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CONSUMER PROTECTION AND SAFETY DIVISION
CALIFORNIA PUBLIC UTILITIES COMMISSION

REBUTTAL BY OVERLAND CONSULTING TO REPORT BY WELLS FARGO SECURITIES

SPONSORED BY HOWARD E. LUBOW AND DR. J. ROBERT MALKO

Order Instituting Investigation on the Commission's own Motion into the Operations and Practices of Pacific Gas and Electric Company to Determine Violations of Public Utilities Code Section 451, General Order 112, and Other Applicable Standards, Laws, Rules and Regulations in Connection with the San Bruno Explosion and Fire on September 9, 2010.

I.12-01-007

San Francisco, California
February 8, 2013

PUBLIC VERSION

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Introduction

Q. Please state your name and business address.

A. My name is Howard E. Lubow. My business address is Overland Consulting, 11551 Ash Street, Suite 215, Leawood, Kansas, 66211.

Q. What is your current position at Overland?

A. I am President of the firm.

Q. Please describe Overland Consulting, and your role in the firm.

A. Overland Consulting generally provides management, finance, regulatory policy and accounting services to clients in or associated with the electric, gas, telecommunications and railroad industries. I typically participate in these services as project director or project manager in the firm's major engagements, providing testimony on regulatory policy, finance, management practices, and ratemaking issues.

Q. Please describe your professional experience.

A. For most of the last 40 years, I have provided consulting services in the subject areas identified above either on behalf of industry clients or state regulators such as this commission. Over this period of time, I have testified on many occasions in state and federal administrative proceedings before state commissions and the FERC. On occasion, I have also testified in state and federal courts on utility finance and valuation matters. Aside from this consulting experience, I have also served as Chief Financial Officer and Chief Operating Officer of a gas utility located in the Midwest. A more detailed description of my professional experience is contained in my resume, attached to this testimony as Exhibit LM-1.

Q. Please state your name, address and occupation.

A. My name is J. Robert Malko. I am a Professor of Finance in the Huntsman School of Business at Utah State University located in Logan, Utah. My business consulting address is 245 North Alta Street, Salt Lake City, Utah 84103.

Q. Please summarize your educational background and academic positions.

A. I received my Bachelor's degree, cum laude, in economics and mathematics from Loyola College in Baltimore, Maryland. I received my Master's and Doctorate degrees in economics from the Krannert Graduate School of Management at Purdue University in West Lafayette, Indiana. I have also taken graduate courses in corporate finance at the University of Wisconsin-Madison. At Utah State University, I teach undergraduate level and graduate level courses in Corporate Finance and Applied Microeconomics.

Q. Please describe some of your prior work experience.

A.. I served during the periods 1975-1977 and 1981-1986 as the Chief Economist for the Public Service Commission of Wisconsin. During this time, I also served as Chair and Vice-Chair of the National Association of Regulatory Utility Commissioners ("NARUC") Staff Subcommittee on Economics and Finance. From 1977-1981, I was Project Manager, and then Program Manager for The Electric Utility Rate Design Study. This study was housed at the Electric Power Research Institute ("EPRI") in Palo Alto, California and prepared for NARUC. During 1981-82, I was the Senior Staff Advisor to the NARUC Ad Hoc Committee on Utility Diversification. I assisted the Committee in the preparation and publication of its Final Report. I served on the Board of Directors at the National Regulatory Research Institute ("NRRI"), located at the Ohio State University, between 1997 and 2003.

Q. Have you previously testified in regulatory proceedings?

A. Yes. I have testified on behalf of state regulatory commissions, state offices of consumer counsel, energy utilities, and customer groups. Exhibit LM-2 provides detail concerning my prior experience and publications.

Background

Q. Would you please describe the circumstances under which Overland developed a report entitled "Financial Analysis of PG&E Corporation," which was dated August 21, 2012?

A. Yes. Overland had been retained to conduct a focused audit of PG&E gas transmission pipeline safety-related expenditures. We issued the results of that audit in a report dated December 30, 2011. At some point after the release of the audit report, we had a discussion with CPSD regarding an analysis that would provide a benchmark they could rely upon regarding the financial capacity of PG&E to absorb potential fines or penalties associated with the outcome of proceedings arising from the San Bruno incident.

Q. At the time of these initial discussions regarding an analysis of the PCG financial capacity to incur fines and penalties in connection with the various proceedings arising from San Bruno, was it envisioned that this report would be submitted as evidence in this proceeding?

A. No. The CPSD was aware that there would be discussions among the various parties to resolve the level of penalties and fines to be imposed in the various CPUC proceedings then pending. Given the significant disparity of positions among the various parties, the CPSD wanted Overland to provide an assessment of PG&E's capacity to issue securities to provide the necessary funding for any potential settlement of the CPUC San Bruno investigations and related proceedings.

Q. Did the CPSD have any preconceived ideas about the appropriate level of penalties and fines that should be imposed in the various CPUC proceedings?

A. No. However, it was aware of some preliminary positions being taken by other parties that led it to want an independent benchmark of PCG financial capacity as a basis for any possible input that CPSD might have in the negotiation and settlement process. It was in this context that Overland performed its financial analysis in 2012.

Q. Given that your analysis, at least initially, was never intended to be relied upon as evidence in a CPUC proceeding, are you comfortable with the commission's reliance on this analysis at this time?

A. Yes. The analysis was designed to provide a reasonable benchmark of financial capacity. We believed that the benchmark, if anything, was conservative and would not cause undo financial stress as a result of potential outcomes within the range of our estimate. We continue to believe that this is the case.

Q. Have you had an opportunity to review the Wells Fargo Securities Report dated January 11, 2013, which is a response to your financial analysis?

A. Yes.

Q. As a result of your review, are there any points addressed that might lead you to reconsider your PG&E financial capacity analysis?

A. No. Although the Wells Fargo report makes various comments regarding Overland's analysis, they were all regarding two central issues:

1. the impact of the size of the penalty on PCG's primary stakeholders- creditors,[1] shareholders, customers; and
2. the options available to fund such a penalty.

To the extent that legitimate points are raised in the Wells Fargo report, we believe that we have already implicitly, if not explicitly, considered such points. However, to provide additional context for the CPUC to make its decision in this proceeding, we address the key assertions made in the Wells Fargo report in the discussions below.

Impact of Penalty on PCG Stakeholders

Impact of Penalty on PCG Creditors

Q. On page 12 of the Wells Fargo report, there is a statement that, "Maintaining investment grade credit ratings is important to ensuring that a utility maintains access to the capital markets at a reasonable cost." Do you agree with this statement?

A. Yes. The utility industry is one of the most capital intensive industries in the country. Large capital investments require financing, so access to the capital markets (both debt and equity) is critical. In our decades of experience in representing both public and corporate clients we have consistently advocated for a utility to maintain strong, investment grade credit ratings. In fact, we recently made recommendations in testimony to a state public service commission that were ultimately adopted and directly led to an upgrade of the subject utility's credit ratings.

Q. The Wells Fargo report implies that a penalty may impact PCG's credit rating. What is Wells Fargo's basis for this assertion?

A. The Wells Fargo report relies primarily on its belief that a penalty will cause the rating agencies to reassess California's regulatory environment. S&P rates state commissions in terms of their degree of credit supportiveness and California is one of seven states in

[1] The Wells Fargo report refers to creditors as "debt investors."

a group that was recently given a ranking of "More Credit Supportive." This was the highest ranking given to any state.[2,3]

Q. Are the ratings agencies likely to revise their view of the California regulatory environment based on decisions addressing the San Bruno event, should the outcomes be greater than anticipated by ratings agencies or equity analysts?

A. No. Ratings agencies are concerned about credit supportiveness as reflected in actions that allow utilities to efficiently recover prudently incurred costs and earn the returns authorized. CPUC actions in the San Bruno proceedings are unique to a specific event, the consequences of which will likely fall (as they already have) primarily upon the equity shareholders.

Q. The Wells Report implies, in a not so subtle fashion, that the CPUC should act in a manner consistent with "…(t)he perceived quality of the regulatory environment in which a utility operates" and that this "…is among the most important factors affecting the utility's ability to attract capital at reasonable rates." The report also warns the CPUC that the ability to attract capital at reasonable costs is conditioned on rating agency and analyst views of the regulatory environment in California. In your opinion, do these concerns or warnings have merit?

A. Of course, conceptually the debt and equity markets respond to all events relevant to actual or perceived changes in business or financial risk. The San Bruno pipeline explosion was one of the most significant events in PCG's history, and the repercussions of this event continue to be a primary concern to the rating agencies. The Wells Fargo implication that the CPUC should feel constrained to keep its penalty level artificially low to maintain a "perceived" regulatory environment, however, is not good regulatory policy. Furthermore, the rating agencies are largely indifferent regarding the size of the PCG fine.

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2 "Standard & Poor's Updates Its US Utility Regulatory Assessments," Standard & Poor's Global Credit Portal, March 12, 2010.

3 It should be noted that Standard & Poor's state rated range from "Most Credit Supportive" to "Least Credit Supportive." There were no states classified as "Most Credit Supportive" in the March 2010 rankings.

Q. Why do you believe the size of the fine is not a major concern to the rating agencies?

A. Credit ratings are determined by a company's perceived ability to make required payments to creditors. Therefore, rating agencies should (and, in practice, do) focus on the amount of cash available to creditors when making their assessment of a company's ability to repay its debt. This is why the financial ratios that credit rating agencies use to assess companies' creditworthiness are generally focused on cash-flow measures.

PCG intends to fund a CPUC-imposed fine with equity. This is a prudent and rational decision that we fully support. The impact of issuing additional equity will cause earnings per share to be diluted, *but issuing additional shares will not decrease the cash available to pay debtholders, nor should it have much, if any, impact on PCG's credit metrics*. As such, within a relevant range, the rating agencies are largely indifferent towards the size of a CPUC-imposed fine.

Q. Is it just your opinion that rating agencies are largely indifferent to the size of the fine imposed on PCG?

A. Actually, the rating agencies have stated as much in their reports on the Company. In its December 15, 2011 ratings report, S&P stated that: [redacted] Similarly, in its most recent report, Moody's stated that it expected a [redacted] and that [redacted] the $200 million amount previously accrued by PCG.

In S&P's most recent ratings report, released December 17, 2012, S&P maintained its Corporate Credit Rating on PCG while also stating that [redacted][5]

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[4] Response to OC-350.
[5] Supplemental Response to OC-466, Attachment 2.

Q. You previously stated that rating agencies are largely indifferent toward the size of the penalty within a "relevant range." Can you elaborate?

A. Yes. As we stated before, the responsibility of rating agencies is to assess default risk. To the extent a penalty is within the range that PCG could raise equity capital, the rating agencies would have minimal concerns, as this would have no little to no impact on the company's credit metrics.

Q. Have you provided an estimate of this "relevant range"?

A. Yes. In our August 2012 report, we provided what we believed to be a conservative estimate of incremental equity capital that PCG could raise of $2.25 billion. This "threshold" level of equity capital is in addition to the $200 million that PCG has planned for and included in its 2012 forecasts. This analysis has been updated and is included in the "Updated Estimate of Available Equity Capital Through Equity Issuance" section, but the threshold level of equity has remained the same: $2.25 billion.

Q. Do the rating agencies make any estimates regarding the costs that it expects PCG to incur due to San Bruno?

A. Yes. S&P made the following statements in its December 2012 report:

[redacted]

Q. Page 11 of the Wells Fargo report states that PCG is currently rated as BBB- by S&P, the lowest investment grade credit rating and, as a result PCG "is specifically vulnerable to a downgrade to non-investment grade." Do you share this concern?

A. No, we do not. Wells Fargo incorrectly quotes PCG's credit rating. PCG is not rated BBB- by S&P; it is rated BBB with a stable outlook. Importantly, in its December 17, 2012 report, S&P affirmed this rating and outlook assuming that PCG will [redacted][7] (emphasis added) The S&P report also stated that an upgrade was more likely than a downgrade.

[6] Ibid.
[7] Ibid.

Q. The December 2012 S&P report referenced in your previous response was before the CPUC's decision on PCG's Pipeline Safety Enhancement Plan (PSEP). Do you believe that the PSEP decision would impact S&P's credit rating assessment of PCG?

A. Possibly, but not necessarily in the manner implied by your question. Although the S&P report was issued prior to the final CPUC Decision, it was issued after the ALJ's Recommended Decision. This Recommended Decision, which was ultimately revised in the Company's favor by the CPUC, is what was used in S&P's forecasts for PCG. [redacted]

Impact of Penalty on PCG Equity Shareholders

Q. Is it the responsibility of the CPUC to shield shareholders against the financial consequences of the San Bruno event?

A. No, quite the opposite is actually the case. Regulation should act as a proxy in the absence of a workable competitive market. Utility managers, not regulators, are the financial agents of the utility investors and are subject to prudence reviews to promote efficient behavior. "Prices" for energy services should not be allowed to rise in order to recover costs arising from improper or imprudent management practices. However, regulators must also be concerned about the ongoing viability of the regulated utility necessary to provide service and attract capital. We believe that the Overland analysis provides a reasonable framework for the commission to consider financial outcomes that also preserve PG&E's financial integrity.

Q. Do you disagree with the Wells Fargo observation at page 3 of their report that:

> *…An equity offering to fund a penalty is not going to be as well received by investors as would an offering to fund capital expenditures or an acquisition that would add to the earnings of the company.*

A. Not at all. This observation is consistent with corporate finance models employed to estimate stock prices, and is in any event, intuitively obvious. The question is, did Overland ignore or overlook this point and assume that investors would treat equity issues to fund penalties as though the proceeds would be deployed to fund expected growth? The answer is that it did not.

Q. Can you direct me to any specific portion of the Overland Report that demonstrates that your analysis considers the fact that the issuance of equity securities will have a more negative impact on stock price when used to fund fines or penalties?

A. Certainly. The analysis provided in Table 10 at page 12 of our August 2012 Report (and updated in the "Updated Estimate of Available Equity Capital Through Equity Issuance" section of this testimony) considers the implications of various levels of equity issuance on stock price and other relevant metrics. Our analysis makes a conservative assumption regarding how investors would view these funding levels – it assumes zero incremental earnings and a 100% dilution effect on incremental shares issued. In reality, our analysis is overly conservative, as much of the penalty effects on the stock price have already been absorbed in the market price of the stock. More specifically, our "No Additional Equity Raise" price of $43.41 from our August 2012 Report ($42.67 in our updated analysis) already considers the adverse effects of San Bruno priced by the market.[8]

[8] The updated analysis contained in this testimony includes a PCG market price of $42.67.

Q. At page 19 of the Wells report, the following statement is made: "…the stock market trades on investor's expectations…any penalty that is larger than the market expects will hurt PCG's ability to raise equity by sending a signal that the regulatory climate in California has changed in such a manner as to hinder PG&E's long-term business prospects and increase the risk of investing in the Company." Do you agree with this statement?

A. We agree that market prices reflect investor expectations. We do not agree that this is necessarily synonymous with analyst estimates of approximately $475 million, as referenced in the Wells report at pages 20 and 21.

Q. Assuming that you do not disagree with the statement made by Wells that the market trades on investor expectations, is it possible to quantify how those expectations have been reflected in market prices?

A. Yes. The table below reflects changes in the market price based on response to the San Bruno event, and specific CPUC regulatory actions taken to date arising from the San Bruno incident. As shown in the data below, *the market response to the San Bruno event indicated an expected cost of approximately $1.6 billion.* Taking into consideration the more recent San Bruno related announcements, it appears that investor expectations have priced in about $2.0 billion in CPUC fines and penalties.

