysis of Lost Earnings Capacity due to Improper Termination (Lloyd Gosselink, Ryan & Fowler).
- Present Value Analysis of Lost Earnings and Future Medical Costs due to Medical Malpractice (Sierra Medical Center).
- Present Value Analysis of Life Care Plan, U.S. District Court, Eastern District of Texas, Texarkana Division, Chisum v. Ford Motor Company, Civil Action No. 5:05-cv-0045, 2005, (Ford Motor Company).
- Analysis of Lost Earnings Capacity due to Industrial Accident, 122<sup>nd</sup> District Court, Galveston County, Texas, Trevino v. BP Products North America, Inc., Cause No. 05-cv-0341, 2006, (BP Products North America, Inc).

**Product Warranty/Liability Litigation:**

- Analysis of Lost Profits due to Equipment Failure in Cogeneration Facility (WF Energy/Travelers Insurance Company).
- Analysis of Economic Damages due to Grain Elevator Explosion (Degesch Chemical Company).
- Analysis of Economic Damages due to failure of Plastic Pipe Water Lines (Western Plastics, Inc.)
- Analysis of Rail Car Repair and Maintenance Costs in Product Warranty Dispute (Youngstown Steel Door Company).
- Analysis of Lost Profits due to Equipment Failure in Electric Power Plant, Houston Casualty Co., Comision Federal de Electricidad, and Seguros Comercial America S.A. de C.V. (Plaintiffs) v. Siemens Power Corporation, et al, District Court of Dallas County Texas, Cause No. DV-99-02749, 2005, (Siemens).
- Analysis of Lost Profits due to Manufacturing Parts Failure, Sanijet Corp. (Plaintiff) v. Lxor International, Inc., U.S. District Court, Northern Division of Texas, Dallas, Texas, Case No. 3:06-cv-1258-B ECF (Lxor International)

**Property Tax Litigation:**

- Evaluation of Electric Utility Distribution System (Jasper-Newton Electric Cooperative).
- Evaluations of Electric Utility Generating Plants (West Texas Utilities Company).

**Valuations of Closely Held Businesses in Litigation Support and Federal Estate Tax Planning.**

**PROFESSIONAL PRESENTATIONS**

- "Fundamentals of Financial Management and Reporting for Non-Financial Managers," Austin Energy, July 2000.
- "Fundamentals of Finance and Accounting," the IC<sup>2</sup> Institute, University of Texas at Austin, December 1996 and 1997.
- "Fundamentals of Financial Analysis and Project Evaluation," Central and South West Companies, April, May, and June 1997.
- "Fundamentals of Financial Management and Valuation," West Texas Utilities Company, November 1995.
- "Financial Modeling: Testing the Reasonableness of Regulatory Results," University of Texas Center for Legal and Regulatory Studies Conference, June 1991.
- "Estimating the Cost of Equity Capital," University of Texas at Austin Utilities Conference, June 1989, June 1990.
- "Regulation: The Bottom Line," Texas Society of Certified Public Accountants, Annual Utilities Conference, Austin, Texas, April 1990.
- "Alternative Treatments of Large Plant Additions -- Modeling the Alternatives," University of Texas at Dallas Public Utilities Conference, July 1989.
- "Industrial Customer Electrical Requirements," Edison Electric Institute Financial Conference, Scottsdale, Arizona, October 1988.
- "Acquisitions and Consolidations in the Electric Power Industry," Conference on Emerging Issues of Competition in the Electric Utility Industry, University of Texas at Austin, May 1988.
- "The General Fund Transfer - Is It A Tax? Is It A Dividend Payout? Is It Fair?" The Texas Public Power Association Annual Meeting, Austin, May 1984.
- "Avoiding 'Rate Shock' - Preoperational Phase-In Through CWIP in Rate Base," Edison Electric Institute, Finance Committee Annual Meeting, May 1983.
- "A Cost-Benefit Analysis of Alternative Bond Ratings Among Electric Utility Companies in Texas," (with B.L. Heidebrecht and J.L. Nash), Texas Senate Subcommittee on Consumer Affairs, December 1982.
- "Texas PUC Rate of Return and Construction Work in Progress Methods," New York Society of Security Analysts, New York, August 1982.
- "In Support of Debt Service Requirements as a Guide to Setting Rates of Return for Subsidiaries," Financial Forum, National Society of Rate of Return Analysts, Washington, D.C., May 1982.

**PUBLICATIONS**

- "Institutional Constraints on Public Fund Performance," (with B.L. Hadaway) *Journal of Portfolio Management*, Winter 1989.
- "Implications of Savings and Loan Conversions in a Deregulated World," (with B.L. Hadaway) *Journal of Bank Research*, Spring 1984.
- "Regulatory Treatment of Construction Work in Progress," abstract, (with B.L. Heidebrecht and J. L. Nash), *Rate & Regulation Review*, Edison Electric Institute, December 20, 1982.
- "Financial Integrity and Market-to-Book Ratios in an Efficient Market," (with W. L. Beedles), *Gas Pricing & Ratemaking*, December 7, 1982.
- "An Analysis of the Performance Characteristics of Converted Savings and Loan Associations," (with B.L. Hadaway) *Journal of Financial Research*, Fall 1981.
- "Inflation Protection from Multi-Asset Sector Investments: A Long-Run Examination of Correlation Relationships with Inflation Rates," (with B.L. Hadaway), *Review of Business and Economic Research*, Spring 1981.

- "Converting to a Stock Company-Association Characteristics Before and After Conversion," (with B.L. Hadaway), *Federal Home Loan Bank Board Journal*, October 1980.
- "A Large-Sample Comparative Test for Seasonality in Individual Common Stocks," (with D.P. Rochester), *Journal of Economics and Business*, Fall 1980.
- "Diversification Possibilities in Agricultural Land Investments," *Appraisal Journal*, October 1978.
- "Further Evidence on Seasonality in Common Stocks," (with D.P. Rochester), *Journal of Financial and Quantitative Analysis*, March 1978.