Table 1 – Event Analysis

Date	Event	Trading Volume	Shares Outstanding	Share Price	Implied Market Cap (2)	Change in Market Cap from Event Date	Percentage Change in PCG Stock Price	Percentage Change in Dow Jones Utility Index	Percentage Change in PCG Stock Price-Index Adjusted
Thursday, September 09, 2010	**San Bruno Accident**	**2.58**	**390**	**$48.24**	**$18,814**				
Friday, September 10, 2010		30.81	390	$44.21	$17,242	-$1,572	-8.35%	-0.97%	-7.39%
Friday, October 12, 2012	**PSEP Proposed Decision**	**4.77**	**429**	**$42.50**	**$18,233**				
Monday, October 15, 2012		2.55	429	$42.63	$18,288	$56	0.31%	0.61%	-0.30%
Thursday, December 20, 2012	**CPUC PSEP Order**	**3.57**	**429**	**$41.92**	**$17,984**				
Friday, December 21, 2012		4.89	429	$41.49	$17,799	-$184	-1.03%	-0.55%	-0.48%
Friday, December 21, 2012	**$550mm Settlement News Story**	**1.98**	**429**	**$41.49**	**$17,799**				
Monday, December 24, 2012		2.17	429	$40.90	$17,546	-$253	-1.42%	-0.37%	-1.05%
Monday, February 04, 2013	**Recent**	**1.98**	**429**	**$42.11**	**$18,065**				

Note1: Amounts in table denoted in millions, except per share amounts.

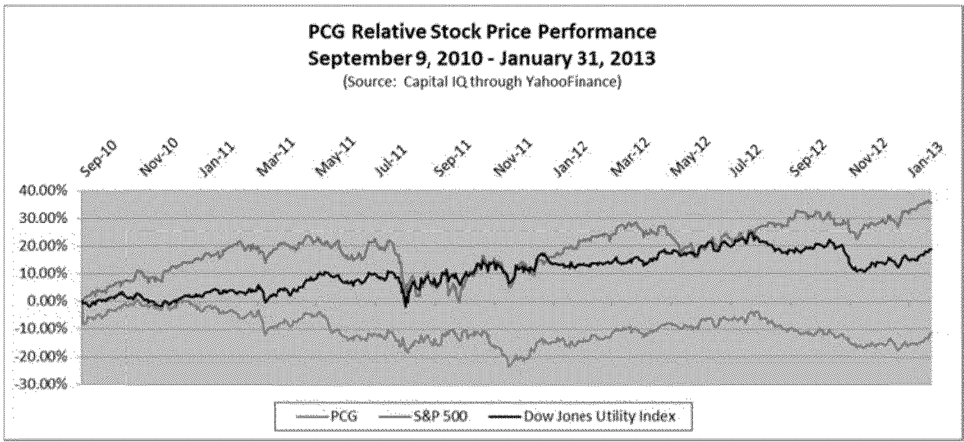
Note2: Implied Market Capitalization was calculated as Share Price * Shares Outstanding.

Share Price and Trading Volume was obtained from CapitalIQ (through YahooFinance); Shares Outstanding used for San Bruno event analysis were obtained from PCG's 3rd quarter 10-Q filing for 2010; Shares Outstanding used for the PSEP analyses were obtained from PCG's 3rd quarter 10-Q filing for 2012.

Q. Generally, how has the stock performed over the period since the San Bruno event?

A. Table 2 below provides a graph of the change in PCG stock prices compared to the S&P 500 and the Dow Jones Utility Index. This graph demonstrates that PCG's stock performance has underperformed relative to the market during this period.

Table 2 – PCG Relative Stock Price Performance



Q. The Wells report references analyst estimates of fines or penalties (page 20), and references the fact that these estimates predated the CPUC December 20, 2012 decision effectively imposing a $1.015 billion penalty on PCG. Have you had an opportunity to review and update the data you included in your August report?

A. Yes. The table below provides an update of the analyst estimates based on data provided to us by the company. This data precedes the December 2012 CPUC decision in the PSEP proceeding. In any event, the analyst estimates are essentially unchanged from our earlier analysis.[9]

[9] In reviewing the underlying data that addresses these estimates, it is evident that the definition of what is included as "fines" varies somewhat among the analysts.

Table 3 – Estimate of Potential Fines

Redacted

Q. Have you also had an opportunity to update the actual analysts' recommendations regarding the PCG stock since your August 2012 analysis?

A. Yes. The table below reflects both the analyst recommendations at the time of our 2012 analysis, as well as an update based on information provided to us by PG&E. This table demonstrates that the stock recommendations have been stable during the spring to fall 2012 timeframe.

Table 4 – Equity Analyst Recommendations - Spring and Fall 2012

Redacted

Q. Understood. However, this update predates the CPUC decision in December 2012. Assuming that the CPUC decision exceeded analyst expectations, would it not be likely that these recommendations would have been impacted by the CPUC Order?

A. Correct. If the equity analysts viewed the CPUC action as negative in relation to expectations, it would be reasonable to assume that their opinions about the stock would be reflected in revised recommendations.

Q. I recognize that your update is based on data available to you from discovery responses provided by PG&E. However, were you able to access similar data that would reflect current analyst recommendations?

A. Yes. While the specific analysts provided in the following table are not necessarily the same as contained in the information provided to us by the company, the overall assessment is similar. Of course, this assessment is ***after*** the CPUC Order released in December 2012.

Table 5 – Equity Analyst Recommendations as of February 2013

Firm	Recommendation
Ativo Research	Hold
Columbine Capital Services Inc.	Hold
Deutsche Bank	Buy
EVA Dimensions	Hold
FBR	Buy
Ford Equity Research	Hold
GMI	Hold
Jefferies	Hold
Jefferson Research	Buy
Morgan Stanley	Hold
Ned Davis Research	Hold
Standard & Poor's Equity Research	Hold
Thomson Reuters/Verus	Hold
Zacks Investment Research, Inc	Hold
Hold	**79%**
Buy	**21%**
Source: fidelity.com obtained 2/6/2013.	

Equity Analyst Reaction to Overland Report

Q. On page 19 of the Wells Fargo report there are quotes from two equity analyst firms regarding Overland's direct testimony. Have you reviewed these comments?

A. Yes.

Q. Do you believe either of these firms offers valid criticisms?

A. No, we do not.

Q. Please elaborate.

A. We will turn first to the comment from Barclays.[10] After stating that it believed the Overland analysis was "flawed" Barclays explained its reasoning, stating that they, "believe it would be difficult for a company to raise 12% of its market capitalization as equity to investors while offering a 0% return on that investment capital." This statement ignores the fact that Overland's analysis assumed that the proceeds PCG would obtain

[10] It is worth noting that in discovery response OC-467, Attachment 53, [redacted].

from issuing its stock would be used to pay the CPUC-imposed fine. This is why Overland assumed a dollar-for-dollar dilution in PCG's share price related to these equity issuances. In other words, the assumption of a 0% return on these proceeds is assumed in Overland's analysis.

Barclays's second criticism is equally baseless: "Furthermore, it would be even more difficult to raise said equity in an environment where the dividend is being cut."[11] Barclays apparently did not review the Overland report in any considerable detail. We clearly state on page 14 of our direct testimony: "<u>Our analysis of PCG's ability to raise equity capital through internal and external sources should not be seen as cumulative</u>." (emphasis added) We further clarify our position that PCG could utilize some mixture of dividend adjustment and outside equity issuance by stating that, "…these options are also not mutually exclusive. PCG could employ some combination of internal/external financing to meet its funding requirements."

Q. Did you also review the comments cited from International Strategy & Investment?

A. Yes. The Wells Fargo report cited the following excerpt from ISI's comments about Overland's report: "The analysis does not appear to address many salient issues pertaining to specific and non-specific capital markets risks that could impact the ability of PCG to finance such a large quantity of equity."

Q. What is your response to this statement?

A. Well, besides vaguely stating that Overland did not consider "many salient issues," ISI admitted elsewhere in its statement that it had an "incomplete" understanding of Overland's report.

More importantly, however, ISI prepared its own analysis regarding how PCG's stock price would be impacted assuming a range of fines and other costs. A comparison of this analysis to Overland's analysis is discussed in the "Updated Estimate of Available Equity Capital Through Equity Issuance" section of our testimony.

[11] Wells Fargo report, page 19.

Size of PCG Equity Issuance

Q. At page 15 of its report, Wells observes that "(t)here have been thirty utility equity offerings since 2008 and Overland's limited selection fails to consider the full data set. More importantly, however, the two offerings Overland selected are not comparable to an equity offering by PCG to fund a penalty..." Have you had an opportunity to review Figure 11 contained at page 25 of their report?

A. Yes.

Q. Does this additional information cause you to change your opinion regarding PCG's ability to issue equity securities necessary to fund up to a threshold of $2.25 billion?

A. No. If anything, we believe that this data fully supports our point that PCG could reasonably expect to issue the amount of equity indicated in relation to its market cap. The table below reflects the six largest equity offerings contained in the Wells data. Issuance of securities equal to our threshold estimate would represent approximately 12% of the PCG market cap. This compares to approximately 17% of market cap in the transactions identified below.[12]

Table 6 – Six Largest Equity Offerings

Six Largest Utility Equity Offerings (as reported in Wells Fargo Report)				
Pricing Date	**Issuer**	**Total Proceeds**	**Market Cap**	**% of Market Cap**
6/22/2010	PPL Corp	2,484	9,179	27.1%
4/11/2011	PPL Corp	2,328	12,462	18.7%
4/1/2009	American Electric Power Co Inc	1,691	10,318	16.4%
9/9/2009	Ameren Corp	552	5,598	9.9%
1/7/2009	Progress Energy Inc	539	10,018	5.4%
9/16/2010	UIL Holdings Corp	524	798	65.6%
Weighted Average Metrics of Large Equity Offerings				16.8%
Overland's 'Threshold' Equity Issue Estimate		**2,250**	**18,321**	**12.3%**
Source: Page 25 of Wells Fargo Report				

[12] The basis for the "Threshold" line item can be found in the "Updated Estimate of Available Equity Capital Through Equity Issuance" section of our testimony.

Impact of Penalty on PCG Customers

Q. How might a penalty imposed on PCG impact PCG customers?

A. The Wells Fargo report alludes to two possible ways that PCG customers could be impacted. One way is an increase in PCG's cost of capital. For reasons described in the previous two sections, we do not anticipate PCG's cost of capital being significantly impacted by a penalty, so long as it falls within the range of our analysis.

Q. At page 16 of the Wells report, it states that "Overland's analysis ignores the fact that PG&E must raise substantial capital for anticipated operational needs over the next few years." Their report then goes on to address this point through page 17. Is this a fair characterization of your analysis?

A. No. If we chose to ignore PG&E's ability to raise capital as required in the future, our threshold" analysis would look considerably different. It is true that PCG faces a period of significant capital spending, as evidenced by the table below. [redacted]

Table 7 – Planned Capital Expenditures and Financing Plan

Redacted

Funding Options Available to PCG

Dividend Alternatives

Q. On page 7 of your August 2012 report, you stated that PCG should consider raising equity through reducing or temporarily eliminating the cash dividend to common stockholders. At page 8 and 9 the Wells Fargo report makes the following statements: "Dividends…signal management's confidence in the business and its prospects…[Wells Fargo] would expect an unanticipated cut in a utility's dividend to lead many risk averse investors to sell thereby reducing the stock price and increasing the utility's cost of capital." Do you agree with these statements?

A. Yes and no. We agree that existing shareholders (and the market as a whole) at times react negatively to news about a dividend cut because they believe it is a "signal" from management about the company's future prospects. This is commonly referred to as the "signaling effect." We also agree that these reactions can be more dramatic for a public utility than for companies in other industries. A 1997 article published in the Journal of Financial Research concluded that a public utility's announcement to cut dividends would be expected to produce a stronger negative market reaction than a similar announcement from an unregulated firm.[13,14]

Although we agree that the signaling effect should generally be a consideration to utilities when deciding on dividend policy, we do not believe that it is a cause for concern in PCG's current circumstances.

Q. Why should the "signaling effect" not be a major concern in the current situation?

A. As stated above, investors often view a dividend cut as an indication that a company's future earnings potential has been revised and company management believes that it is necessary to retain some of the cash that it had originally earmarked for investors. A dividend reduction by PCG to pay its fines/penalties would not be an indication that it was revising its future earnings potential, and we believe the market is sophisticated

[13] Michael Impson, "Market Reaction to Dividend-Decrease Announcements: Public Utilities vs. Unregulated Industrial Firms," *Journals of Financial Research*, September 1997.

[14] However, it should be noted that the mean stock price decline calculated in this study was 10%, far less dramatic than the 17.7% to 24.6% calculated in Figure 4 of the Wells Fargo report. This discrepancy is likely due to a combination of the small number of events listed by Wells Fargo and that three of the dividend cuts listed by Wells Fargo occurred during 2008-2009, one of the worst bear markets in American history.

enough to make this distinction. The market would recognize that this was an event driven decision to raise capital for a one-time cost.

A recent example that illustrates this point is BP's decision in 2010 to suspend its dividend after the massive oil spill that occurred in the Gulf of Mexico. BP's Chief Financial Officer at the time stated that BP was, "…taking a financially prudent position because of the uncertainties."[15] BP's stock rose 1.4% the day of the announcement.

Q. Much of the Wells Fargo report discusses the impact of a dividend cut at PCG. Is this the only dividend action that PCG could take to raise capital?

A. No. [redacted]. The total projected level of dividends during the next four-year period, discounted to present value, equals approximately [redacted]. This includes projected dividend payments for the years 2013 through 2016, of [redacted].

Q. Are you suggesting PCG should eliminate or substantially cut its dividend?

A. Not necessarily. Although those are options that PCG should consider, [redacted].

As noted above, the company projects dividends of [redacted] for 2013. Using the "Base Case" scenario from the most recent company financial forecasts provided in discovery (prepared in September 2012), [redacted] [redacted].[16] [redacted].[17,18,19] Using a 9% discount rate, the projected level of PCG dividends planned during this time period is [redacted] (in present value dollars).

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[15] BP Slashes Dividend, June 16, 2010, CNNMoney.com.

[16] Response to OC-469, Attachment 5.

[17] This level of growth translates to compound annual growth of [redacted].

[18] [redacted].

[19] Using PCG's "Pessimistic" case, [redacted]).

Table 8 – PCG Projected Dividends – Assuming Dividend Increases

Redacted

[redacted]

Table 9 – PCG Projected Dividends – Assuming Dividend Freeze

Redacted

The difference in total dividend value of the above tables clearly demonstrates that [redacted]. If the company just maintained its current dividend through 2016 it would [redacted].

Table 10 – PCG Projected Savings from Dividend Freeze

Redacted

Q. Will freezing the dividend have a major impact on the stock price?

A. We do not believe so. Academic research has indicated that increases in a company's dividend have a much less dramatic impact on the stock price than dividend cuts.[20] Furthermore, much of the impact that dividend policies have on a company's share price is due to the signaling effect. As we described in our previous answers, this effect would be a nonfactor in PCG's current situation.

Q. Can you summarize your views on the possibilities of PCG revising its dividend policies to raise equity capital?

A. Depending on the ultimate CPUC ruling, [redacted]. At a minimum, it would [redacted].

Revised Comparable Company Analysis

Q. In Overland's August 2012 report, a comparable company analysis was provided. Has this analysis been updated?

A. Yes. Attachment 1 is a revised comparable company analysis prepared with more recent data.

[20] J. Fred Weston and Thomas E. Copeland, Ninth Edition, Managerial Finance, The Dryden Press, 1992.

Q. Was the same group of comparable companies used?

A. No. To address the Wells Fargo criticism that we used too many companies in our August 2012 comparable company analysis, we revised our list of companies to include the peer group that PCG discloses in its proxy statement.[21]

Q. When you performed the analysis using PCG's peer group, were the results significantly different than the analysis you provided in your August 2012 report?

A. No. Just as with the analysis in our August 2012 Report, and consistent with the rating agency comments previously discussed, PCG is in a financially stable position and its financial metrics compare favorably with its peers.

Updated Estimate of Available Equity Capital Through Equity Issuance

Q. In Table 10 of the August 2012 Overland report, you provided an analysis that estimated the impact of various levels of equity issuance on PCG's share price, price-to-book ratio and payout ratio. Can you describe the purpose of this analysis?

A. This analysis was used to determine the amount of incremental equity that could potentially be issued by PCG, aside from $200 million that PCG had already incorporated into its forecasts.[22] Using PCG's price-to-book and payout ratio as financial ratio indicators relative to its peer group, Overland determined that PCG could issue $2.25 billion in additional equity and remain comparable to other electric and gas companies.

Q. Have you updated this table?

A. Yes. Using the most recent quarterly information and the most updated financial forecasts provided by the Company, Overland updated this analysis. For reference purposes, we have included both the original analysis and the updated analysis.

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[21] PCG lists two comparator groups in its proxy statement. For purposes of our comparable company analysis, we included all available companies listed in one or both of these groups.

[22] Overland has revised the level of equity incorporated into PCG's financial forecasts from $300 million (referenced on page 10 of Overland's August 2012 report) to $200 million based on company data request responses received subsequent to the filing of the August 2012 report.

Table 11 – Impacts of Equity Issuance (original analysis from August 2012 Report)

Level of Equity Issuance (1)				
	No Additional Equity Raise	Low Estimate	High Estimate	Threshold level
Additional Funding Required	0	500	750	2,250
Impact of Equity Issuance on PCG Price to Book and Payout Ratios				
	No Additional Equity Raise	Low Estimate	High Estimate	Threshold level
PCG Stock Price (as of 03/31/2012)	43.41	43.41	43.41	43.41
Outstanding Shares (pre equity raise)	[redacted]	[redacted]	[redacted]	[redacted]
Implied Market Capitalization	18,328	18,328	18,328	18,328
Implied Book Equity(2)	12,218	12,718	12,968	14,468
Implied Price to Book Ratio	1 5	1.4	1.4	1.3
Equity Issuance Required (in dollars)	-	500	750	2,250
Percentage of Company Sold	0%	3%	4%	12%
Implied Stock Price	43.41	42 23	41.63	38 08
Additional Shares Required to Fund Equity Issuance	-	[redacted]	[redacted]	[redacted]
Outstanding Shares (post equity raise)	[redacted]	[redacted]	[redacted]	[redacted]
Projected Dividend Per Share	[redacted]	[redacted]	[redacted]	[redacted]
Projected Operating Earnings Per Share(3)	[redacted]	[redacted]	[redacted]	[redacted]
Implied Payout Ratio	57%	59%	59%	65%

Note1: Amounts in table denoted in millions, except ratios and per share amounts.

Note2: "Implied Book Equity" was partially based on the company's Q1 2012 Price to Book Ratio of 1 5 obtained from Capital IQ (through YahooFinance).

Note3: Impact on earnings per share was assumed to be due exclusively to the dilutive impact of additional shares.

Source: OC-357 (for company forecast data); Capital IQ (for stock price and price to book data).

Table 12 – Impacts of Equity Issuance (updated)

Level of Equity Issuance (1)				
	No Additional Equity Raise	**Low Estimate**	**High Estimate**	**Threshold level**
Additional Funding Required	0	500	750	2,250
Impact of Equity Issuance on PCG Price to Book and Payout Ratios				
	No Additional Equity Raise	**Low Estimate**	**High Estimate**	**Threshold level**
PCG Stock Price (as of 09/30/2012)	42.67	42.67	42.67	42.67
Outstanding Shares (pre equity raise)	[redacted]	[redacted]	[redacted]	[redacted]
Implied Market Capitalization	18,135	18,135	18,135	18,135
Implied Book Equity(2)	13,047	13,547	13,797	15,297
Implied Price to Book Ratio	1.4	1.3	1.3	1.2
Equity Issuance Required (in dollars)	-	500	750	2,250
Percentage of Company Sold	0%	3%	4%	12%
Implied Stock Price	42.67	41.49	40 91	37 38
Additional Shares Required to Fund Equity Issuance	-	12.1	18.3	60.2
Outstanding Shares (post equity raise)	[redacted]	[redacted]	[redacted]	[redacted]
Projected Dividend Per Share	[redacted]	[redacted]	[redacted]	[redacted]
Projected Operating Earnings Per Share(3)	[redacted]	[redacted]	[redacted]	[redacted]
Implied Payout Ratio	56%	58%	59%	64%

Note1: Amounts in table denoted in millions, except ratios and per share amounts.

Note2: "Implied Book Equity" was partially based on the company's Q3 2012 Price to Book Ratio obtained from Capital IQ (through YahooFinance).

Note3: Impact on earnings per share was assumed to be due exclusively to the dilutive impact of additional shares.

Source: OC-469 (for company forecast data); Capital IQ (for stock price and price to book data).

Q. How has your analysis changed with the updated information?

A. As can be seen in the above tables, the impact of the proposed equity issuance on the payout ratio has stayed substantially the same. The price-to-book ratio decreased at the threshold level from 1.3 to 1.2. At the threshold level, PCG's price-to-book ratio would still remain within the peer group, albeit at the lower end. The estimated percentage of the company sold at this level was largely unchanged compared to our calculation from our August 2012 report.

Q. Have you revised your "threshold" level based on your updated analysis?

A. No, we have not. As stated in our August 2012 report, we believe that our threshold level of equity issuance is a conservative estimate. By assuming that the market will fully dilute PCG's share price with each share of new equity, we are making the <u>highly</u> conservative assumption that the market has not priced in any incremental equity issuance related to a CPUC imposed fine. Furthermore, PCG's metrics, as explained in our previous answer, were largely unaffected from our initial analysis.

Q. Have any equity analysts performed an analysis similar to Overland's?

A. Yes. The same month that Overland released its initial report, ISI (the equity analyst group quoted in the Wells Fargo report) released its own sensitivity analysis that provided estimates of PCG's share price based on fine amounts ranging from [redacted].

This analysis has been reproduced below.[23]

Table 13- Valuation Sensitivity to Fine Amount and Authorized Post 2013

Redacted

The ISI analysis estimates the value of one share of PCG stock assuming a range of non-tax deductible fines [redacted] and tax deductible related costs of [redacted].[24] The Post-Tax Exposure column in the above table represents PCG's exposure to San Bruno related fines/penalties on an after-tax basis. As such, the Post-tax Exposure column should be used when making any comparisons between ISI's analysis to Overland's.

Q. How does the ISI analysis compare to Overland's analysis?

A. Overland's analysis estimated the incremental equity capital available to PCG. We ultimately concluded that $2.25 billion was the threshold level of incremental equity that could be raised by PCG, without exposing the Company to potential increases in costs associated with issuance of subsequent securities offerings.

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[23] [redacted].

[24] The amount of tax deductible related costs is an Overland calculated value. This value was not separately defined by ISI.

Although ISI did not provide valuation estimates at a Post-Tax Exposure of [redacted], it did estimate PCG's per share value at a slightly lower exposure amount of [redacted]. At this exposure level, ISI estimated PCG's share price to range from [redacted], assuming different levels of authorized ROE.

We estimated PCG's share price assuming an equity raise of $2.25 billion at $38.08 in our August 2012 analysis; $37.43 in our updated analysis.

Q. Why is the comparison of the Overland results with the equity analyst results important?

A. Wells Fargo stated in its report that its "major disagreement with the Overland report is that Overland's analysis does not use standard equity capital markets industry practices and is inconsistent with those practices."[25] Overland has itself performed and reviewed numerous financial studies of investment bankers employing financial metrics analyses consistent with measures contained in this testimony and our August 2012 Report. Furthermore, when compared to a valuation study performed by one of PCG's own equity analysts, Overland's results actually produced a more conservative result. Inconsistencies between Overland's methodology and that of "standard" practices, to the extent they exist, appear to be in PCG's favor.

Major Findings and Conclusion

Q. Please summarize the major findings and conclusions addressed in this testimony.

A. Certainly.

- PCG stock prices already reflect an expected cost of San Bruno fines and penalties (consequences) of $1.6 to $2.0 billion.

- The rating agencies have anticipated the CPUC imposition of significant fines and penalties, potentially exceeding [redacted].

- An equity analyst relied upon in the Wells Fargo report, developed a sensitivity analysis including a range of outcomes up to [redacted] in a post-tax exposure

[25] Page 28 of Wells Fargo report.

to fines and penalties. Its "most likely range of outcomes" included an exposure of up to [redacted].

- The company itself has estimated that the range of fines and penalties could be in the range of [redacted].

- Overland developed its estimate of funding capacity based on the current financial position of PCG, as well as its anticipated funding requirements in future periods. In contrast with the Wells Fargo report, Overland's analysis was not solely focused on fines. Also, in contrast to the Wells Fargo report, Overland did not rely on equity analyst estimates. Overland developed its own, independent analysis of PCG's financial capacity.

- A threshold of $2.25 billion is entirely reasonable as an upper limit when measured against the above ranges of outcomes that are within 10% to 20% of the Overland estimate.

- The Overland estimate is not a recommendation as to any particular level of fines and / or penalties, but is provided as a benchmark at which point financial risks may expose PCG to increases in its cost of raising capital to fund future capital expenditures. The Wells Fargo report did not provide, nor did it attempt to provide, such an estimate.

- Whatever level of fines and penalties that may ultimately imposed by the CPUC, PCG should give serious consideration to maintaining its current dividend level, thus retaining a material portion of the funding requirements needed, and reducing reliance on proceeds from equity securities offerings.

Q. Does this conclude your testimony?

A. Yes, it does.

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Attachment 1

Revised PCG Comparable Company Analysis						
Company	**Ticker**	**Forward P/E**	**Price/ Book**	**Debt/Equity**	**Current Ratio**	**Dividend Yield**
PG&E Corporation	PCG	15.24	1.39	1.00	1.03	4.30%
American Electric Power Co.	AEP	14.42	1.43	1.21	0.68	4.20%
AES Corporation	AES	8.64	1.86	2.81	1.15	1.40%
Ameren Corporation	AEE	15.65	1.01	0.87	1.56	4.90%
CenterPoint Energy, Inc.	CNP	16.32	2.06	2.32	0.82	4.00%
Consolidated Edison Inc.	ED	14.69	N/A	0.94	N/A	4.20%
Dominion Resources, Inc.	D	15.14	2.63	1.78	0.71	4.20%
DTE Energy Company	DTE	15.81	1.49	1.06	1.18	3.90%
Duke Energy Corporation	DUK	15.76	1.18	0.97	1.18	4.40%
Edison international	EIX	14.50	1.57	1.22	1.05	2.80%
Entergy Corporation	ETR	13.03	1.25	1.37	0.97	5.10%
Exelon Corporation	EXC	12.18	1.21	0.89	1.46	6.80%
FirstEnergy Corp.	FE	13.50	1.26	1.39	0.63	5.40%
NextEra Energy, Inc.	NEE	13.53	1.90	1.70	0.60	3.30%
NiSource, Inc.	NI	17.20	1.54	1.45	0.67	3.60%
Northeast Utilities	NU	16.17	1.41	0.97	0.56	3.30%
Pinnacle West Capital	PNW	15.10	1.44	0.82	1.16	4.10%
Public Service Enterprise Group	PEG	13.37	1.46	0.77	1.31	4.60%
SCANA Corporation	SCG	14.04	1.51	1.40	0.97	4.20%
Southern Company	SO	15.00	2.06	1.10	N/A	4.50%
Wisconsin Energy Corporation	WEC	15.58	2.20	1.26	0.91	3.40%
Xcel Energy Inc.	XEL	14.07	N/A	1.27	N/A	3.90%
Mean		**14.46**	**1.60**	**1.31**	**0.98**	**4.10%**
Median		**14.69**	**1.49**	**1.22**	**0.97**	**4.20%**

Note1: Constellation Energy and Progress Energy were also included in PCG's comparator group. These companies were not included because they have subsequently merged with Exelon Corporation and Duke Energy Corporation, respectively.
Source: PCG 2012 Proxy Statement; Capital IQ (obtained through YahooFinance).

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Exhibit LM-1

HOWARD E. LUBOW
President

General

Mr. Lubow is President of Overland Consulting. He has more than thirty years of experience as a public utility consultant. His consulting engagements have encompassed a broad spectrum of management, finance and regulatory issues for electric, gas, water, pipeline, and telephone utilities. Recent project experience includes focused management audits, analysis of utility diversification and acquisition plans, prudence studies, accounting systems design, cost of service determination and allocation, utility property valuation, rate of return determinations and rate design issues. Mr. Lubow has testified in more than 100 regulatory and civil litigation proceedings and has testified in approximately 20 jurisdictions throughout the country.

Education

- Bachelor of Business Administration - Accounting, 1968, University of Missouri - Kansas City. Minor in economics.
- Graduate studies in quantitative and systems analysis, 1968-1970, University of Missouri - Kansas City.

Representative Experience

Electric and Gas

- Project Director in a focused audit of National Grid service and parent company charges to New York jurisdictional utilities. The audit included a review of internal control procedures, as well as an in-depth review of transactions over a 20 month period, ultimately associated with jurisdictional cost of service implications. The scope of charges considered in the audit exceeded $5.0 billion. Overland sampled the total population of costs through direct and statistical analysis.
- Project Director in the review of the proposed merger between Exelon Constellation Energy on behalf of the Maryland PSC. Appeared as the lead policy witness, addressing financial, governance and rate issues implicit in the merger review. Considered the implications of market power and cost-benefit analyses in making recommendations concerning proposed settlement options.
- Project manager in a management audit of Connecticut Natural Gas, and its parent Iberdrola USA. The audit scope included all significant functions of the company including a review of corporate governance and executive management, accounting and finance, conservation activities, and operations. A number of special topics were also addressed including: customer demand metering, billing determinates and billing procedures.

- Project Director in the review of the proposed merger of FirstEnergy and Allegheny on behalf of the Maryland PSC. Appeared as the lead policy witness, addressing financial, governance and rate issues implicit in the merger review. Proposed conditions necessary to comply with statutory criteria. Provided a set of ring-fencing conditions appropriate to maintain financial and governance policies necessary to protect Potomac Edison, the Maryland regulated utility under review.

- Project Director in the review of the proposed transaction between Constellation Energy and EDF involving, among other things, the sale of a 50% interest in Constellation's nuclear facilities. Lead witness on behalf of the Maryland Staff addressing various transaction issues including: impact on Baltimore Gas & Electric customers; corporate governance and financial implications; ring-fencing measures; and cost-benefit analysis.

- Project manager of the management audit of Atlantic City Electric, and its parent PHI Holdings. The audit covered a detailed review of the corporate governance, strategic planning, executive management, and finance functions. Other key areas of review included affiliate transactions, generation and transmission planning, and service quality and system reliability.

- Project Manager in the review of long-term financial projections prepared by Midland Cogeneration Venture Limited Partnership to be used in regulatory proceedings concerning proposed modifications to a power purchase agreement. The engagement included the sensitivity testing of major variables in the partnership's financial model.

- Project Manager in the review of accounting and finance issues raised by Connecticut utilities in connection with proceedings on long-term capacity measures. Addressed the implications of new generation facilities and DSM projects on regulated electric utilities.

- Project Director for a multi-disciplinary consulting team that reviewed the proposed Exelon / PSEG merger on behalf of the New Jersey Board of Public Utilities. Also the primary expert witness in areas of: finance and regulatory policy, responsible for analysis of the merger's financial impacts, in particular the impact on PSE&G, the New Jersey utility. Responsible for recommendations to insure that if the merger is approved, that the transaction price, terms and conditions are fair and reasonable in light of applicable standards for review, and that the New Jersey utility remains financially secure.

- Performed a financial and market feasibility study of a fiber optic network designed to provide SCADA requirements for a large multi-state electric utility interested in selling capacity to telecommunications carriers and high volume customers.

- Sponsored the overall development of utility revenue requirements, jurisdictional and class cost of service studies and rate design issues in numerous electric, gas, water and telecommunication cases throughout the country.

- Conducted an analysis of the adequacy of depreciation rates for a large independent telephone company located in Texas in order to assess the relationship of capital recovery in light of technological obsolescence.

- Directed and developed a two day training seminar for the Kentucky Public Service Commission addressing energy and telecommunications issues raised in rate filings, and utility planning and forecast models required in considering the use of projected test year data.

- Supervised and directed a group of PSC Staff members in the review of a rate filing relying upon the use of a projected test year.