**Northern Utilities, Inc.**  
**Comparable Company Fundamental Characteristics**

No.	Company	(1)	(2)		(3)		
		% Regulated Revenue	Credit Rating		Capital Structure (2010)		
			S&P	Moody's	Common Equity Ratio	Long-Term Debt Ratio	Preferred Stock Ratio
1	Atmos Energy Corp.	65.0%	BBB+	Baa2	54.6%	45.4%	0.0%
2	NiSource Inc.	87.5%	BBB-	Baa2	45.3%	54.6%	0.1%
3	N.W. Nat'l Gas	94.2%	A+	A1	53.5%	46.5%	0.0%
4	Piedmont Nat'l	100.0%	A	A3	59.0%	41.0%	0.0%
5	Southwest Gas	85.5%	BBB	Baa2	50.9%	49.1%	0.0%
6	Alliant Energy Co.	92.4%	A-/BBB+	A2/A3	49.5%	46.3%	4.2%
7	Ameren	100.0%	BBB-	Baa2	50.9%	48.2%	0.9%
8	Avista Corp.	91.0%	BBB+	Baa1	51.5%	48.5%	0.0%
9	Black Hills Corp	85.7%	BBB+	A3	50.0%	50.0%	0.0%
10	Con. Edison	86.2%	A-	A3/Baa1	50.0%	50.0%	0.0%
11	DTE Energy Co.	77.6%	A	A2	48.7%	51.3%	0.0%
12	Empire District	98.6%	BBB+	A3	48.7%	51.3%	0.0%
13	Entergy Corp.	77.8%	A-/BBB+	Baa1	42.1%	56.3%	1.6%
14	PG&E Corp.	100.0%	BBB+	A3	49.5%	49.5%	1.0%
15	Pepco Holdings	71.0%	A	A3	52.5%	47.5%	0.0%
16	P.S. Enterprise Gp.	66.7%	A-	A2	60.5%	39.5%	0.0%
17	SCANA Corp.	72.9%	A-	A3	47.1%	52.9%	0.0%
18	Sempra Energy	75.7%	A+	Aa3	52.0%	47.0%	1.0%
19	Teco Energy, Inc.	76.6%	BBB	Baa1	40.8%	59.2%	0.0%
20	Vectren Corp.	73.4%	A-	A2	50.1%	49.9%	0.0%
21	Wisconsin Energy	99.1%	A-	A1	49.0%	50.6%	0.4%
22	Xcel Energy Inc.	99.3%	A	A3	46.5%	53.0%	0.5%
Average		85.3%	A-/BBB+	A3	50.1%	49.4%	0.4%

## Column Sources:

(1) Most recent company 10-Ks.

(2) AUS Utility Reports, April 2011.

(3) Value Line Investment Survey, Electric Utility (East), Feb 25, 2011; (Central), Mar 25, 2011; (West), Feb 4, 2011; Natural Gas Utility, Mar 11, 2011.

**Northern Utilities, Inc.**  
**Historical Capital Market Costs**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Prime Rate</b>	6.9%	4.7%	4.1%	4.3%	6.2%	8.0%	8.1%	5.1%	3.3%	3.3%
<b>Consumer Price Index</b>	1.6%	2.5%	2.0%	3.3%	3.3%	2.5%	4.1%	0.0%	2.8%	1.4%
<b>Long-Term Treasuries</b>	5.5%	5.4%	5.0%	5.1%	4.7%	5.0%	4.8%	4.3%	4.1%	4.3%
<b>Moody's Avg Utility Debt</b>	7.7%	7.5%	6.6%	6.2%	5.7%	6.1%	6.1%	6.7%	6.3%	5.6%
<b>Moody's Baa Utility Debt</b>	8.0%	8.0%	6.8%	6.4%	5.9%	6.3%	6.3%	7.2%	7.1%	6.0%

SOURCES:

Prime Interest Rate - Federal Reserve Bank of St. Louis website

Consumer Price Index For All Urban Consumers: All Items (Seasonally Adjusted, December to December) - Federal Reserve Bank of St. Louis website

Long-Term Treasuries - Federal Reserve Bank of St. Louis website; 30-year Treasury bonds 2001 and 2007-2010; 20-year Treasury bonds 2002-2006

Moody's Average Utility Debt - Moody's (Mergent) Bond Record

Moody's Baa Utility Debt - Moody's (Mergent) Bond Record

**Northern Utilities, Inc.**  
**Long-Term Interest Rate Trends**

Month	Triple-B Utility Rate	30-Year Treasury Rate	Triple-B Utility Spread
Jan-08	6.35	4.33	2.02
Feb-08	6.60	4.52	2.08
Mar-08	6.68	4.39	2.29
Apr-08	6.81	4.44	2.37
May-08	6.79	4.60	2.19
Jun-08	6.93	4.69	2.24
Jul-08	6.97	4.57	2.40
Aug-08	6.98	4.50	2.48
Sep-08	7.15	4.27	2.88
Oct-08	8.58	4.17	4.41
Nov-08	8.98	4.00	4.98
Dec-08	8.11	2.87	5.24
Jan-09	7.90	3.13	4.77
Feb-09	7.74	3.59	4.15
Mar-09	8.00	3.64	4.36
Apr-09	8.03	3.76	4.27
May-09	7.76	4.23	3.53
Jun-09	7.31	4.52	2.79
Jul-09	6.87	4.41	2.46
Aug-09	6.36	4.37	1.99
Sep-09	6.12	4.19	1.93
Oct-09	6.14	4.19	1.95
Nov-09	6.18	4.31	1.87
Dec-09	6.26	4.49	1.77
Jan-10	6.16	4.60	1.56
Feb-10	6.25	4.62	1.63
Mar-10	6.22	4.64	1.58
Apr-10	6.19	4.69	1.50
May-10	5.97	4.29	1.68
Jun-10	6.18	4.13	2.05
Jul-10	5.98	3.99	1.99
Aug-10	5.55	3.80	1.75
Sep-10	5.53	3.77	1.76
Oct-10	5.62	3.87	1.75
Nov-10	5.85	4.19	1.66
Dec-10	6.04	4.42	1.62
Jan-11	6.06	4.52	1.54
Feb-11	6.10	4.65	1.45
Mar-11	5.97	4.51	1.46
3-Mo Avg	<b>6.04</b>	<b>4.56</b>	<b>1.48</b>
12-Mo Avg	<b>5.92</b>	<b>4.24</b>	<b>1.68</b>

Sources: Mergent Bond Record (Utility Rates); www.federalreserve.gov (Treasury Rates).