- Directed a comprehensive financial and regulatory base period audit of a large gas transmission and distribution company in connection with implementation of an incentive regulation plan. Reviewed savings resulting from force reductions of 1,200 employees and implementation of aggressive cost reduction programs.

- Performed a study of an LDC's gas supply and transportation procurement practices in a post Order 636 operating environment, where the LDC's transportation and supply services continued to be provided by affiliated companies. The parent reorganized its pipeline transmission and gas supply services into a separate company, transferring jurisdiction from state regulators to the FERC. Developed a model to quantify an optimal supply and transportation mix for state ratemaking purposes.

- Performed a review of intrastate pipeline issues including the use of a straight fixed-variable cost methodology; regulatory treatment of stranded costs; pipeline competition issues; and the merits of a corporate restructuring and related effects on cost of service and changes in corporate operations.

- Developed a revenue requirement analysis of an intrastate gas transmission pipeline company addressing issues including: proper recognition of net operating loss carryforwards for ratemaking purposes; treatment of deferred start-up costs; application of criteria for consideration of acquisition premium in rates; and the recognition and relationship of financial criteria in the ratesetting process.

- Directed a comprehensive review of the $850 million PG&E gas transmission pipeline expansion project. This study included a review of regulatory considerations in recognizing construction and operating costs in light of competition in the California pipeline markets, and based upon the Commission intended allocation of risks among regulated customers, project shippers and the pipeline owner.

- Directed a review of gas procurement policies and procedures, and addressed the impact of FERC Order 636 for three Wyoming LDC’s. This study addressed the relationship of gas pipeline and LDC affiliate organizations associated with the gas supply and transportation functions, and the impact of the affiliated organizational structures on gas prices measured against other utilities in the region.

- Reviewed impacts of FERC Order 636 on gas utility distribution companies including staffing and other operating requirements, changes in gas procurement and storage policies, and effects on marketing plans. Also reviewed various pipeline compliance filings, analyzing impacts on firm and non-firm customers.

- Reviewed electric and gas utility fuel procurement policies and procedures, organization and internal controls in various engagements. Developed recommendations resulting in significant benefits to utilities under review.

- Performed fuel audit investigations in several jurisdictions addressing such issues as economic dispatch procedures, fuel acquisition policies, affiliated mine or pipeline operations, captive mine development and compliance with Commission rules and regulations. These studies included the review of prices and returns produced from affiliated operations vs. third-party options and market prices available.

- Reviewed gas supply issues including procurement policies, supply mix, affiliate transactions, and contract provisions in the context of both cost of service and management review proceedings. Provided policy analysis regarding considerations and benefits of increased gas supply and pipeline competition.

- Participated in three FERC interstate pipeline rate proceedings addressing cost of service issues, including appropriate classification and allocation methodologies. Also addressed construction costs, overhead, and pipeline operations issues in a major oil pipeline docket.

- Performed a detailed analysis and presented testimony regarding the relative economic benefits of the operation of a LNG plant vs. meeting seasonal peak demands through pipeline contract commitments.

- Developed gas transportation pricing criteria and implementation guidelines in the development of tariff service offerings for several gas LDC's.

- Developed numerous gas cost service studies, and related rate design recommendations for local distribution companies, as well as pipeline suppliers. Testimony regarding such studies was presented before various state commissions, as well as the FERC.

- Responsible for gas distribution company revenue requirements in over twenty-five cases, addressing accounting, cost allocation, operations, and rate design issues. These cases generally included an analysis of gas production, gathering, and transmission systems owned by the LDC parent.

- Developed a damages model for a gas utility in civil litigation arising from acquisition of a defective distribution system caused by improper installation practices. Measured incremental construction and operating costs associated with pipe replacement program.

- Developed a risk analysis model used to associate the relationship between cost recovery and changes in class consumption patterns for a gas distribution company.

- Developed a quantitative model to estimate jurisdictional and class-peak consumption for distribution gas companies.

- Performed an overview of regulatory considerations in the oversight of holding company formations and operations. This project was conducted on behalf of a PUC to analyze issues associated with holding company formations, utility diversification, and affiliated interest oversight and controls. The four largest electric utilities in the state were included in the study. The final report covered policy issues, as well as more detailed discussions of monitoring procedures and recommended filing requirements.

- Developed diversification guidelines for utilities in several jurisdictions. Addressed regulatory concerns and limits that might be implemented to control contingent adverse consequences to utility ratepayers.

- Performed an overview of regulatory considerations in the oversight of holding company formations and operations. This study addressed appropriate regulatory guidelines and oversight policies for utility and nonutility operations.

- Directed reviews of two major utility subsidiary gas intrastate pipeline systems, addressing cost of service, operating issues, and appropriate accounting for overheads and affiliated transactions from regulated electric utility parent companies.

- Developed a financing plan and reorganization of corporate structure for an electric utility having gas properties and a separate gas subsidiary. This project included preparation of SEC U-1 filings, filings with regulatory agencies and testimony to address the impact of the proposed financing and reorganization on cost of capital and rates.

- Responsible for the independent analysis of the feasibility and economics of consolidation of two major electric utilities. The project focused primarily on the quantification of merger benefits associated with consolidated operations. This in-depth twelve-month study also included a detailed review of the scope of services and basis of pricing such services among affiliates. The study addressed a number of affiliate interest issues including: the basis of pricing and level of capacity and/or energy supplied by affiliate vs. third-parties; the services provided by an affiliate "service" company vs. internal resources or purchases from third-parties; and the consideration of management resources devoted to non-utility functions and the basis of compensation for such resource transfers.

- Reviewed American Electric Power System Agreement to assess the reasonableness of fuel and purchased power costs incurred and allocated to its utility operating companies. The analysis also considered system dispatch and related fuel accounting issues associated with energy requirements of regulated customers versus wholesale transactions.

- Responsible for the development and implementation of phase-in plans utilized to defer initial costs of new generation facilities. Developed assessment criteria and related models to assign capacity from new plant additions between jurisdictional and nonregulated service.

- Developed and conducted a training program on the measurement of relative and absolute fuel productivity measures in ranking utility's effectiveness in fuel procurement and generation system operations.

- Developed a framework for implementation of competitive pricing for an electric utility facing higher costs due to nuclear plant additions. The analysis also encompassed an incentive rate program designed to induce greater use of excess capacity, as well as to improve the utility load factor.

- Analyzed and implemented economic dispatch models used to evaluate the effects of changes in generation capacity and fuel use.

- Conducted several comprehensive nuclear management and prudence reviews addressing construction, management, planning and economics issues.

- Directed a two-year study of the impacts on and options available to an electric utility due to the abandonment of a nuclear plant near completion. Presented a workout plan to regulators. Study involved a five-year forecast of financial results including construction expenditures and operating costs.

- Developed commercial operation date criteria and guidelines for nuclear power plants, which were supported by a national industry survey.

- Developed a financial analysis of a major municipal utility facing an extended outage of its nuclear power plant, with alternative pricing strategies, recognizing competitor pricing in adjacent service areas. Developed multi-year cost of service and revenue requirements models, and presented results to the Utility Board.

- Performed studies for municipalities to determine the feasibility of acquiring street lighting facilities, or in the alternative, pricing options other than PSC regulated tariffs.

- Conducted an industry survey of the effectiveness and relative benefits achieved from the use of uniform filing requirements in utility rate applications. The findings were published and distributed to the utility industry and regulatory commissions.

- Developed class cost-of-service studies including identification of direct assignments and review of distribution facilities, methodologies and criteria for the allocation of generation and bulk power facilities, and risk differentials associated with various classes of service.

- Project director of a review of Kentucky current statutes, regulations and policies governing integrated resource planning. The project addresses recommendations necessary to mitigate impediments to the development of appropriate demand-side management programs, energy efficiency, renewables, and new generation technology options available within the state.

Water

- Senior Auditor on two financial audits of large Kansas City area water utility. Lead consultant working with this client on an engagement to develop an improved model to forecast water consumption. Provided consulting services to the client in the development of inverted rate design structure.

- Project director in revenue requirement, cost of service and rate design studies for Kansas area water utility. Responsible for the filing of two cases before the Kansas Corporation Commission. Also advised this client on the going concern valuation of the utility, relied upon in a transaction for the sale of the utility assets.

- Developed a class cost of service analysis involving a St. Louis area water utility, and submitted the study in rate proceedings before the Missouri Public Service Commission.

- Addressed tax issues impacting the revenue requirements of the large Indiana water company before the Indiana Utility Regulatory Commission.

- Developed rate filings on behalf of several water companies within the state of Missouri. Responsible for revenue requirement, cost of service and rate design evidence in two applications on behalf of this client.

- Project manager of a regulatory audit of California American Water Company's general office activities and costs, including unregulated activities, cost allocations and affiliate transactions.

- Project manager in a rate design analysis of Cal Am Water Phase 2 Rate proceedings. Addressed appropriate rate design considerations in a market area highly constrained by available supply. Proposed use of inverted rates, and other conservation mechanisms to address limited supply conditions. Reviewed price elasticity implications on usage; metering options for irrigation customers; cost of service analysis; and pricing of service charge component of customer tariffs.

Valuation

- Conducted a feasibility study regarding the sale of a utility power plant used to provide steam heat and process steam to commercial customers through a downtown area distribution system. The feasibility study addressed energy alternatives and pricing options; cogeneration; and a financial and operating forecast assuming alternative case scenarios based upon various potential ownership structures.

- Performed a valuation analysis on behalf of an investor group for the construction and operation of a high capacity fiber network between Seattle and Vancouver, designed to serve large commercial companies and telecommunications providers. Provided due diligence analysis of market demand and pricing assumptions, competition, and anticipated construction and operation costs.

- Performed a valuation analysis of an electric utility on the southwest on behalf of a private investor group interested in making a tender offer for the shareholder interests of this public company. Also participated in presentations to investment bankers and commercial banks who were to fund the acquisition.

- Performed a valuation study regarding two natural gas distribution affiliates in the Midwest, whose electric utility parent was seeking offers for a sale of the assts and related securities. Developed analysis of the impact of regulation on property values.

- Performed a valuation analysis of a gas transmission company used to evaluate offers for the company. Developed due diligence and information materials provided to interested parties. Participated in presentations to interested parties with investment bankers.

- Developed a valuation analysis used in litigation proceedings to support the reasonableness of the acquisition price for a rural electric company acquired by an investor owned electric utility company.

- Developed and applied a model for the determination of the value of helium extracted from natural gas relied upon in litigation cases in federal courts in Oklahoma and Kansas. Analysis required the determination of extraction costs at plants involving four major pipeline systems in the Midwest. Developed studies of construction and operating costs associated with helium extraction plants, as well as the analysis of incremental costs and revenues related in by-product liquid extractions.

- Performed an analysis of the value of long-term gas transportation contracts relied upon in civil litigation and by regulators. The studies included the development of construction cost and operations estimates, as well as discount rates to be employed.

- Performed a reproduction cost study for a cable television company located in the west. As part of the project, developed a continuing property records system. Company used results in the negotiation of the sale of its assets.

- Represented a member of a consortium formed to build a satellite network for cellular services with commercial applications throughout the United States. Developed a valuation analysis and business plan used in a private placement for equity financing. Acted as a co-investment advisor with a large Wall Street firm in providing these services and making presentations to potential investors.

- Developed a valuation analysis of nuclear facilities, which included a detailed study of assets, and their costs, required for environmental protection as defined by state statutes and federal regulations. The study was relied upon in determining the proper classification and valuation of nuclear assets for property tax purposes.

- On behalf of a state department of revenue, developed a review of property tax rules and definitions as applied to telephone, cellular and cable companies. The study included a national survey of valuation practices relied upon by each state department of revenue.

- Developed appraisals of telecommunications properties for property tax purposes using standard valuation methods. Presented studies in administrative and civil proceedings. Developed cost of capital analysis based upon applications of the DCF and CAPM models.

- Developed appraisals relied upon in property tax cases involving telecommunications properties where subject sales were involved within two years of the date of property assessment.

- Prepared appraisals for a natural gas transmission company in appeals of property tax assessments in administrative proceedings in Kansas and Oklahoma.

- Prepared appraisals of two investor owned utilities on behalf of the Iowa Department of Revenue. The appraisals included a subject sale analysis, and a review of economic obsolescence.

- Developed appraisals of two Class I railroad companies in contested property tax valuation in civil proceedings in New York. Valuation studies included the review of the cost method based on RCNLD.

- Assisted an electric G&T coop in valuation and due diligence analysis of electric and gas properties offered for sale by a large independent telephone company.

- Developed a manual for "Alternative Valuation Procedures" on behalf of the Virginia State Corporation Commission – Public Service Taxation Division in a state that otherwise relies on the cost method.

- Developed a business plan and other financial advisory services to the National Homebuilders Association joint venture subsidiary – “Smarthouse”; in connection with securities offerings.

- Developed a complete appraisal of a cogeneration facility on behalf of the Virginia State Corporation Commission, Public Service Taxation Division. The study included “Subject Sale” and “Comparable Company” analyses, as well as a review of capacity and energy forecast prices in the PJM market area.

- Prepared a complete appraisal of CSX railroad operating property on behalf of the Florida Department of Revenue.

- Prepared a complete appraisal of Qwest Corporation on behalf of the Iowa Department of Revenue. The appraisals included “Subject Sale” and “Comparable Company” market analyses.

Telecommunications

- Developed and directed a three-day nationally attended conference entitled "Competitive Strategies in the Local Exchange Marketplace".

- Directed audits of RBOCs regarding compliance with regulatory accounting requirements; procedures to allocate costs between regulated and non-regulated activities; policies and rules for pricing transactions among affiliates; and monitoring reports filed with regulators.

- Conducted a review of depreciation rates for local exchange telecommunications property of the central division of a national carrier.

- Directed a comprehensive review of the operation of a RBOC telecommunications incentive plan, based upon a revenue sharing mechanism, over a three-year period. The study reviewed quality of service measures, capital expansion programs, work force reductions, and other major elements of operating expense for the review period. Provided policy options regarding modifications to the incentive plan for prospective consideration.

- Developed business plan and other related materials for telecommunications reseller in its initial public offering. Provided ongoing financial and regulatory services, including development of all SEC filings.

- Directed an analysis of switching and other LEC facilities required and costs of providing inter-exchange services to an alternative service provider in the Phoenix, Arizona area.

Income Tax

- Expert witness in numerous regulatory proceedings addressing the proper recognition of investment tax credits and accelerated depreciation for accounting and ratemaking purposes. Provided guidance on intent of IRS regulations in use of tax benefits in the ratesetting process. Such testimony was provided in a number of jurisdictions including: Arizona, Oklahoma, Missouri, Indiana, Kansas, and Mississippi.

- Addressed the implications of utility net operating loss carryforwards for GAAP and ratemaking purposes before the Kansas Corporation Commission and the FERC.

- Provided expert analysis and testimony on the proper recognition of tax benefits arising from participation of subsidiary utilities in consolidated tax returns that include regulated and unregulated affiliates.

- Expert witness testimony and analysis of tax timing differences arising from utility operations as considered for income tax, accounting, and ratemaking purposes. Provided an assessment of proper application of normalization or flow-through of tax timing differences for accounting and ratemaking purposes. These issues were addressed in over 20 cases in various jurisdictions throughout the U.S.

Publications and Presentations

- "The Use of Uniform Filing Requirements by State Regulatory Commissions - An Industry Survey," May 1980.

- "Regulatory and Accounting Implications of Phase-in Plans," NARUC Biennial Regulatory Information Conference, September 1984.

- "Rate Moderation Plan Considerations" Public Utilities Accounting and Ratemaking Conference, sponsored by the Texas Society of CPAs, April 1985.

- "Review of The Proposed Amendment to FASB Statement No. 71," Presentation to the Financial Accounting Standards Board, June 1986.

- "Regulatory Implications Associated with the Prudence Audit Process," NARUC Biennial Regulatory Information Conference, September 1986.

- "On the South Texas Project and Other Cases," The Advisory, March 4, 1987.