Three month average is for January 2011-March 2011.

Twelve month average is for April 2010-March 2011.

# Economic Indicators

Seasonally Adjusted Annual Rates — Dollar Figures in Billions

	P2010	E2011	E2012	----- Annual % Change -----			----- 2010 -----		----- E2011 -----				----- E2012 -----	
				P2010	E2011	E2012	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Gross Domestic Product</b>														
\$14,657.8	\$15,365.5	\$16,035.1	3.8	4.8	4.4	GDP (current dollars)	\$14,745.1	\$14,861.0	\$15,032.3	\$15,280.8	\$15,496.6	\$15,652.2	\$15,790.3	\$15,928.4
3.8	4.8	4.4	-	-	-	Annual rate of increase (%)	4.6	3.2	4.7	6.8	5.8	4.1	3.6	3.5
2.8	3.1	3.0	-	-	-	Annual rate of increase—real GDP (%)	2.6	2.8	3.2	4.0	3.1	3.7	2.1	2.6
1.0	1.7	1.4	-	-	-	Annual rate of increase—GDP deflator (%)	2.1	0.4	1.4	2.7	2.6	0.4	1.4	0.9
<b>*Components of Real GDP</b>														
\$9,314.4	\$9,583.9	\$9,820.6	1.8	2.9	2.5	Personal consumption expenditures	\$9,330.6	\$9,425.9	\$9,481.6	\$9,550.2	\$9,617.5	\$9,686.3	\$9,738.2	\$9,795.4
1.8	2.9	2.5	-	-	-	% change	2.4	4.1	2.4	2.9	2.8	2.9	2.2	2.4
1,178.2	1,288.6	1,353.4	7.6	9.4	5.0	Durable goods	1,179.3	1,236.9	1,261.9	1,278.6	1,296.6	1,317.4	1,330.3	1,348.4
2,073.5	2,130.9	2,171.9	2.8	2.8	1.9	Nondurable goods	2,076.2	2,100.9	2,109.2	2,124.4	2,138.1	2,151.8	2,159.4	2,167.1
6,064.6	6,181.8	6,320.7	0.5	1.9	2.2	Services	6,076.9	6,098.7	6,124.9	6,163.4	6,200.9	6,237.9	6,270.9	6,304.9
1,363.0	1,487.2	1,598.8	5.6	9.1	7.5	Nonresidential fixed investment	1,388.0	1,405.9	1,420.2	1,462.5	1,511.8	1,554.2	1,563.8	1,584.1
5.6	9.1	7.5	-	-	-	% change	10.0	5.3	4.1	12.4	14.2	11.7	2.5	5.3
1,054.7	1,198.7	1,322.0	15.1	13.7	10.3	Producers durable equipment	1,084.2	1,098.9	1,126.9	1,172.4	1,224.0	1,271.6	1,284.5	1,307.3
323.0	328.7	406.0	(3.3)	1.8	23.5	Residential fixed investment	313.8	315.9	314.2	323.2	332.2	345.2	360.2	387.5
(3.3)	1.8	23.5	-	-	-	% change	(28.0)	2.6	(2.2)	12.0	11.5	16.7	18.5	34.0
60.4	73.8	53.1	-	-	-	Net change in business inventories	121.4	7.1	42.3	76.4	87.5	88.9	67.9	51.7
2,568.6	2,547.2	2,500.2	1.0	(0.8)	(1.8)	Gov't purchases of goods & services	2,589.6	2,579.7	2,558.5	2,555.6	2,545.1	2,529.5	2,512.7	2,505.6
1,077.0	1,079.6	1,045.6	4.8	0.2	(3.1)	Federal	1,094.3	1,093.7	1,082.3	1,084.6	1,079.3	1,072.4	1,061.2	1,050.1
1,497.6	1,474.0	1,460.1	(1.4)	(1.6)	(0.9)	State & local	1,501.7	1,492.6	1,482.7	1,477.6	1,472.4	1,463.5	1,457.7	1,461.2
(421.9)	(389.6)	(326.8)	-	-	-	Net exports	(505.0)	(395.0)	(374.3)	(390.9)	(406.4)	(386.6)	(349.4)	(335.1)
1,666.5	1,827.2	2,006.0	11.8	9.6	9.8	Exports	1,679.3	1,718.3	1,760.3	1,801.6	1,850.5	1,896.2	1,943.2	1,983.8
2,088.4	2,216.7	2,332.8	12.7	6.1	5.2	Imports	2,184.3	2,113.3	2,134.6	2,192.5	2,256.9	2,282.9	2,292.7	2,318.9
<b>**Income &amp; Profits</b>														
\$12,544.6	\$13,207.4	\$13,712.5	3.0	5.3	3.8	Personal income	\$12,595.5	\$12,715.3	\$12,949.8	\$13,127.9	\$13,304.6	\$13,447.2	\$13,481.1	\$13,633.1
11,377.5	11,885.0	12,235.1	3.1	4.5	2.9	Disposable personal income	11,417.3	11,509.1	11,673.0	11,826.2	11,962.2	12,078.5	12,060.9	12,181.0
5.8	5.5	4.4	-	-	-	Savings rate (%)	6.0	5.4	5.4	5.5	5.5	5.4	4.4	4.5
1,794.9	1,678.4	1,665.5	36.3	(6.5)	(0.8)	Corporate profits before taxes	1,845.7	1,773.0	1,711.4	1,697.4	1,674.3	1,630.4	1,636.7	1,632.8
1,381.3	1,207.1	1,220.0	30.1	(12.6)	1.1	Corporate profits after taxes	1,416.3	1,356.5	1,230.2	1,223.6	1,204.5	1,170.2	1,194.3	1,197.6
76.97	96.27	97.12	50.0	25.1	0.9	‡Earnings per share (S&P 500)	72.04	76.97	83.59	88.39	93.63	96.27	96.73	95.51
<b>†Prices &amp; Interest Rates</b>														
1.6	2.8	1.7	-	-	-	Consumer price index	1.4	2.6	5.1	2.7	2.1	1.4	1.5	1.1
0.1	0.3	2.2	-	-	-	Treasury bills	0.2	0.1	0.1	0.2	0.3	0.8	1.4	1.7
3.2	3.8	4.5	-	-	-	10-yr notes	2.8	2.9	3.5	3.7	3.9	4.2	4.5	4.3
4.3	4.9	5.5	-	-	-	30-yr bonds	3.9	4.2	4.6	4.8	4.9	5.3	5.6	5.3
4.9	5.5	6.1	-	-	-	New issue rate—corporate bonds	4.6	4.9	5.1	5.4	5.5	5.9	6.2	6.0
<b>Other Key Indicators</b>														
585.2	665.3	1,055.3	5.6	13.7	58.6	Housing starts (1,000 units SAAR)	588.3	533.7	591.7	625.7	679.3	764.7	857.9	984.6
11.5	13.2	14.7	11.0	14.0	11.5	Auto & truck sales (1,000,000 units)	11.6	12.3	12.8	12.7	13.3	13.8	14.2	14.6
9.6	8.9	8.4	-	-	-	Unemployment rate (%)	9.6	9.6	9.1	8.9	8.8	8.6	8.6	8.5
(3.0)	(4.9)	(1.7)	-	-	-	§U.S. dollar	(8.5)	(14.4)	(5.0)	(1.4)	(1.7)	(2.1)	(3.3)	(1.7)

Note: Annual changes are from prior year and quarterly changes are from prior quarter. Figures may not add to totals because of rounding. A—Advance data. P—Preliminary. E—Estimated. R—Revised.

\*2005 Chain-weighted dollars. \*\*Current dollars. ‡Trailing 4 quarters. †Average for period. §Quarterly % changes at quarterly rates. This forecast prepared by Standard & Poor's.

Northern Utilities, Inc.  
GDP Growth Rate Forecast

	Nominal GDP	% Change	GDP Price Deflator	% Change	CPI	% Change
1950	313.3		15.0		25.0	
1951	347.9	11.0%	15.9	5.6%	26.5	6.0%
1952	371.4	6.8%	16.1	1.5%	26.7	0.9%
1953	375.9	1.2%	16.2	0.8%	26.9	0.6%
1954	389.4	3.6%	16.4	0.8%	26.8	-0.4%
1955	426.0	9.4%	16.8	2.6%	26.9	0.4%
1956	448.1	5.2%	17.3	3.3%	27.6	2.8%
1957	461.5	3.0%	17.8	2.7%	28.5	3.0%
1958	485.0	5.1%	18.3	2.5%	29.0	1.8%
1959	513.2	5.8%	18.4	0.9%	29.4	1.5%
1960	523.7	2.0%	18.7	1.4%	29.8	1.4%
1961	562.6	7.4%	18.9	1.1%	30.0	0.7%
1962	593.3	5.5%	19.1	1.3%	30.4	1.2%
1963	633.5	6.8%	19.4	1.4%	30.9	1.6%
1964	675.6	6.6%	19.7	1.5%	31.3	1.2%
1965	747.5	10.6%	20.1	2.0%	31.9	1.9%
1966	806.9	7.9%	20.8	3.5%	32.9	3.4%
1967	852.7	5.7%	21.4	3.1%	34.0	3.3%
1968	936.2	9.8%	22.4	4.6%	35.6	4.7%
1969	1004.5	7.3%	23.6	5.2%	37.7	5.9%
1970	1052.7	4.8%	24.7	5.0%	39.8	5.6%
1971	1151.4	9.4%	25.9	4.7%	41.1	3.3%
1972	1286.6	11.7%	27.1	4.5%	42.5	3.4%
1973	1431.8	11.3%	28.9	6.8%	46.3	8.9%
1974	1552.8	8.5%	32.0	10.7%	51.9	12.1%
1975	1713.9	10.4%	34.4	7.6%	55.6	7.1%
1976	1884.5	10.0%	36.3	5.4%	58.4	5.0%
1977	2110.8	12.0%	38.7	6.7%	62.3	6.7%
1978	2416.0	14.5%	41.5	7.3%	67.9	9.0%
1979	2659.4	10.1%	45.2	8.7%	76.9	13.3%
1980	2915.3	9.6%	49.6	9.7%	86.4	12.4%
1981	3194.7	9.6%	53.6	8.3%	94.1	8.9%
1982	3312.5	3.7%	56.4	5.2%	97.7	3.8%
1983	3688.1	11.3%	58.3	3.3%	101.4	3.8%
1984	4034.0	9.4%	60.4	3.6%	105.5	4.0%
1985	4318.7	7.1%	62.1	2.8%	109.5	3.8%
1986	4543.3	5.2%	63.5	2.3%	110.8	1.2%
1987	4883.1	7.5%	65.5	3.1%	115.6	4.3%
1988	5251.0	7.5%	67.9	3.7%	120.7	4.4%
1989	5581.7	6.3%	70.3	3.5%	126.3	4.6%
1990	5846.0	4.7%	73.2	4.2%	134.2	6.3%
1991	6092.5	4.2%	75.5	3.2%	138.2	3.0%
1992	6493.6	6.6%	77.1	2.2%	142.3	3.0%
1993	6813.8	4.9%	78.8	2.2%	146.3	2.8%
1994	7248.2	6.4%	80.5	2.1%	150.1	2.6%
1995	7542.5	4.1%	82.1	2.0%	153.9	2.5%
1996	8023.0	6.4%	83.6	1.8%	159.1	3.4%
1997	8505.7	6.0%	85.0	1.6%	161.8	1.7%
1998	9027.5	6.1%	85.9	1.1%	164.4	1.6%
1999	9607.7	6.4%	87.2	1.5%	168.8	2.7%
2000	10129.8	5.4%	89.4	2.5%	174.6	3.4%
2001	10373.1	2.4%	91.2	2.0%	177.4	1.6%
2002	10766.9	3.8%	92.8	1.8%	181.8	2.5%
2003	11416.5	6.0%	94.8	2.1%	185.5	2.0%
2004	12144.9	6.4%	97.9	3.2%	191.7	3.3%
2005	12915.6	6.3%	101.3	3.5%	198.1	3.3%
2006	13611.5	5.4%	104.2	2.9%	203.1	2.5%
2007	14291.3	5.0%	106.9	2.6%	211.4	4.1%
2008	14191.2	-0.7%	109.2	2.1%	211.3	0.0%
2009	14277.3	0.6%	109.7	0.4%	217.2	2.8%
2010	14861.0	4.1%	111.2	1.4%	220.2	1.4%
10-Year Average		3.9%		2.2%		2.4%
20-Year Average		4.8%		2.1%		2.5%
30-Year Average		5.6%		2.7%		3.2%
40-Year Average		6.9%		3.9%		4.4%
50-Year Average		7.0%		3.7%		4.1%
60-Year Average		6.7%		3.4%		3.7%
Average of Periods		5.8%		3.0%		3.4%