- "Regulatory Considerations Inherent in Assessing Utility Culpability" (Richard Ganulin coauthor), Public Utilities Fortnightly, 1987.

- "Framework for a Competitive Strategy," Southeastern Regional Public Utilities Conference, Atlanta, GA, September 1988.

- "Competitive Strategies in the Local Exchange Marketplace," a three-day telecommunications conference sponsored by Overland Consulting and the University of Missouri at Kansas City, September 1991.

- "Considerations Associated with the Review of Rate Applications Based Upon Projected Test Periods," a two-day training seminar conducted on behalf of the Kentucky Public Service Commission, December 1992.

- "Impact of Deregulation and Competition On Property Tax Valuation Within the Utility Industry," Western States Association of Tax Administrators, Austin, Texas, September 1995.

- "Appraisers Find Help in Recent Accounting Rules" (Gregory Oetting, coauthor), Fair & equitable, August 2003.

- "Blue Chip Method Overview", 21st Conference of Unit Value States; Memphis, Tennessee, October 2004.

- "The Yield Capitalization Method – Application Issues", WSATA Unitary Appraisal School, Advanced Class – Logan, Utah, January 2007.

- "Overview of FIN 46(R), SFAS No. 133, and SFAS No. 71," (Gregory Oetting, co-presenter), Connecticut Department of Public Utility Control, May 2007.

- "Accounting and Finance Issues Associated with Contracts for Differences-Generation/DSM Projects" (Gregory Oetting, co-presenter), Connecticut Department of Public Utility Control, September 2007.

- "Accounting Pronouncements Impacting Financial Reporting Associated with Utility Purchase Power Agreements", WSATA Unitary Appraisal School, Advanced Class, Logan, Utah, January 2008.

- "Rating Agencies – Current Methods Employed and Recognition of Imputed Debt", WSATA Unitary Appraisal School, Advanced Class, Logan, Utah, January 2008.

- "Constellation / EDF Nuclear Joint Venture: Regulatory Issues and Subsequent Resolutions," (Ryan Pfaff and Dr. J. Robert Malko, co-authors), published in the *Electricity Journal*, March 2010. Also presented at the Western States Association of Tax Administrators Annual Meeting, February 2010.

Consulting Work History and Industry Experience

1991 - Present: **Overland Consulting**
President. Responsible for administration and review of management auditing, regulatory consulting, and litigation support services. Provide expert witness services in projects involving decision analysis, damages assessment, ratemaking, valuation, and accounting.

1997 – 1999 **Kansas Pipeline Company**
Executive Vice-President; Chief Operating and Financial Officer. Responsible for the day-to-day operations of this natural gas

pipeline, as well as direct responsibilities associated with the financial, accounting, and regulatory functions of the Company. Implemented a reengineering and downsizing program that resulted in a major reduction in operating expenses. Negotiated new gas supply and transportation contracts. Renegotiated credit lines on more favorable terms. Responsible for the negotiation and acquisition of a natural gas marketing company. Developed and implemented a management incentive program for senior executives. Developed due diligence and presentation materials relied upon by potential buyers of Kansas Pipeline assets.

1990 – 1991 **Amerifax, Inc. (Americonnect)**
Chief Executive Officer. Directed the IPO for this telecommunications switchless rebiller. The company implemented a national marketing program, focusing primarily in the Midwest. After five years, the company was acquired for approximately three times its IPO valuation.

1983 - 1991: **LMSL, Inc.**
President. Responsible for administration and review of regulatory services projects and research studies. Expert witness in regulatory proceedings. Director of special projects including management audits, financing feasibility studies, property acquisition and merger feasibility studies and development of innovative solutions to current regulatory issues.

1976 - 1982: **Drees Dunn Lubow & Company**
Managing Partner. Responsible for projects for utility clients. Responsibility included financial and managerial analysis of public utility companies and the presentation of expert testimony before regulatory commissions.

1972 - 1976: **Troupe, Kehoe, Whiteaker & Kent**
Senior Regulatory Consultant. Responsible for special services work for utility clients, including accounting systems design, cost of service determination and allocation, budgeting and rate designs. Performed fair value determinations, developed cost analysis studies, curtailment requirements analysis, and forecasts of utility operations.

1968 - 1972: **Kansas City Power & Light Company**
Senior Accountant. Analyzed accounting and reporting procedures, taxes and costs of operations. Assisted in the preparation of the Federal and State income tax returns and the Annual Report to stockholders. Assisted with rate filings in Kansas and Missouri. Developed tax basis property accounting system.

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J. ROBERT MALKO
Professional Vita

BUSINESS ADDRESS: Department of Economics and Finance
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HOME ADDRESS: 245 North Alta Street
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DATE & PLACE OF BIRTH: December 25, 1943
Baltimore, Maryland

MARITAL STATUS: Married, two children

EDUCATION:

Doctor of Philosophy degree in economics from the Krannert Graduate School of Management at Purdue University (Lafayette, Indiana), 1972.

Master of Science degree in economics from the Krannert Graduate School of Management at Purdue University (Lafayette, Indiana), 1968.

Bachelor of Science degree, cum laude, in mathematics and economics (majors) and political science (minor) from Loyola College (Baltimore, Maryland), 1966.

Business finance courses at Graduate School of Business, University of Wisconsin (Madison), 1982-1986.

Visiting Scholar in industrial engineering and public utility economics, Stanford University (Palo Alto, California), 1980.

Accounting courses at Illinois State University (Normal, Illinois), 1971-1973 and public utility business courses at the University of Wisconsin (Madison), 1976-1977.

GOVERNMENT AND BUSINESS:

Chief Economist, Public Service Commission of Wisconsin, Madison, Wisconsin, January 1981 to December 1986.

Economist, Program Manager, The Electric Utility Rate Design Study at the Electric Power Research Institute at Palo Alto, California; this is a study for the National Association of Regulatory Utility Commissioners; Program Manager, December 1979 to January 1981; Project Manager, December 1977 to December 1979.

Chief Economist, Public Service Commission of Wisconsin, Madison, Wisconsin, June 1975 to December 1977.

Economist, Utility Rates Division, Public Service Commission of Wisconsin, Madison, Wisconsin, December 1974 to June 1975.

Financial Economics Consultant (2009-2010), Colorado Public Utilities Commission Staff, Denver, Colorado.

Financial Economic Consultant (2005-present), Overland Consulting, Overland Park, Kansas.

Financial Economic Consultant (2003-2006), Peters, Scofield & Price, Salt Lake City, Utah.

Financial Economics Consultant (2007),California Public Utilities Commission, San Francisco, California.

Financial Economic Consultant (2006-2007), Tomsic & Peck, Salt Lake City, Utah.

Financial Economic Consultant (2005-2006), Moss & Barnett and Northern States Power Company, Minneapolis, Minnesota.

Financial Economic Consultant (2005-2006), West Virginia Public Services Commission of West Virginia, Charleston, West Virginia.

Financial Economic Consultant (1998-2003), Parsons, Davies, Kinghorn & Peters, Salt Lake City, Utah.

Energy Utility Consultant (Spring 1996-1998), Energy Strategies, Inc., Salt Lake City, Utah.

Energy Utility Consultant (Winter 1997), Retail Merchants Association, Concord, New Hampshire.

Energy Utility Consultant (Summer 1995-Spring 1996), Southern Company Services, Inc., Atlanta Georgia.

Energy Utility Consultant (Spring 1995), PECO Energy Company, Philadelphia, Pennsylvania.

Energy Utility Consultant (Fall 1994-Spring 1995), Virginia State Corporation Commission Staff, Richmond, Virginia.

Energy Utility Consultant (Fall 1994), Mountain Fuel Supply Company, Salt Lake City, Utah.

Energy Utility Consultant (Summer 1994-Fall 1994), Brooklyn Union Gas Company and the E Cubed Company, Brooklyn, New York.

Senior Consultant (Winter 1993-Winter 1997), Utility Services Group - AUS Consultants, Moorestown, New Jersey.

Energy Utility Consultant (Spring-Fall 1992), Wisconsin Energy Conservation Corporation, Madison, Wisconsin

Energy Utility Consultant (Fall 1990-Fall 1991) Associated Electric Cooperative, Inc., Springfield, Missouri.

Energy Utility Consultant (Fall 1990), Arizona Electric Power Cooperative, Inc., Benson, Arizona.

Energy Utility Consultant (Fall 1989 to 1997), The Management Exchange, New York City, New York.

Energy Utility Consultant (Summer 1989-Fall 1991, Spring 1993, and Spring 1997 and Fall 1998), Washington Gas Light Company, Washington, D.C.

Energy Utility Consultant (Spring 1989), LMSL, Inc. and the Arizona Corporation Commission, State of Arizona.

Energy Utility Consultant (Summer 1986-Spring 1988), Illinois Office of Public Counsel, State of Illinois.

Energy Utility Consultant (Fall 1985), Virginia State Corporation Commission, State of Virginia.

Energy Utility Consultant (Summer-Fall 1982, Spring 1984, Spring 1985, Spring-Summer 1990, Fall 1991-Spring 1992, Winter 1994), Hawaii Consumer Advocacy Division, State of Hawaii, Honolulu, Hawaii.

Energy Utility Consultant (Spring-Summer 1982, Summer-Fall 1983), Alaska Public Utilities Commission, State of Alaska.

Energy Utility Consultant (Winter 1982), Nevada Public Service Commission, State of Nevada.

Energy Utility Consultant (Fall 1981), Kentucky Public Service Commission, State of Kentucky.

Energy Utility Consultant (Spring 1981), Hawaii Public Utilities Division, State of Hawaii.

Energy Utility Consultant (Fall 1977), Electric Power Research Institute, Palo Alto, California.

Energy Utility Consultant (Spring-Summer 1977), Illinois Commerce Commission, State of Illinois.

Energy Utility Consultant (Spring-Summer 1977), Office of the Consumer Advocate, State of Pennsylvania.

Energy Utility Consultant (Winter 1976), Public Utilities Commission of Ohio, State of Ohio.

Energy Utility Consultant (Spring 1976, Spring 1977), Office of Consumer Counsel, State of Connecticut.

Economist, U.S. Department of Commerce, Bureau of Economic Analysis, Government Division, Washington, D.C., June 1974 to December 1974.

Program Performance Budget Consultant (Spring-Summer 1973), City of Bloomington, Bloomington, Illinois.

Tax Consultant (Summer-Fall 1972), City of Bloomington, Bloomington, Illinois.

Administrative Analyst (Summer 1969), Department of Fiscal Services, Division of Fiscal Research, State of Maryland, Annapolis, Maryland.

Worked on research projects in the Business Methods Department (Summer 1964) and the Business Computer Department (Summer 1965) of Western Electric Company, Baltimore, Maryland.

RESEARCH:

At Utah State University, I am continuing to focus my research on various financial and pricing issues, such as cost of capital analysis, corporate restructuring, nuclear decommissioning, and time-of-use pricing, concerning energy utilities.

At the Public Service Commission of Wisconsin between 1981 and 1986, I focused my research on various financial issues, such as diversification and rate of return analysis, concerning energy utilities and telephone utilities. In addition, I analyzed issues relating to rate design and cost-of-service studies for electricity, natural gas, and telephone. I developed and presented expert testimony in rate and rule making proceedings that pertain to economic and financial issues relating to public utilities.

At the Electric Power Research Institute between 1978 and 1980, I focused my research on the desirability and technical feasibility of time-of-use pricing and direct load controls for electricity usage.

At the Public Service Commission of Wisconsin between 1975 and 1977, I focused my research on various problems faced by electric utilities and gas utilities. I have analyzed problems related to rate design, cost of service studies, load management, consumer and environmental impact analysis, public utility productivity and demand forecasting. I have developed and presented expert testimony in rate and rule making proceedings that pertain to economic issues relating to public utilities.

At the U.S. Department of Commerce during 1974, I focused my research on estimating the interest subsidy associated with programs of the Federal Government and its agencies incorporated in the Federal Government sector of the national income accounts.

At Illinois Wesleyan University and Illinois State University between 1971 and 1974, I focused my research work on analyzing relationships between microeconomic theory and financial cost accounting theory.

For my doctoral research, I analyzed various aspects of benefits received by business firms and households from municipal fire protection services, and I proposed policy implication concerning taxes needed to finance these services. In this analysis, fire insurance rates were used in order to quantify benefits received by economic units. Dissertation has been used by Insurance Services Office, Midwestern Regional Office (Chicago). Dissertation Director, Keith Brown.

TEACHING:

Professor of Finance, College of Business, Utah State University (Logan, Utah), January 1987 to present; granted tenure in June 1988 and promoted to Full Professor in June 1989; I teach the following courses: Principles of Corporate Finance, Advanced Finance Problems (Case Studies), Finance Issues and Public Utilities, Managerial Economics, and Investments; Outstanding MBA Professor of the Year Award, 1989-90 and 1990-91; and Outstanding Faculty Employee Finalist at Utah State University, 2005.

Visiting Guest Lecturer, College of Law, University of Utah (Salt Lake City, Utah), 1993.

Guest Lecturer, School of Business, University of Wisconsin at Madison, Spring 1976 to December 1986; I have taught and presented guest lectures in regulation of public utility courses and have presented guest lectures in business finance courses on a part-time basis.

Guest Lecturer, Department of Industrial Engineering and School of Business, Stanford University, Summer 1978 to Summer 1980; School of Business, University of California at Berkeley, Spring 1979; Department of Economics, Michigan State University, Spring 1978; I have presented guest lecturers in regulation of public utilities and applied microeconomics courses at these universities.

Assistant Professor of Economics, Illinois Wesleyan University (Bloomington, Illinois), September 1970 to May 1974. At Illinois Wesleyan, I taught the following courses: Principles of Economics, Principles of Accounting, Intermediate Microeconomic Theory, Business Statistics, Money and Banking, Public Finance, Economic Growth and Development, and Mathematical Economics.

Assistant Professor of Business Administration, Illinois State University (Normal, Illinois), Spring 1973 to Spring 1974 on a part-time basis. Course taught: Managerial Economics.

Teaching Assistant (Graduate Instructor) at Purdue University from September 1966 to June 1970; won outstanding teaching award in 1970. At Purdue University, I taught or provided teaching assistance in the following courses: Principles of Economics, Economic History, Intermediate Microeconomic Theory Intermediate Macroeconomic Theory, Managerial Economics, and Public Finance.

PAPERS AND PUBLICATIONS:

This section of the resume lists papers and publications and is organized in the following manner: (1) academic and policy journals, (2) books, (3) chapters in books, (4) academic and policy conferences with published proceedings, (5) academic and policy conferences and (6) technical reports.

I. Academic and Policy Journals

Joni S. Zenger, Charles E. Peterson, and J. Robert Malko, "The Test Period: Issues and Challenges in Utah," appears in Public Utilities Fortnightly, Vol. 148, No. 5, Pg 36 -40, May 2010.

Ryan Pfaff, Howard Lubow, and J. Robert Malko, "Constellation/EDF Nuclear Joint Venture: Regulatory Issues and Subsequenct Resolutions," appears in The Electricity Journal, Vol. 23, No. 2. Pg 65-70, March 2010.

Charles E. Peterson and J. Robert Malko, "Ring Fencing in Utah," appears in Public Utilities Fortnightly, Vol. 146, No. 2, February 2008.

J. Robert Malko and Philip R. Swensen, "Some Lessons Learned: Electricity Costing and Pricing,"appears in The Electricity Journal, Volume 21, Issue 1, January/February 2008.

J. Robert Malko, Philip R. Swensen, and Joseph A. Monteleone, "Some Thoughts on Estimating the Cost of Common Equity for a Regulated Business," appears in The Electricity Journal, Volume 20, Issue 5, June 2007.

Charles E. Peterson and J. Robert Malko, "Applying the CAPM: Issues and Activities in Utah," appears in The NRRI Journal of Applied Regulation, Volume 3, December 2005 issue.

Jeff Bodington and J. Robert Malko, "Power Plant Valuation: Overcoming the New Risks," appears in Public Utilities Fortnightly, May 2003 issue.