**Northern Utilities, Inc.**  
**Discounted Cash Flow Analysis**  
**Summary Of DCF Model Results**

Company	Constant Growth DCF Model Analysts' Growth Rates	Constant Growth DCF Model Long-Term GDP Growth	Low Near-Term Growth Two-Stage Growth DCF Model
1 Atmos Energy Corp.	8.4%	9.9%	9.5%
2 NiSource Inc.	11.3%	10.7%	10.0%
3 N.W. Nat'l Gas	7.6%	9.6%	9.2%
4 Piedmont Nat'l	8.0%	9.8%	9.6%
5 Southwest Gas	8.0%	8.6%	8.5%
6 Alliant Energy Co.	11.2%	10.4%	10.2%
7 Ameren	9.5%	11.3%	10.5%
8 Avista Corp.	10.4%	10.5%	10.6%
9 Black Hills Corp	10.8%	10.5%	10.0%
10 Con. Edison	8.6%	10.6%	10.0%
11 DTE Energy Co.	10.4%	10.8%	10.7%
12 Empire District	12.4%	11.7%	11.1%
13 Entergy Corp.	6.0%	10.5%	10.2%
14 PG&E Corp.	10.9%	10.0%	9.9%
15 Pepco Holdings	9.7%	11.6%	11.0%
16 P.S. Enterprise Gp.	6.7%	10.1%	9.8%
17 SCANA Corp.	9.1%	10.6%	10.2%
18 Sempra Energy	8.0%	9.0%	9.1%
19 Teco Energy, Inc.	11.1%	10.5%	10.5%
20 Vectren Corp.	10.6%	11.1%	10.7%
21 Wisconsin Energy	11.1%	8.9%	9.7%
22 Xcel Energy Inc.	10.0%	10.1%	9.9%
<b>GROUP AVERAGE</b>	<b>9.9%</b>	<b>10.3%</b>	<b>10.0%</b>
<b>GROUP MEDIAN</b>	<b>10.2%</b>	<b>10.5%</b>	<b>10.0%</b>

Sources: Value Line Investment Survey, Electric Utility (East), Feb 25, 2011; (Central), Mar 25, 2011; (West), Feb 4, 2011; Natural Gas Utility, Mar 11, 2011.

DCF results based on analysts' growth results for Entergy (6.0%) and P.S. Enterprise (6.7%) are less than 100 basis points above the triple-B cost of debt (6.04%) from Schedule SCH-2, p. 2, and are, therefore, eliminated.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Northern Utilities, Inc.**  
**Constant Growth DCF Model**  
**Analysts' Growth Rates**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company	Recent Price(P0)	Next Year's Div(D1)	Dividend Yield	Analysts' Estimated Growth					ROE K=Div Yld+G (Cols 3+8)
				Value Line	Zacks	Thomson	Reuters	Average Growth (Cols 4-7)	
1 Atmos Energy Corp.	33.25	1.37	4.12%	5.00%	4.50%	3.60%	4.00%	4.28%	8.4%
2 NiSource Inc.	18.67	0.92	4.93%	7.50%	NA	5.70%	6.03%	6.41%	11.3%
3 N.W. Nat'l Gas	46.09	1.74	3.78%	3.00%	4.60%	3.88%	3.88%	3.84%	7.6%
4 Piedmont Nat'l	28.94	1.17	4.04%	3.50%	4.80%	3.60%	4.03%	3.98%	8.0%
5 Southwest Gas	37.97	1.08	2.83%	7.50%	6.00%	4.40%	2.70%	5.15%	8.0%
6 Alliant Energy Co.	38.23	1.74	4.55%	7.00%	5.00%	9.30%	5.38%	6.67%	11.2%
7 Ameren	28.00	1.54	5.50%	NA	4.00%	NA	4.00%	4.00%	9.5%
8 Avista Corp.	22.79	1.08	4.74%	8.50%	4.70%	4.67%	4.67%	5.64%	10.4%
9 Black Hills Corp	31.22	1.46	4.68%	6.50%	6.00%	6.00%	6.00%	6.13%	10.8%
10 Con. Edison	49.71	2.41	4.85%	2.50%	4.00%	4.23%	4.18%	3.73%	8.6%
11 DTE Energy Co.	46.95	2.35	5.01%	5.50%	5.00%	5.75%	5.22%	5.37%	10.4%
12 Empire District	21.61	1.28	5.92%	7.00%	NA	6.00%	NA	6.50%	12.4%
13 Entergy Corp.	71.57	3.36	4.69%	1.00%	1.50%	NA	1.35%	1.28%	6.0%
14 PG&E Corp.	45.67	1.92	4.20%	6.00%	8.00%	6.16%	6.78%	6.74%	10.9%
15 Pepco Holdings	18.51	1.08	5.83%	0.50%	4.30%	7.00%	3.82%	3.91%	9.7%
16 P.S. Enterprise Gp.	31.80	1.37	4.31%	2.00%	2.00%	1.00%	4.75%	2.44%	6.7%
17 SCANA Corp.	40.71	1.96	4.81%	3.00%	4.60%	4.74%	4.72%	4.27%	9.1%
18 Sempra Energy	52.36	1.68	3.21%	1.00%	7.00%	5.63%	5.72%	4.84%	8.0%
19 Teco Energy, Inc.	18.17	0.86	4.71%	8.00%	5.30%	6.09%	6.13%	6.38%	11.1%
20 Vectren Corp.	26.22	1.40	5.34%	5.50%	5.00%	5.35%	5.35%	5.30%	10.6%
21 Wisconsin Energy	29.57	0.92	3.11%	7.50%	8.00%	8.50%	7.76%	7.94%	11.1%
22 Xcel Energy Inc.	23.77	1.03	4.33%	5.50%	5.10%	6.19%	6.07%	5.72%	10.0%
<b>GROUP AVERAGE</b>	32.92	1.45	4.52%	5.29%	5.33%	5.62%	5.08%	5.34%	9.9%
<b>GROUP MEDIAN</b>			4.69%						10.2%