J. Robert Malko, "Assessing Corporate Restructurings In The Electric Utility Industry: A Framework," appears in NRRI Quarterly Bulletin, Vol. 17, No. 4, Winter 1996-97 issue.

Joseph F. Brennan and J. Robert Malko, "Rate Unbundling: Are We There Yet? A Reality Check," in Public Utilities Fortnightly, June 1996 issue.

David A. Foltz, J. Robert Malko, Gregory J. Pumilia, and Thomas J. Purvenas, "Purchased Power Is Not A Riskless Strategy," appears in The Electricity Journal, Vol. 7, No. 10, December 1994.

J. Robert Malko, "Comments On The Paper by Rodney Stevenson and Dennis Ray," appears in Utilities Policy, Vol. 3, No. 4, October 1993.

Caryn L. Beck-Dudley and J. Robert Malko, "Dotting the Horizon: Will The United States Be Able To Decommission Its Nuclear Power Plants?" appears in Journal of Energy Law and Policy, Vol. 10, No. 2, 1990.

Donna L. Tanner, Richard J. Williams, and J. Robert Malko, "Utility Diversification: Issues and Activities in Virginia," appears in Electric Potential, February 1989 issue. This paper was also presented at The Sixth NARUC Biennial Regulatory Information Conference, National Regulatory Research Institute at The Ohio State University, Columbus, September 1988; this paper also appears in Conference Proceedings.

J. Robert Malko and Philip R. Swensen, "Corporate Restructurings In The Electric Utility Industry: Some Common Issues," appears in Business Insights, Spring 1989 Issue, Vol. 8., No. 2; an earlier version of this paper was presented at the Tenth Annual Public Utilities Conference, sponsored by New Mexico State University, held in Albuquerque, New Mexico, October 1987.

Ahmad Faruqui and J. Robert Malko, "Pakistan's Economic Development in a Global Perspective," appears in Asian Profile, Vol. 16, No. 6, December 1988 issue; an earlier version of this paper was presented at the Second Biennial Conference Of The Pakistan Engineers and Scientists Association, held at Stanford University, Palo Alto, California, September 1987; also appears in the Conference Proceedings.

J. Robert Malko and George R. Edgar, "Energy Utility Diversification and Small Business: A Wisconsin Perspective," appears in The Journal of Energy and Development, Vol., 13, No. 1 (issued July 1988); an earlier version of this paper was prepared for presentation to the Midwest Economics Association Annual Meeting, Chicago, Illinois, April 1988.

J. Robert Malko, "Alternative Approaches For Funding Nuclear Power Plant Decommissioning Expenses: Some Financial Issues and Considerations," appears in Forum For Applied Research And Public Policy, Vol. 2, No. 4, Winter 1987 issue.

J. Robert Malko, Caryn L. Beck-Dudley, and Philip R. Swensen, "Corporate Restructuring and Transferring Regulation of Electricity Generation: Some Issues, Considerations and Activities," appears in Electric Potential, November-December 1987 issue; an earlier version of this paper was presented at the Nineteenth Financial Forum, sponsored by the National Society of Rate of Return Analysts, Washington, D.C., May 1987.

J. Robert Malko and George R. Edgar, "Diversification in the Gas Industry: Some Comments," (short comments) appears in Public Utilities Fortnightly, October 1987 issue.

J. Robert Malko, Richard Williams, and George Hermina, "Electric Utility Diversification: Activities In Some Eastern States," appears in The Kentucky Journal of Economics and Business, Vol. 7, September 1987 issue; an earlier version of this paper was presented at the Eastern Finance Association 1987 Annual Meetings, Baltimore, Maryland, April 1987; an abstract of this paper appears in the 1987 Proceedings Issue of the Financial Review; this paper was also presented at the National Association of Regulatory Utility Commissioners (NARUC) Annual Summer Committee Meetings San Francisco, California, July 1987; this paper also appears in The 1987 Report of the NARUC Committee on Utility Diversification, National Association of Regulatory Utility Commissioners, Washington, D.C., March 1988.

George R. Edgar and J. Robert Malko, "Electric Utilities as Part of Diversified Business: Some Considerations and Thoughts," appears in Electric Potential, July-August 1987 issue; this paper was presented at the Thirteenth Annual Rate Symposium, sponsored by the Institute for the Study of Regulation and the University of Missouri-Columbia, held in St. Louis, Missouri, February 1987; also appears in the Symposium Proceedings; this paper also appears in The 1987 Report of the NARUC Committee on Utility Diversification, National Association of Regulatory Utility Commissioners, Washington, D.C., March 1988.

J. Robert Malko, "Diversification and Strategic Planning in the Electric Power Industry," (short comments) appears in Forum For Applied Research And Public Policy, Vol. 2, No. 2, Summer 1987 issue.

J. Robert Malko and George R. Edgar, "Energy Utility Diversification: Its Status in Wisconsin," Public Utilities Fortnightly, August 1986 issue.

Steven G. Kihm, Clarence E. Mougin, and J. Robert Malko, "An External Fund Approach for Nuclear Power Plant Decommissioning Expenses: Wisconsin Activities," appears in Electric Potential, March-April 1986 issue.

J. Robert Malko, "Applying Regulatory Strategic Planning to Electric Utilities," appears in Electric Potential, January-February 1986 issue.

J. Robert Malko and Gregory B. Enholm, "Applying CAPM In a Utility Rate Case: Current Issues and Future Directions," appears in Electric Potential, September-October 1985 issue.

Ahmad Faruqui and J. Robert Malko, "The Residential Demand for Electricity by Time-of-Use: A Survey of Evidence from Twelve Experiments with Peak-Load Pricing," appears in Energy: The International Journal, October 1983 issue.

J. Robert Malko, "Comments: Jury Still Out On The Arbitrage Pricing Theory," (short comments) appears in Public Utilities Fortnightly, June 1983 issue.

J. Robert Malko and Terrace B. Nicolai, "Implementing Residential Time-of-Day Pricing of Electricity in Wisconsin: Some Current Activities and Issues," presented at Ninth Annual Symposium on Problems of Regulated Industries, sponsored by the Institute for Study of Regulation and the University of Missouri-Columbia, held at Kansas City, Missouri, February 1983; appears in Proceedings of this conference; also appears in Electric Ratemaking, February/March 1983 issue.

Stanley York and J. Robert Malko, "Utility Diversification: A Regulatory Perspective," Public Utilities Fortnightly, January 1983 issue.

Gregory B. Enholm, Theodore M. Jaditz, and J. Robert Malko, "Electric Utility Diversification In The 1980s: A Challenge For Applied Regulatory Economics," presented at the Midwest Economics Association Forty-Sixth Annual Meeting, Chicago, Illinois, April 1982; appears in The Journal of Energy and Development, Autumn 1982 issue.

J. Robert Malko and Gregory B. Enholm, "Electric Utility Diversification: Some Regulatory Concerns and Issues," appears in Electric Ratemaking, Vol. 1, No. 2, April 1982.

J. Robert Malko, Dennis J. Ray and Nancy L. Hassig, "Time-of-Day Pricing of Electricity Activities in Some Midwestern States," presented at the Midwest Economics Association Annual Meeting, Chicago, Illinois, April 1979; appears in Journal of Business Administration, Volume 12, Spring 1981.

Teri L. Vierima and J. Robert Malko, "Natural Gas Rate Design: Innovative Activities in Wisconsin," Public Utilities Fortnightly, October 1981 issue.

J. Robert Malko and Robert G. Uhler, "Helping Regulators Evaluate Load Management: An Update of The Rate Design Study," Public Utilities Fortnightly, October 1979 issue.

Carol T. Everett and J. Robert Malko, "Measuring the Impact of Residential Gas and Electric Rates," Public Utilities Fortnightly, December 1977 issue.

J. Robert Malko, Malcolm A. Lindsay, and Carol T. Everett, "Towards Implementation of Peak-Load Pricing of Electricity: A Challenge for Applied Economics," The Journal of Energy and Development, Autumn 1977 issue.

J. Robert Malko and David Stipanuk, "Electric Peak-Load Pricing: A Wisconsin Framework," Public Utilities Fortnightly, July 1976 issue.

Richard D. Cudahy and J. Robert Malko, "Electric Peak-Load Pricing: Madison Gas and Beyond," Wisconsin Law Review, Volume 1976, Number 1, Spring 1976.

J. Robert Malko and Ernst Harwig, "Municipal Electric Utility Pricing," Governmental Finance, February 1976.

II. Books

Ahmad Faruqui and J. Robert Malko, editors, Customer Choice: Finding Value In Retail Electricity Markets, published by Public Utilities Reports, Inc., Vienna, Virginia, 1999.

Gregory B. Enholm and J. Robert Malko, editors, Reinventing Electric Utility Regulation, published by Public Utilities Reports, Inc., Vienna, Virginia, 1995.

Gregory B. Enholm and J. Robert Malko, editors, Electric Utilities Moving Into The 21st Century, published by Public Utilities Reports, Inc., Arlington, Virginia, 1994.

James M. Fischer, J. Robert Malko, and Richard L. Wallace, editors, Pricing Electric, Gas, and Telecommunication Services: Rate Symposium Proceedings, published by University of Missouri-Columbia, 1989.

III. Chapters in Books

J. Robert Malko, "Pricing of Electricity: An Overview," appears in Pricing In Competitive Electricity Markets, edited by Ahmad Faruqui and Kelly Eakin, Kluwar Academic Publishers, 2000.

Ahmad Faruqui and J. Robert Malko, "The Brave New World of Customer Choice," appears in Customer Choice: Finding Value in Retail Electricity Markets, edited by Ahmad Faruqui and J. Robert Malko, Public Utilities Reports, 1999.

Ahmad Faruqui and J. Robert Malko, "What's in Our Future?" appears in Customer Choice: Finding Value In Retail Electricity Markets, edited by Ahmad Faruqui and J. Robert Malko, Public Utilities Report, 1999.

J. Robert Malko and Richard J. Williams, "Traditional and New Regulatory Tools," appears in Reinventing Electric Utility Regulation, edited by Gregory B. Enholm and J. Robert Malko, Public Utilities Reports, Inc., 1995.

Gregory B. Enholm and J. Robert Malko, "Assessing the Future of Electric Utility Regulation," appears in Reinventing Electric Utility Regulation, edited by Gregory B. Enholm and J. Robert Malko, Public Utilities Reports, Inc., 1995.

Gregory B. Enholm and J. Robert Malko, "Meshing New Regulation with New Utilities," appears in Reinventing Electric Utility Regulation, edited by Gregory B. Enholm and J. Robert Malko, Public Utilities Reports, Inc., 1995.

Gregory B. Enholm and J. Robert Malko, "Assessing the Electric Utility Industry's Future," appears in Electric Utilities Moving Into the 21st Century: 18 Views of the Elephant, edited by Gregory B. Enholm and J. Robert Malko, Public Utilities Reports, Inc., 1994.

Gregory B. Enholm and J. Robert Malko, "Electric Utilities in the 21st Century," appears in Electric Utilities Moving Into the 21st Century: 18 Views of the Elephant, edited by Gregory B. Enholm and J. Robert Malko, Public Utilities Reports, Inc., 1994.

J. Robert Malko and Philip R. Swensen, "Pricing And The Electric Utility Industry," appears in Public Utility Regulation: The Social Control Of Industry, edited by Kenneth Nowotny, David B. Smith, and Harry M. Trebing, Kluwer Academic Publishers, 1989.

Gregory B. Enholm and J. Robert Malko, "Financing The New Midwest Bell Holding Company - AMERITECH," presented at Midwest Finance Association Annual Meeting, held at Chicago, Illinois, April 1984; appears in: Albert L. Danielsen and David R. Kamerschen, editors, Telecommunications In The Post Divestiture Era, D.C. Heath and Company, 1986.

Gregory B. Enholm and J. Robert Malko, "State Regulatory Treatment of Electric Utility Diversification," presented at the Fifth Annual Public Utilities Conference, sponsored by New Mexico State University, held at Albuquerque, New Mexico, October 1982; appears in Terry A. Ferrar, James L. Plummer, and William Hughes, editors, Electric Power Strategic Issues: Deregulation and Diversification, Public Utilities Reports, Inc., 1983.

J. Robert Malko and Gregory B. Enholm, "Challenges For Electric Utilities and Regulatory Commissions in the Decade of the 1980s," appears in Albert L. Danielsen and David R. Kamerschen, editors, Current Issues in Public Utility Economics: Essays in Honor of James C. Bonbright, published by D.C. Heath and Company, 1983.

J. Robert Malko, Dennis J. Ray, and Nancy L. Hassig, "Time-Of-Day Pricing of Electricity Activities in Some Midwestern States," appears in Energy Crisis: Policy Response, edited by Peter Nemetz, The Institute for Research of Public Policy, Montreal, Canada, 1981.

Robert G. Uhler and J. Robert Malko, "Electricity Pricing for Conservation and Solar Energy Systems," appears as a chapter in Economics of Energy Conservation and Use of Solar Energy, edited by F. Keith and R. West, CRC Press, Volume I, 1980.

J. Robert Malko and Ahmad Faruqui, "Implementing Time-Of-Day Pricing of Electricity: Some Current Challenges and Activities," presented at Public Utility Conference, Graduate School of Business Administration, Rutgers University, Newark, New Jersey, October 1979; appears in, Issues In Public Utility Pricing and Regulation, edited by M. Crew, Lexington Books, 1980.

IV. Academic and Policy Conferences with Published Proceedings

Paul Rossiter, Craig Maughan, and J. Robert Malko, "Applying the Fama-French Model to Regulated Energy Utilities: Some Challenges and Issues," presented at Utah Conference on Undergraduate Research (UCUR), Southern Utah University, Cedar City, February 2010.

Justin Allred and J. Robert Malko, "Pricing Strategies for Municipal Water Services" presented at Utah Conference on Undergraduate Research (UCUR), Southern Utah University, Cedar City, February 2010.

Nicholas L. Rupp, Craig A. Maughan, and J. Robert Malko, "The Discounted Cash Flow Model and the Cost of Common Equity," presented at Utah Conference on Undergraduate Research (UCUR), Westminster College, Salt Lake City, February 2009.

Nicholas Rupp and J. Robert Malko, "Cost of Equity Methods and Valuing Energy Utility Property at the Utah State Tax Commission," presented at the Utah Conference on Undergraduate Research (UCUR), Utah Valley State College (Orem), February, 2008.

Jeremiah Harris and J. Robert Malko, "Ring Fencing (Insulating) The Regulated Utah Energy Utility That is a Subsidiary of a Parent Holding Company," presented at the Utah Conference on Undergraduate Research (UCUR), Utah Valley State College (Orem), February 2008.

J. Robert Malko and Philip R. Swensen, "Assessing Corporate Restructurings And The Electricity Markets: Some Issues And Framework," presented at 10th Annual Conference on Electricity Law and Regulation, sponsored by ABA Section of Natural Resource, Energy and Environmental Law, Denver, Colorado, February 1997; this paper appears in Conference Proceedings.

Gregory B. Enholm and J. Robert Malko, "Changing The Rules: The Pros and Cons of Incentive and Performance Based Regulation," presented at 106th Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, Reno, Nevada, November 1994; this paper appears in Symposium Proceedings.

J. Robert Malko and Philip R. Swensen, "Corporate Restructuring In The Electric Utility Industry: Some Thoughts," presented at Twenty-Third Annual Conference, sponsored by the Institute of Public Utilities at Michigan State University, Williamsburg, Virginia, December 1991, appears in Regulatory Responses to Continuously Changing Industry Structures, Michigan State University Public Utilities Papers, 1993.

Dennis Ray, Gary Mathis, and J. Robert Malko, "Electric Rate-Making Innovations In Wisconsin During the 1980s," presented at the Fifteenth Annual Rate Symposium, sponsored by the Missouri Public Services Commission, The University of Missouri-Columbia, and Utah State University, held in St. Louis, Missouri, February 1989; this paper appears in Conference Proceedings.

J. Robert Malko, "Utility Financial Planning In The Wake of Seabrook and Shoreham," presented at the One-Hundredth Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, San Francisco, California, November 1988, and appears in Proceedings, of this symposium.

Caryn L. Beck-Dudley and J. Robert Malko, "Nuclear Power Plant Decommissioning: Unanswered Questions Still Loam," presented at the American Business Law Association Annual Meeting, New Orleans, Louisiana, August 1988; this paper appears in the refereed Conference Proceedings, Fall 1988.

J. Robert Malko, Caryn L. Beck-Dudley, and Philip R. Swensen, "Corporate Restructurings In The Electric Utility Industry: Some Issues and Activities," presented at The Utility Industries In Transition Conference, sponsored by New Mexico State University, held in Albuquerque, New Mexico, April 1988; this paper appears in Conference Proceedings, 1988.

Ahmad Faruqui, J. Robert Malko, and Philip R. Swensen, "Competitive Electricity Pricing Strategies: A California Perspective," presented at the Fourteenth Annual Rate Symposium, sponsored by the Missouri Public Service Commission, the University of Missouri-Columbia and Utah Sate University, held in Kansas City, Missouri, February 1988; this paper appears in Conference Proceedings.

Rodney E. Stevenson, George R. Edgar, and J. Robert Malko, "An Assessment of Reforms and Deregulation in the Context of Societal Values and Equity," Nineteenth Annual Conference, sponsored by the Institute of Public Utilities at Michigan State University, Williamsburg, Virginia, December 1987; appears in Alternatives to Traditional Regulation: Options for Reform (Conference Proceedings), edited by Patrick C. Mann and Harry M. Trebing, Michigan State University Public Utilities Papers, 1988.

Caryn L. Beck-Dudley and J. Robert Malko, "Diversified Regulatory Approaches To Electric Utility Diversification," presented at the American Business Law Association Annual Meeting, Philadelphia, Pennsylvania, August 1987; appears in the Conference Proceedings.

George R. Edgar and J. Robert Malko, "Electric Utility Diversification And The Role of The Regulator: A Wisconsin Perspective," presented at the Current Issues Challenging The Regulatory Process Conference, sponsored by New Mexico State University, held at Albuquerque, New Mexico, April 1987; appears in Conference Proceedings.

J. Robert Malko, Clarence E. Mougin and Steven G. Kihm, "Funding For Nuclear Power Plant Decommissioning Expenses: Considerations of Financial Assurance And Federal Tax Regulations," presented at The Eighteenth Annual Williamsburg Conference, Institute of Public Utilities, Michigan State University, Williamsburg, Virginia, December 1986; appears in New Regulatory And Management Strategies In A Changing Market Environment, edited by Patrick C. Mann and Harry M. Trebing, Michigan State University Public Utilities Papers, 1987.

J. Robert Malko and Steven G. Kihm, "Internal vs. External Fund Approaches for Nuclear Power Plant Decommissioning Expenses: Current Issues and Activities," presented at The Fifth NARUC Biennial Regulatory Information Conference, National Regulatory Research Institute, The Ohio State University, Columbus, September 1986 and appears in Proceedings of this conference.

Terrance B. Nicolai and J. Robert Malko, "Electricity Costing and Ratemaking: Some Current Issues," presented at Twelfth Annual Rate Symposium on Problems of Regulated Industries, sponsored by the Institute for the Study of Regulation, the American University and the University of Missouri-Columbia, held at Washington, D.C., February 1986; appears in Proceedings of this conference.

J. Robert Malko, "Regulatory Strategic Planning and Electric Utilities," presented at Ninety-Seventh Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, New York City, New York, November 1985 and appears in Proceedings of this conference.

George R. Edgar and J. Robert Malko, "After Construction What Next?" presented at Sixteenth Annual Conference, sponsored by Institute of Public Utilities, Michigan State University, held at Williamsburg, Virginia, December 1984 and appears in The Impact of Deregulation and Market Forces on Public Utilities: The Future Role of Regulation, edited by Patrick C. Mann and Harry M. Trebing, Michigan Sate University Public Utilities Papers, 1985.

J. Robert Malko and Terrance B. Nicolai, "Using Accounting Cost and Marginal Cost In Electricity Rate Design," presented at Eleventh Annual Rate Symposium on Problems of Regulated Industries, sponsored by the Institute for the Study of Regulation, The American University and the University of Missouri-Columbia, held at Washington, D.C., February 1985, appears in Proceedings of this conference.

J. Robert Malko, "Electricity Rate Design For North Carolina: Some Comments," presented at the Influencing North Carolina's Energy Future Symposium, sponsored by North Carolina Alternative Energy Corporation, held at Raleigh, North Carolina, September 1984; appears in Symposium Proceedings.

J. Robert Malko, "Residential Time-of-Day Pricing of Electricity: Issues and Activities," presented at Tenth Annual Symposium on Problems of Regulated Industries, sponsored by the Institute for the Study of Regulation, the American University, and the University of Missouri-Columbia, held at Washington, D.C., February 1984; appears in Proceedings of this conference.

Gregory B. Enholm and J. Robert Malko, "Utility Diversification: Options For State Regulators," presented at The Third NARUC Biennial Regulatory Information Conference, The Ohio State University, Columbus, September 1982; appears in Proceedings of this conference.

Harold A. Meyer and J. Robert Malko, "Natural Gas Rate Design: A State Regulatory Perspective," presented at Eighth Annual Symposium on Problems of Regulated Industries, sponsored by the Institute for Study of Regulation and the University of Missouri-Columbia, held at Kansas City, Missouri, February 1982 and appears in Proceedings of this conference.

Stanley York, Phyllis Dube' and J. Robert Malko, "Electric Utility Diversification: A State Regulatory Perspective," presented at the Thirteenth Annual Conference, sponsored by Institute of Public Utilities, Michigan State University, held at Williamsburg, Virginia, December 1981 and appears in Diversification, Deregulation, and Increased Uncertainty in the Public Utility Industries, edited by Harry Trebing, Michigan State University Public Utilities Papers, 1983.

J. Robert Malko, "Electric Utility Diversification: Devilish or Divine?" presented at Ninety-Third Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, San Francisco, California, November 1981 and appears in Proceedings of this conference.

J. Robert Malko and E. Victor Niemeyer, "Load Management Options," presented at 8th Energy Technology Conference, Washington, D.C., March 1981; appears in Energy Technology VIII: New Fuels Era, edited by Richard F. Hill, Government Institutes, Washington, D.C., August 1981.

J. Robert Malko, "The Rate Design Study: Helping Regulators Evaluate Load Management," presented at Ninety-Second Annual Convention and Regulatory Symposium, National Association of Regulatory Utility Commissioners, Houston, Texas, November 1980; appears in Proceedings: Ninety-Second NARUC Annual Convention, NARUC, Washington, D.C., 1981.

Ahmad Faruqui and J. Robert Malko, "Time-of-Use Rates and the Modification of Electric Utility Load Shapes," presented at Twelfth Annual Conference, Institute of Public Utilities, Williamsburg, Virginia, December 1980; appears in Challenges for Public Utility Regulation in the 1980s, edited by H. M. Trebing, Michigan State University Public Utilities Papers, 1981.

J. Robert Malko, "Cost and Rates," Proceedings of the Rate Design Study Regional Conference, prepared by Resource Planning Associates, Inc., Electricity Utility Rate Design Study, Electric Power Research Institute, Palo Alto, California, Report No. 92, October 1980.

J. Robert Malko and James Simpson, "Time-of-Use Pricing in Practice: An Analysis of Some Recent Regulatory Actions," for the Ninth Annual Conference, Institute of Public Utilities, Williamsburg, Virginia, December 1977; appears in Assessing New Pricing Concepts in Public Utilities, edited by H. M. Trebing, Michigan State University Public Utilities Papers, 1978.

James Simpson and J. Robert Malko, "Environmental Impact Analysis of Electricity Tariffs: A Wisconsin Framework," presented at The NARUC Biennial Regulatory Information Conference, The Ohio State University, Columbus, Ohio, October 18-20, 1978; appears in Proceedings of this conference.

J. Robert Malko, "Municipal Fire Protection Services - Benefits of Business Firms and Households," presented at the Missouri Valley Economic Association Meetings, St. Louis, Missouri, October 1974; appears in Proceedings, Journal of Economics, edited by Steven Lin, Volume I, 1975.

V. ***Academic and Policy Conferences***

J. Robert Malko, Ryan Pfaff, and Howard Lubow, "Constellation Energy/EFD Nuclear Joint Venture" presented at Annual Unitary Appraisal Conference, Western States Association of Tax Administrators, Logan, Utah, February, 2010.

J. Robert Malko, Craig Maughan, and Paul Rossiter, "Fama-French Three-Factor Model: Some Issues for Regulated Energy Utilities," prepared for Society of Utility and Regulatory Financial Analysts (SURFA), Forty-First Financial Forum, Georgetown University, Washington D.C., April 2009.

J. Robert Malko, “Economic Regulation and the Role of Natural Gas Utilities in a Clean Energy Economy: A Public Policy Perspective,” presented at Regulatory Trends Conference, sponsored by American Gas Association, Washington, D.C., November 2008.

J. Robert Malko, Austin Kwag, Mykola Edvarchuk, and Nicholas Rupp, “Cost of Common Equity, Allowed Fair Return, and Behavioral Finance,” presented at the Society of Utility and Regulatory Financial Analyst (SURFA) Fortieth Financial Forum, Georgetown University, Washington D.C., April 2008.

J. Robert Malko and Nicholas Rupp, “The Market Risk Premium: Historical and Prospective” presented at the 21st Annual Unitary Appraisal Conference, sponsored by the Western States Association of Tax Administrators, Logan, Utah, January 2008.

J. Robert Malko, “Cost of Equity Methods: Issues, Challenges, and Options,” presented at NARUC Western Utility Rate School Conference, sponsored by the Institute of Public Utilities at Michigan State University, San Diego, California, May 2007.

J. Robert Malko, Philip R. Swensen, Joseph A. Monteleome, “Estimating The Cost Of Common Equity For A Regulated Business: Some Thoughts”, presented at NARUC Western Utility Rate School Conference, sponsored by the Institute of Public Utilities at Michigan State University, San Diego, California, May 2006.

J. Robert Malko and Philip R. Swensen, “Applying CAPM to Regulated Businesses: Some Issues,” presented at the Society of Utility and Regulatory Financial Analyst (SURFA) Financial Forum, Washington D.C., April 2005.

J. Robert Malko and Philip R. Swensen, “Regulation/Deregulation: Views from The Ivy Halls,” presented at the Society of Utility and Regulatory Financial Analyst (SURFA) Financial Forum, Washington D.C., April 2004.

J. Robert Malko and Philip R. Swensen, “Valuing Electric Utilities: Some Business Risks and Regulation Issues,” presented at the 17th Annual Unitary Appraisal Conference, sponsored by Western States Association of Tax Administrators, Logan, Utah, January 2004.

J. Robert Malko, “Some Cost of Capital Issues: Regulated Energy Utilities, “ presented at Utah State Tax Commission Staff Seminar, Salt Lake City, Utah, May 2003.

J. Robert Malko and Philip R. Swensen, “Assessing Corporate Restructurings In the Electricity Utility Industry,” prepared for Society of Utility and Regulatory Financial Analyst (SURFA) Financial Forum, Washington D.C., April 2003.

J. Robert Malko, Philip R. Swensen and Heather S. Malko, “Some Costing and Pricing Issues in Regulated Electricity Markets,” presented at the Regulation and Electricity Utilities in India Conference, sponsored by the Institute for International Education, Salt Lake City, UT, September 2002.

J. Robert Malko and Philip R. Swensen, “Disaggregating Risks of Electricity Generation, Transmission, and Distribution Assets: Some Issues,” prepared for Society of Utility and Regulatory Financial Analysts (SURFA) Financial Forum, Clearwater Breach, Florida, April 2002.

J. Robert Malko, ACapital Structure and the Cost of Equity: Some Issues@presented at the 15th Annual Unitary Appraisal School, sponsored by Western States Tax Administrators and Utah State University, Logan, Utah, January 2002.

J. Robert Malko, “Financial Expert Certification Examination: Some Activities,” presented at Valuation Seminar, sponsored by WSATA, Park City, Utah, October 2001.

J. Robert Malko, ”Business Risks in the Electricity Industry,” prepared for Society of Utility and Regulatory Financial Analysts (SURFA) Conference, Washington, DC, Spring 2001.

J. Robert Malko, “Estimating the Cost of Common Equity: Some Issues and Thoughts,” presented at the 14th Annual Unitary Appraisal School, sponsored by Western States Tax Administrators and Utah State University, Logan, Utah, January 2001.

J. Robert Malko, “Electric Utility Restructurings and Property Valuations,” presented at the 13th Annual Unitary Appraisal School, sponsored by Western States Association of Tax Administrators and Utah State University, Logan, Utah, January-February 2000.

J. Robert Malko, “Restructurings and Electric Utility Valuations: Some Issues,” presented at Strategic Finance Management for Utilities Conferences, sponsored by IBC-USA, New York City, New York, January 2000.

J. Robert Malko, “Some Financial Agency Issues and Electric Utility Corporate Restructurings,” presented at 31st Financial Forum, sponsored by Society of Utility and Regulatory Financial Analysts (SURFA), Washington, D.C., April 1999.

J. Robert Malko, “Corporate Restructurings and Electric Utility Valuations,” presented at Financial Valuation Issues and Energy Utilities Services, sponsored by California Board of Equalization Staff, Sacramento, California, March 1999.

Judith Johnson, David Carter, and J. Robert Malko, “Financial Agency Issues and Electric Restructurings,” presented at 1999 Annual Meeting of the American Economic Association/TPUG, New York City, January 1999.

J. Robert Malko, “Innovative Electricity Pricing Strategies,” presented at Pricing of Electricity in Competitive Market Conference, sponsored by EPRI, Washington, D.C., June 1998.

J. Robert Malko, “Corporate Restructurings and Electric Utilities: Some Financial Issues,” presented at the 11th Annual Unitary Appraisal School, sponsored by Western States Association of Tax Administrators and Utah State University, Logan, Utah, February 1998.

J. Robert Malko, “Financial and Economic Analysis of Electric Utilities In A Competitive Environment,” NARUC Conference, sponsored by Michigan State University, East Lansing, Michigan, August 1997.

J. Robert Malko, “Assessing Corporate Restructurings And The Electricity Markets,” presented at 10th Annual Unitary Appraisal School, sponsored by Western States Association of Tax Administrators, Logan, Utah, February 1997.

J. Robert Malko, "Restructuring Electricity Service Markets: Some Comments," presented at the Transportation and Public Utility Group Sessions, American Economic Association Annual Meeting, San Francisco, California, January 1996.

J. Robert Malko and Philip R. Swensen, "A General Framework For Electricity Pricing In A World Of Competition And Regulation: Some Thoughts," prepared for the DOE-NARUC Second National Electricity Forum, Providence, Rhode Island, April 1995.

J. Robert Malko, "Emerging Competitive Forces and Structures in the Energy Utility Industries," presented at Energy Utility Training Seminar, Wisconsin Public Utility Institute, University of Wisconsin, Madison, Wisconsin, September 1994.

J. Robert Malko, "Estimating An Energy Utility's Cost of Equity Capital In A Changing Business Environment: Some Thoughts," presented at the Eighth Annual Regulatory Educational Conference, sponsored by the Canadian Association of Members of Public Utility Tribunals, Banff, Alberta, Canada, May 1994.

J. Robert Malko, "The Electric Utility In The Year 2000: A Forecast," presented at Energy Utility Training Seminar, Wisconsin Public Utility Institute, University of Wisconsin, Madison, Wisconsin, September 1993.

Ajay Krishnan, Rajiv Mallick, and J. Robert Malko, "Leverage: Adjustment to Beta In The Capital Asset Pricing Model," prepared for Twenty-Fifth Financial Forum, sponsored by The National Society of Rate of Return Analysts, Philadelphia, Pennsylvania, April 1993.