Sources: Value Line Investment Survey, Electric Utility (East), Feb 25, 2011; (Central), Mar 25, 2011; (West), Feb 4, 2011; Natural Gas Utility, Mar 11, 2011.

The results for Entergy at 6.0% and P.S. Enterprise at 6.7% are below the current cost of triple-B debt (6.04% from Schedule SCH-2, p. 2) plus 100 basis points and are eliminated.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Northern Utilities, Inc.**  
**Constant Growth DCF Model**  
**Long-Term GDP Growth**

	(10)	(11)	(12)	(13)	(14)
Company	Recent	Next	Dividend	GDP	ROE
	Price(P0)	Year's Div(D1)	Yield	K=Growth	K=Div Yld+G (Cols 12+13)
1 Atmos Energy Corp.	33.25	1.37	4.12%	5.80%	9.9%
2 NiSource Inc.	18.67	0.92	4.93%	5.80%	10.7%
3 N.W. Nat'l Gas	46.09	1.74	3.78%	5.80%	9.6%
4 Piedmont Nat'l	28.94	1.17	4.04%	5.80%	9.8%
5 Southwest Gas	37.97	1.08	2.83%	5.80%	8.6%
6 Alliant Energy Co.	38.23	1.74	4.55%	5.80%	10.4%
7 Ameren	28.00	1.54	5.50%	5.80%	11.3%
8 Avista Corp.	22.79	1.08	4.74%	5.80%	10.5%
9 Black Hills Corp	31.22	1.46	4.68%	5.80%	10.5%
10 Con. Edison	49.71	2.41	4.85%	5.80%	10.6%
11 DTE Energy Co.	46.95	2.35	5.01%	5.80%	10.8%
12 Empire District	21.61	1.28	5.92%	5.80%	11.7%
13 Entergy Corp.	71.57	3.36	4.69%	5.80%	10.5%
14 PG&E Corp.	45.67	1.92	4.20%	5.80%	10.0%
15 Pepco Holdings	18.51	1.08	5.83%	5.80%	11.6%
16 P.S. Enterprise Gp.	31.80	1.37	4.31%	5.80%	10.1%
17 SCANA Corp.	40.71	1.96	4.81%	5.80%	10.6%
18 Sempra Energy	52.36	1.68	3.21%	5.80%	9.0%
19 Teco Energy, Inc.	18.17	0.86	4.71%	5.80%	10.5%
20 Vectren Corp.	26.22	1.40	5.34%	5.80%	11.1%
21 Wisconsin Energy	29.57	0.92	3.11%	5.80%	8.9%
22 Xcel Energy Inc.	23.77	1.03	4.33%	5.80%	10.1%
<b>GROUP AVERAGE</b>	<b>34.63</b>	<b>1.53</b>	<b>4.52%</b>	<b>5.80%</b>	<b>10.3%</b>
<b>GROUP MEDIAN</b>			<b>4.69%</b>		<b>10.5%</b>

Sources: Value Line Investment Survey, Electric Utility (East), Feb 25, 2011; (Central), Mar 25, 2011; (West), Feb 4, 2011; Natural Gas Utility, Mar 11, 2011.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Northern Utilities, Inc.**  
**Low Near-Term Growth**  
**Two-Stage Growth DCF Model**

Company	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
	2011/12	2014/15	Annual	CASH FLOWS							ROE=Internal
	Div	Div	Change to 2014/15	Recent Price	Year 1 Div	Year 2 Div	Year 3 Div	Year 4 Div	Year 5 Div	Year 5-150 Div Growth	Rate of Return (Yrs 0-150)
1 Atmos Energy Corp.	1.38	1.45	0.02	-33.25	1.38	1.40	1.43	1.45	1.53	5.80%	9.5%
2 NiSource Inc.	0.92	0.92	0.00	-18.67	0.92	0.92	0.92	0.92	0.97	5.80%	10.0%
3 N.W. Nat'l Gas	1.76	1.88	0.04	-46.09	1.76	1.80	1.84	1.88	1.99	5.80%	9.2%
4 Piedmont Nat'l	1.19	1.31	0.04	-28.94	1.19	1.23	1.27	1.31	1.39	5.80%	9.6%
5 Southwest Gas	1.10	1.25	0.05	-37.97	1.10	1.15	1.20	1.25	1.32	5.80%	8.5%
6 Alliant Energy Co.	1.78	2.00	0.07	-38.23	1.78	1.85	1.93	2.00	2.12	5.80%	10.2%
7 Ameren	1.54	1.54	0.00	-28.00	1.54	1.54	1.54	1.54	1.63	5.80%	10.5%
8 Avista Corp.	1.08	1.30	0.07	-22.79	1.08	1.15	1.23	1.30	1.38	5.80%	10.6%
9 Black Hills Corp	1.46	1.55	0.03	-31.22	1.46	1.49	1.52	1.55	1.64	5.80%	10.0%
10 Con. Edison	2.42	2.48	0.02	-49.71	2.42	2.44	2.46	2.48	2.62	5.80%	10.0%
11 DTE Energy Co.	2.40	2.70	0.10	-46.95	2.40	2.50	2.60	2.70	2.86	5.80%	10.7%
12 Empire District	1.28	1.35	0.02	-21.61	1.28	1.30	1.33	1.35	1.43	5.80%	11.1%
13 Entergy Corp.	3.40	3.70	0.10	-71.57	3.40	3.50	3.60	3.70	3.91	5.80%	10.2%
14 PG&E Corp.	1.92	2.20	0.09	-45.67	1.92	2.01	2.11	2.20	2.33	5.80%	9.9%
15 Pepco Holdings	1.08	1.12	0.01	-18.51	1.08	1.09	1.11	1.12	1.18	5.80%	11.0%
16 P.S. Enterprise Gp.	1.37	1.50	0.04	-31.80	1.37	1.41	1.46	1.50	1.59	5.80%	9.8%
17 SCANA Corp.	1.98	2.10	0.04	-40.71	1.98	2.02	2.06	2.10	2.22	5.80%	10.2%
18 Sempra Energy	1.68	2.05	0.12	-52.36	1.68	1.80	1.93	2.05	2.17	5.80%	9.1%
19 Teco Energy, Inc.	0.87	1.00	0.04	-18.17	0.87	0.91	0.96	1.00	1.06	5.80%	10.5%
20 Vectren Corp.	1.41	1.50	0.03	-26.22	1.41	1.44	1.47	1.50	1.59	5.80%	10.7%
21 Wisconsin Energy	1.04	1.40	0.12	-29.57	1.04	1.16	1.28	1.40	1.48	5.80%	9.7%
22 Xcel Energy Inc.	1.03	1.15	0.04	-23.77	1.03	1.07	1.11	1.15	1.22	5.80%	9.9%
GROUP AVERAGE											10.0%
GROUP MEDIAN											10.0%

Sources: Value Line Investment Survey, Electric Utility (East), Feb 25, 2011; (Central), Mar 25, 2011; (West), Feb 4, 2011; Natural Gas Utility, Mar 11, 2011.

NOTE: SEE PAGE 5 OF THIS SCHEDULE FOR FURTHER EXPLANATION OF EACH COLUMN.

**Northern Utilities, Inc.**  
**Discounted Cash Flow Analysis**  
**Column Descriptions**

Column 1: Three-month Average Price per Share (Jan 2011-Mar 2011)

Column 2: Estimated 2011 Div per Share from Value Line  
(Average 2011/2012 Div per Share for East/Central/Nat Gas Utilities)

Column 3: Column 2 Divided by Column 1

Column 4: "Est'd '07-'09 to '13-'15" Earnings Growth Reported by Value  
Line ("Est'd '08-'10 to '14-'16" for East/Central/Nat Gas Utilities)

Column 5: "Next 5 Years" Company Growth Estimate as  
Reported by Zacks.com

Column 6: "Next 5 Years (per annum) Growth Estimate Reported  
by Thomson Financial Network (at Yahoo Finance)

Column 7: Mean "LT Growth Rate (%)" Reported by Reuters.com

Column 8: Average of Columns 4-7

Column 9: Column 3 Plus Column 8

Column 10: See Column 1

Column 11: See Column 2

Column 12: Column 11 Divided by Column 10

Column 13: Average of GDP Growth During the Last 10 year, 20 year,  
30 year, 40 year, 50 year, and 60 year growth periods.  
See Schedule SCH-3

Column 14: Column 12 Plus Column 13

Column 15: Estimated 2011 Div per Share from Value Line  
(Average 2011/2012 Div per Share for East/Central/Nat Gas Utilities)

Column 16: Estimated 2014 Div per Share from Value Line  
(2015 Div per Share for East/Central/Nat Gas Utilities)

Column 17: (Column 16 Minus Column 15) Divided by Three

Column 18: See Column 1

Column 19: See Column 15

Column 20: Column 19 Plus Column 17

Column 21: Column 20 Plus Column 17

Column 22: Column 21 Plus Column 17

Column 23: Column 22 Increased by the Growth  
Rate Shown in Column 24

Column 24: See Column 13

Column 25: The Internal Rate of Return of the Cash Flows  
in Columns 18-23 along with the Dividends  
for the Years 6-150 Implied by the Growth  
Rates shown in Column 24

## Northern Utilities, Inc.

### Risk Premium Analysis

(Based on Projected Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED GAS COMPANY RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.05%	0.90%
1981	15.62%	15.11%	-0.51%
1982	15.33%	15.62%	0.29%
1983	13.31%	15.25%	1.94%
1984	14.03%	15.31%	1.28%
1985	12.29%	14.75%	2.46%
1986	9.46%	13.46%	4.00%
1987	9.98%	12.74%	2.76%
1988	10.45%	12.85%	2.40%
1989	9.66%	12.88%	3.22%
1990	9.76%	12.67%	2.91%
1991	9.21%	12.46%	3.25%
1992	8.57%	12.01%	3.44%
1993	7.56%	11.35%	3.79%
1994	8.30%	11.35%	3.05%
1995	7.91%	11.43%	3.52%
1996	7.74%	11.19%	3.45%
1997	7.63%	11.29%	3.66%
1998	7.00%	11.51%	4.51%
1999	7.55%	10.66%	3.11%
2000	8.14%	11.39%	3.25%
2001	7.72%	10.95%	3.23%
2002	7.53%	11.03%	3.50%
2003	6.61%	10.99%	4.38%
2004	6.20%	10.59%	4.39%
2005	5.67%	10.46%	4.79%
2006	6.08%	10.43%	4.35%
2007	6.11%	10.24%	4.13%
2008	6.65%	10.37%	3.72%
2009	6.28%	10.19%	3.91%
2010	5.55%	10.08%	4.53%
<b>AVERAGE</b>	<b>8.94%</b>	<b>12.09%</b>	<b>3.15%</b>

#### **INDICATED COST OF EQUITY**

PROJECTED TRIPLE-B UTILITY BOND YIELD*	6.38%
MOODY'S AVG ANNUAL YIELD DURING STUDY	8.94%
INTEREST RATE DIFFERENCE	<u>-2.56%</u>
INTEREST RATE CHANGE COEFFICIENT	-41.71%
ADJUSTMENT TO AVG RISK PREMIUM	<u>1.07%</u>
BASIC RISK PREMIUM	3.15%
INTEREST RATE ADJUSTMENT	1.07%
EQUITY RISK PREMIUM	<u>4.22%</u>
PROJECTED TRIPLE-B UTILITY BOND YIELD*	<u>6.38%</u>
<b>INDICATED EQUITY RETURN</b>	<b><u>10.60%</u></b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Projected triple-B bond yield is 148 basis points over projected long-term Treasury bond rate of 4.9% from Schedule SCH-2, p. 3. The triple-B spread is for 3 months ended March 2011 from Schedule SCH-2, p. 2.