J. Robert Malko, "Some Current Financial And Economic Issues In The Electric Utility Industry," presented at Applied Economics Seminar, sponsored by the Krannert Graduate School of Management, Purdue University, West Lafayette, Indiana, September 1992.

J. Robert Malko, "Corporate Restructuring In The Electric Utility Industry: Some Thoughts," presented at Energy Utility Seminar, sponsored by World Bank Energy Analysis Group, Washington, D.C., May 1992.

J. Robert Malko, "Emerging Issues In Interfuel Competition," presented at Demand-Side Management In The Natural Gas Industry Seminar, sponsored by AUS, Philadelphia, Pennsylvania, October 1991.

J. Robert Malko and Philip R. Swensen, "Selecting A Portfolio of Comparable Electrical Utilities," prepared for the Twenty-Second Financial Forum, sponsored by The National Society of Rate of Return Analysts (NSRRA), Washington, D.C., May 1990.

J. Robert Malko, "Nuclear Power Plant Decommissioning: Some Issues For The 1990s," presented at Economic Regulation Seminar, sponsored by Council On Economic Regulation, Washington, D.C., March 1990.

Bradley R. Baker, J. Robert Malko, and Philip R. Swensen, "Estimating The Cost Of Capital For Diversified Utilities -- The Pure Play Technique," prepared for the Twenty-First Financial Forum, sponsored by The National Society of Rate of Return Analysts, Washington, D.C., May 1989.

J. Robert Malko, Keith Brown, Philip R. Swensen, and Caryn L. Beck-Dudley, "Regulation And The Restructuring Of Energy Utilities: Mergers, Diversification, and Corporate Reorganization," presented at the Transportation and Public Utility Group Sessions, American Economic Association One Hundredth and First Annual Meeting, New York City, New York, December 1988.

J. Robert Malko, "Energy Utility Diversification In Wisconsin: 1981-1986," presented at the Energy Utilities and Regulation Conference, sponsored by the Wisconsin Public Utility Institute, the University of Wisconsin, Madison, Wisconsin, September 1988.

J. Robert Malko, Keith C. Brown, and Harry N. Fugate, "External Funding For Nuclear Power Plant Decommissioning Expenses: Some Current Issues, Considerations, And Activities," presented at the Nuclear Decommissioning Trust Forum, sponsored by Institutional Investor, held in Oak Brook, Illinois, July 1988.

J. Robert Malko, Keith C. Brown, and Alan A. Stephens, "Natural Gas Distribution Utility Diversification: Financial Regulation In An Uncertain World," presented at the Seventh Annual Regulation and Public Utility Economics Conference, sponsored by Rutgers University, held in New Paltz, New York, May 1988.

Stephen Fogel, David Effron, J. Robert Malko, and Caryn L. Beck-Dudley, "External Funding for Nuclear Decommissioning: Some Issues And Considerations Concerning Financial Assurance," presented a the New Developments In Nuclear Decommissioning Costs And Funding Methods Conference, sponsored by the Northwest Center for Professional Education, held in Arlington, Virginia, April 1988.

J. Robert Malko, Ahmad Faruqui, and Philip R. Swensen, "Time-of-Day Pricing of Electricity: Industrial and Commercial Customers," presented at the Transportation and Public Utility Group Sessions, American Economic Association One Hundredth Annual Meeting, Chicago, Illinois, December 1987.

J. Robert Malko and Philip R. Swensen, "Corporate Restructuring In The Electric Utility Industry: Some Important Issues," presented at the Tenth Annual Public Utilities Conference, sponsored by New Mexico State University, Albuquerque, New Mexico, October 1987.

Thomas R. Tuschen, J. Robert Malko, and Steven G. Kihm," Implementing And Managing An External Fund for Nuclear Power Plant Decommissioning Expenses: Activities In Some Midwest States," presented at the Midwest Finance Association 1987 Annual Meetings, St. Louis, Missouri, March 1987.

J. Robert Malko and Steven G. Kihm, "An External Fund Approach for Nuclear Power Plant Decommissioning Expenses: Some Financial Issues," presented at Financial Management Association, 1986 Annual Meeting, New York City, October 1986.

J. Robert Malko and Steven G. Kihm, "Regulatory Strategic Planning and Electric Utilities: Some Thoughts," presented at Current Issues Challenging The Regulatory Process Conference, sponsored by New Mexico State University, held at Albuquerque, New Mexico, April 1986.

Gregory B. Enholm and J. Robert Malko, "Earned Return on Electric Utility Common Equity, 1972-1984: Selected Midwest Utilities," presented at Midwest Finance Association Annual Meeting, held at Cincinnati, Ohio, March 1985.

J. Robert Malko, "The DCF Method and Regulated Utility Rate Cases," presented at Third Annual Basic Course on Public Utilities and Regulation, sponsored by the Wisconsin Public Utility Institute, held at University of Wisconsin-Madison, October 1984.

J. Robert Malko and Paul R. Lenz, "Strategic Pricing of Electricity," presented at Seventh Annual Public Utilities Conference, sponsored by New Mexico State University, held at Albuquerque, New Mexico, September 1984.

J. Robert Malko, "Residential Time-of-Day Pricing of Electricity: Mandatory Vs. Voluntary," presented at Sixth Annual Public Utilities Conference, sponsored by New Mexico State University, held at Albuquerque, New Mexico, October 1983.

Gregory B. Enholm and J. Robert Malko, "Electric Utilities In The 1980s: Financial Performance and Diversification," presented at American Economic Association Ninety-Fifth Annual Meeting, New York City, December 1982.

J. Robert Malko, Gregory B. Enholm, and Theodore M. Jaditz, "Energy Utility Diversification, Holding Companies, and Regulation," prepared for the Public Service Commission of Wisconsin, September 1981, and presented at the Fourth Annual Public Utilities Conference, sponsored by New Mexico State University, held at El Paso, Texas, October 1981.

J. Robert Malko and Gregory B. Enholm, "Regulation and Electric Utilities: Some Current Issues," presented at Ninth Annual National Utilities Conference, sponsored by Planmetrics and Energy Management Associates, Chicago, Illinois, May 1981.

Ahmad Faruqui and J. Robert Malko, "Response of Residential Electric Loads to Time-of-Use Rates: Evidence from Eleven Pricing Experiments," presented at Midwest Economics Association Annual Meeting, Louisville, Kentucky, April 1981.

J. Robert Malko and James D. Simpson, "Considering and Implementing Time-Of-Day Pricing of Electricity: Activities in Some Eastern States," presented at Eastern Economics Association Annual Meeting, Montreal, Canada, May 1980.

James Kaul, Dennis Ray, and J. Robert Malko, "Estimating Usage Response of Wisconsin Industrial Customers to Time-of-Day Electricity Rates: A Preliminary Analysis," presented at Midwest Economics Association Annual Meeting, Chicago, Illinois, March 1980.

John Schaefer, and J. Robert Malko, "Some Current Load Management Activities," presented at Thirty-Second Annual Power Distribution Conference, University of Texas, Austin, Texas, October 1979.

J. Robert Malko, "Implementing Time-of-Use Pricing," presented at the Engineering Economy for Public Utilities Seventeenth Annual Program, Stanford University, Palo Alto, California, July, 1978.

Dennis J. Ray, J. Stanley Black, and J. Robert Malko, "Developing and Implementing a Peak-Load Pricing Experiment for Residential Electricity Customers. A Wisconsin Experience," presented at the Midwest Economics Association Annual Meeting, Chicago, Illinois, April 1978.

J. Robert Malko, "Some Necessary Activities and Important Considerations for Formulating and Implementing a Workable Time-of-Use Pricing Program," presented at the Mid-America Regulatory Commissioners Conference, Des Moines, Iowa, June 1977.

J. Robert Malko and Bernard Morzuch, "Peak-Load Pricing in Wisconsin: An Update," for National Rural Electric Cooperative Association, Load Management Conference, Kansas City, April 1977.

J. Robert Malko and Gary Couillard, "Cost-Based Pricing of Electricity in Wisconsin: A Process in Flux," presented at the Wisconsin Telephone Seminar on Utilities, Madison, April 1976.

J. Robert Malko and David Stipanuk, "Peak-Load Pricing of Electricity in Wisconsin," presented at Midwest Economics Association Annual Meeting, St. Louis, April 1976.

VI. Technical Reports

Electric Utility Cost Allocation Manual (1992), prepared by various professionals including J. Robert Malko, published by the National Association of Regulatory Utility Commissioners, Washington, D.C., 1992.

1982 Report of the Ad Hoc Committee on Utility Diversification, prepared by various regulatory commissioners and regulatory staff (including J. Robert Malko), published by the National Association of Regulatory Utility Commissioners, Washington, D.C., October 1982.

J. Robert Malko, Darrell Smith, and Robert G. Uhler, Costing For Ratemaking, Topic #2, a report to the National Association of Regulatory Utility Commissioners, Electric Utility Rate Design Study, Report No. 85, Electric Power Research Institute, Palo Alto, California, August 1981, 212 pages.

Generic Environmental Impact Statement On Electric Utility Tariffs, prepared by Wisconsin Public Service Commission Staff (including J. Robert Malko) for the Wisconsin Public Service Commission, Docket No. 1-AC-10, June 1977, 308 pages.

Generic Preliminary Environmental Report On Electric Utility Tariffs, prepared by Wisconsin Public Service Commission Staff (including J. Robert Malko) for the Wisconsin Public Service Commission, Docket No. 1-AC-10, November 1976, 105 pages.

A Program Performance Budget Analysis of Sanitation Service Provided By The City of Bloomington, prepared by J. Robert Malko, prepared for the Municipal Government of Bloomington, Illinois, August 1973.

An Analysis of Revenue Sources For The City of Bloomington, prepared by J. Robert Malko, prepared for the Municipal Government of Bloomington, Illinois, September 1972.

PRESENTATIONS: Electric Utility Rate Design Study Activities (1979-80)
Electric Power Research Institute (EPRI)

Utah Public Service Commission Staff, Salt Lake City, Utah, July 1980
NARUC Committee on Electricity, San Francisco, California, July 1980
Northwest Public Power Association Rates Symposium, Vancouver, B.C., Canada, July 1980
Quebec Hydro Staff, Montreal, Quebec, Canada, July 1980
Illinois Commerce Commission Staff, Springfield, Illinois, June 1980
Western Conference of Public Service Commission, Anchorage, Alaska, June 1980
Alaska Public Utilities Commission, Anchorage, Alaska, June 1980
APPA Load Management Conference, Kansas City, Missouri, June 1980
Commonwealth Edison Company Staff, Chicago, Illinois, March 1980
Electricite de France Staff, Paris, France, February 1980
ANIE/INTEL Conference, Milan, Italy, February 1980
The Electricity Council Staff, London, England, February 1980
Tennessee Valley Authority Staff, Knoxville, Tennessee, December 1979
APPA Rates Workshop, San Francisco, California, November 1979
Commonwealth Club, San Francisco, California, November 1979
APPA Rates and PURPA Conference, Denver, Colorado, November 1979
Colorado Public Utilities Commission Staff, Denver, Colorado, November 1979
Bonneville Power Administration Staff, Portland, Oregon, October 1979
Iowa State Legislature, Public Utility Joint Subcommittee, Des Moines, Iowa, October 1979
Iowa State Commerce Commission Staff, Des Moines, Iowa, October 1979
Edison Electric Institute Rate Research Committee, Delavan, Wisconsin, September 1979
Tennessee Valley Authority Staff, Chattanooga, Tennessee, September 1979
NARUC Staff and District of Columbia Public Service Commission Staff, Washington, D.C., September 1979
Edison Electric Institute Staff, Washington, D.C., September 1979
U.S. Department of Energy, Economic Regulatory Administration, Office of Utility Systems Staff, Washington, D.C., September 1979
National Rural Electric Cooperative Association Staff, Washington, D.C., September 1979
Connecticut Public Utilities Control Authority Staff, Hartford, September 1979
New Hampshire Public Utilities Commission, Concord, September 1979
Ontario Hydro Staff, Toronto, Ontario, Canada, August 1979
NARUC Committee on Electricity, San Francisco, California, August 1979
1979 NARUC Annual Regulatory Studies Programs, Michigan State University, August 1979
Michigan Public Service Commission, Lansing, August 1979
California Public Utilities Commission, San Francisco, California, July 1979
Minnesota Public Service Commission, St. Paul, July 1979
Virginia State Corporation Commission, Richmond, July 1979
North Carolina Utilities Commission, Raleigh, July 1979
Research Triangle Institute, Economics Section, Raleigh, July 1979
Wisconsin Public Service Commission, Madison, July 1979
University of Wisconsin, Utility Rates Conference, Madison, July 1979
American Public Power Association Conference, Seattle, June 1979
Washington Utility and Transportation Commission, Olympia, June 1979
Stanford University, Public Utilities Conference, Palo Alto, June 1979
Massachusetts Department of Public Utilities, Boston, May 1979
University of California, Graduate School of Business, Berkeley, May 1979
Federal Energy Regulatory Commission, Washington, D.C., April 1979
University of Wisconsin, Utility Load Management Conference, Madison, April 1979
Electric Power Research Institute, Energy Analysis Department Symposium, Palo Alto, March 1979
U.S. Department of Energy, Economic Regulatory Administration, Washington, D.C., February 1979
Edison Electric Institute Rate Research Committee Conference, New Orleans, January 1979

TESTIFYING EXPERIENCE:

Presented testimony before the Arizona Corporation Commission (1989, 1998), the Connecticut Public Utilities Control Authority (1976-77), District of Columbia Public Service Commission (1990), the Federal Energy Regulatory Commission (1986), the Hawaii Public Utilities Commission, (1981, 1984-85, 1990, 1992, 1994), the Illinois Commerce Commission (1987-88), Maryland Public Service Commission (1990-1991, 2009), the Minnesota Public Utilities Commission (2006), the New Hampshire Public Utilities Commission (1997),the New Jersey Board of Public Utilities (2006), the Nevada Public Service Commission (1982), the New York Public Service Commission (1994), the Pennsylvania Public Utility Commission (1977), the Public Service Commission of Wisconsin (1975-77, 1981-86), the Utah Public Service Commission (1994), Utah State Tax Commission (1998-2004), and the Virginia State Corporation Commission (1985, 1993).

ORGANIZATIONS AND COMMITTEES:

The Society of Utility and Regulatory Financial Analysts (SURFA), formerly named The National Society of Rate of Return Analysts, Board of Directors, 1984- 1986, 1990-1996, 2000-2002, and 2004-2010; Vice President, 1986-1988, and 2004 – 2006; and President 1988-1990.

The National Regulatory Research Institute, housed at the Ohio State University, Board of Directors, 1997-2003.

American Economics Association; Transportation and Public Utility Group, Vice-Chair, 1992, Chair, 1993, and Executive Committee, 1994-1996.

National Association of Regulatory Commissioners - Staff Subcommittee on Economics and Finance (Chairman, 1976-77 and Vice Chairman, 1981-86)

Faculty Associate for the Institute of Public Utilities at Michigan State University, 2008 – present

Financial Management Association, 2006 - present

Council on Economic Regulation Fellow, Washington D.C., 1986-2000.

Rate and Regulatory Symposium, University of Missouri, Advisory Council, 1987-2000.

University of Wisconsin-Madison, Wisconsin Public Utility Institute, Executive Board (Chairman 1981-82), 1981-1985.

New Mexico State University, Public Utility Center Advisory Council, 1981-2003.

Electric Power Research Institute, Demand and Conservation Program, Project Review Committee, 1982-83.

American Finance Association, 1982-1992

Midwest Finance Association, 1985-1990

Alpha Sigma Nu, the National Jesuit Honor Society

Beta Gamma Sigma, National Honor Society for Business Schools.

Who's Who in California Business and Finance, 1980

Electric Ratemaking Journal, Board of Advisors, 1982-83.

Electric Potential Journal, Honorary Board of Editors, 1987-88.

Forum For Applied Research and Public Policy, Editorial Board, 1987-91.

The Kentucky Journal of Economics and Business, Board of Editors 1987-97.

The Electricity Journal, Board of Editors 1988-present.

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