## Northern Utilities, Inc.

### Risk Premium Analysis

(Based on Current Interest Rates)

	MOODY'S AVERAGE PUBLIC UTILITY BOND YIELD (1)	AUTHORIZED GAS COMPANY RETURNS (2)	INDICATED RISK PREMIUM
1980	13.15%	14.05%	0.90%
1981	15.62%	15.11%	-0.51%
1982	15.33%	15.62%	0.29%
1983	13.31%	15.25%	1.94%
1984	14.03%	15.31%	1.28%
1985	12.29%	14.75%	2.46%
1986	9.46%	13.46%	4.00%
1987	9.98%	12.74%	2.76%
1988	10.45%	12.85%	2.40%
1989	9.66%	12.88%	3.22%
1990	9.76%	12.67%	2.91%
1991	9.21%	12.46%	3.25%
1992	8.57%	12.01%	3.44%
1993	7.56%	11.35%	3.79%
1994	8.30%	11.35%	3.05%
1995	7.91%	11.43%	3.52%
1996	7.74%	11.19%	3.45%
1997	7.63%	11.29%	3.66%
1998	7.00%	11.51%	4.51%
1999	7.55%	10.66%	3.11%
2000	8.14%	11.39%	3.25%
2001	7.72%	10.95%	3.23%
2002	7.53%	11.03%	3.50%
2003	6.61%	10.99%	4.38%
2004	6.20%	10.59%	4.39%
2005	5.67%	10.46%	4.79%
2006	6.08%	10.43%	4.35%
2007	6.11%	10.24%	4.13%
2008	6.65%	10.37%	3.72%
2009	6.28%	10.19%	3.91%
2010	5.55%	10.08%	4.53%
AVERAGE	8.94%	12.09%	3.15%

#### INDICATED COST OF EQUITY

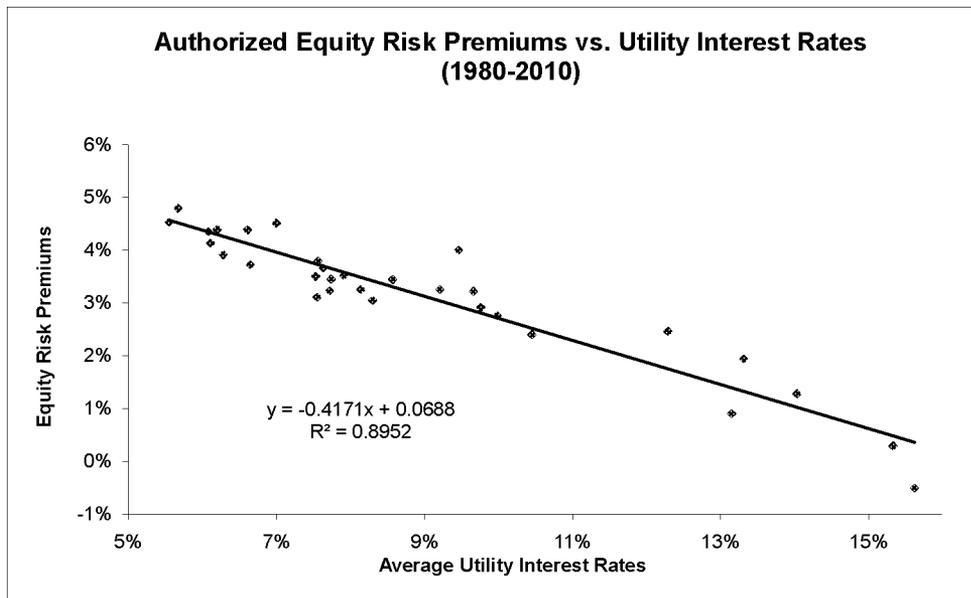
CURRENT TRIPLE-B UTILITY BOND YIELD*	6.04%
MOODY'S AVG ANNUAL YIELD DURING STUDY	8.94%
INTEREST RATE DIFFERENCE	-2.90%
INTEREST RATE CHANGE COEFFICIENT	-41.71%
ADJUSTMENT TO AVG RISK PREMIUM	1.21%
BASIC RISK PREMIUM	3.15%
INTEREST RATE ADJUSTMENT	1.21%
EQUITY RISK PREMIUM	4.36%
CURRENT TRIPLE-B UTILITY BOND YIELD*	6.04%
<b>INDICATED EQUITY RETURN</b>	<b>10.40%</b>

(1) Moody's Investors Service

(2) Regulatory Focus, Regulatory Research Associates, Inc.

\*Current triple-B utility bond yield is three month average of Moody's Triple-B Public Utility Bond Yield Average through March 2011 from Schedule SCH-2, p. 2.

**Northern Utilities, Inc.**  
Risk Premium Analysis  
Regression Analysis & Interest Rate Change Coefficient



SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.946125577
R Square	0.895153607
Adjusted R Square	0.891538214
Standard Error	0.004144593
Observations	31

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.004253103	0.004253103	247.5951145	9.71512E-16
Residual	29	0.000498152	1.71777E-05		
Total	30	0.004751255			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.06876819	0.002483473	27.69033381	2.07972E-22	0.063688918	0.073847462	0.063688918	0.073847462
X Variable 1	-0.417149936	0.026510697	-15.73515537	9.71512E-16	-0.471370399	-0.362929474	-0.471370399	-0.362929474