

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-12\_\_\_\_\_

EXHIBIT NO. \_\_\_\_ (MNL-2)

MARK N. LOWRY

REPRESENTING AVISTA CORPORATION

# RESUME OF MARK NEWTON LOWRY

March 2012

**Home Address:** 1511 Sumac Drive **Business Address:** 22 E. Mifflin St., Suite 302

Madison, WI 53705  
(608) 233-4822

Madison, WI 53703  
(608) 257-1522 Ext. 23

**Date of Birth:** August 7, 1952

**Education:** High School: Hawken School, Gates Mills, Ohio, 1970  
BA: Ibero-American Studies, University of Wisconsin-Madison, May 1977  
Ph.D.: Agricultural and Resource Economics, University of Wisconsin-Madison, May 1984

## Relevant Work Experience, Primary Positions:

**Present Position** President, Pacific Economics Group Research LLC, Madison WI

Chief executive of the research unit of the Pacific Economics Group consortium. Leads internationally recognized practice in alternative regulation ("Altreg") and utility statistical research. Other research specialties include: codes of competitive conduct, markets for oil and gas, and commodity storage. Duties include senior management, supervision of research, and expert witness testimony.

**October 1998-February 2009** Partner, Pacific Economics Group LLC, Madison, WI

Managed PEG's Madison office. Specific duties include project management and research, written reports, public presentations, expert witness testimony, personnel management, and marketing.

**January 1993-October 1998** Vice President

**January 1989-December 1992** Senior Economist, Christensen Associates, Madison, WI

Directed the company's Regulatory Strategy group. Participated in all Christensen Associates testimony on energy utility PBR and statistical benchmarking during these years.

**Aug. 1984-Dec. 1988** Assistant Professor, Department of Mineral Economics, The Pennsylvania State University, University Park, PA

Responsibilities included research and graduate and undergraduate teaching and advising. Courses taught: Min Ec 387 (Introduction to Mineral Economics); 390 (Mineral Market Modeling); 484 (Political Economy of Energy and the Environment) and 506 (Applied Econometrics). Teaching and research specialty: analysis of markets for energy products and metals.

**August 1983-July 1984** Instructor, Department of Mineral Economics, The Pennsylvania State University, University Park, PA

Taught courses in Mineral Economics (noted above) while completing Ph.D. thesis.

**April 1982-August 1983**                      **Research Assistant, Department of Agricultural and Resource Economics, University of Wisconsin-Madison**

Dissertation research under Dr. Peter Helmberger on the role of speculative storage in markets for field crops. Work included the development of an econometric rational expectations model of the U.S. soybean market.

**March 1981-March 1982**                      **Natural Gas Industry Analyst, Madison Consulting Group, Madison, Wisconsin**

Research under Dr. Charles Cicchetti in two areas:

- Impact of the Natural Gas Policy Act on the production and average wellhead price of natural gas in the United States.
- Research supporting litigation testimony in an antitrust suit involving natural gas producers and pipelines in the San Juan Basin of New Mexico.

#### Relevant Work Experience, Visiting Positions:

**May-August 1985**                              **Professeur Visiteur, Centre for International Business Studies, Ecole des Hautes Etudes Commerciales, Montreal, Quebec.**

Research on the behavior of inventories in non-competitive metal markets.

#### Major Consulting Projects:

1. Research on Gas Market Competition for a Western Electric Utility. 1981.
2. Research on the Natural Gas Policy Act for a Northeast Trade Association. 1981
3. Interruptible Service Research for an Industry Research Institute. 1989.
4. Research on Load Relief from Interruptible Services for a Northeast Electric Utility. 1989.
5. Design of Time-of-Use Rates for a Midwest Electric Utility. 1989.
6. PBR Consultation for a Southeast Gas Transmission Company. 1989.
7. Gas Transmission Productivity Research for a U.S. Trade Association. 1990.
8. Productivity Research for a Northeast Gas and Electric Utility. 1990-91.
9. Comprehensive Performance Indexes for a Northeast Gas and Electric Utility. 1990-1991.
10. PBR Consultation for a Southeast Electric Utility. 1991.
11. Research on Electric Revenue Adjustment Mechanisms for a Northeast Electric Utility. 1991.
12. Productivity Research for a Western Gas Distributor. 1991.
13. Cost Performance Indexes for a Northeast U.S. Gas and Electric Utility. 1991.
14. Gas Transmission Rate Design for a Western U.S. Electric Utility. 1991.
15. Gas Supply Cost Indexing for a Western U.S. Gas Distributor. 1992.
16. Gas Transmission Strategy for a Western Electric Utility. 1992.
17. Design and Negotiation of Comprehensive Benchmark Incentive Plans for a Northeast Gas and Electric Utility. 1992.
18. Gas Supply Cost Benchmarking and Testimony for a Northeast U.S. Gas Distributor, 1992.
19. Bundled Power Service Productivity Research for a Western Electric Utility. 1993-96.
20. Development of PBR Options for a Western Electric Utility. 1993.

21. Review of the Regional Gas Transmission Market for a Western Electric Utility. 1993.
22. Productivity and PBR Research and Testimony for a Northeast Electric Utility. 1993.
23. Productivity and PBR Research and Testimony for a Northeast Electric Utility. 1994.
24. Productivity Research for a Western Gas Distributor. 1994.
25. White Paper on Price Cap Regulation for a U.S. Trade Association. 1994.
26. Bundled Power Service Benchmarking for a Western Electric Utility. 1994.
27. White Paper on PBR for a U.S. Trade Association. 1995.
28. Productivity Research and PBR Plan Design for a Northeast Gas and Electric Company. 1995.
29. Regulatory Strategy for a Restructuring Canadian Electric Utility. 1995.
30. PBR Consultation for a Japanese Electric Utility. 1995.
31. Regulatory Strategy for a Restructuring Northeast Electric Utility. 1995.
32. Productivity Research and Plan Design Testimony for a Western Gas Distributor. 1995.
33. Productivity Testimony for a Northeast Gas Distributor. 1995.
34. Speech on PBR for a Western Electric Utility. 1995.
35. Development of a PBR Plan for a Midwest Gas Distributor. 1996.
36. Stranded Cost Recovery and Power Distribution PBR for a Northeast Electric Utility. 1996.
37. Benchmarking and Productivity Research and Testimony for a Northeast Gas Distributor. 1996.
38. Consultation on Gas Production, Transmission, and Distribution PBR for a Latin American Regulator. 1996.
39. Power Distribution Benchmarking for a Northeast Electric Utility. 1996.
40. Testimony on PBR for a Northeast Power Distributor. 1996.
41. Bundled Power Service Benchmarking for a Northeast Electric Utility. 1996.
42. Design of Gas Distributor Service Territories for a Latin American Regulator. 1996.
43. Bundled Power Service Benchmarking for a Northeast Electric Utility. 1996.
44. Service Quality PBR for a Canadian Gas Distributor. 1996.
45. Productivity and PBR Research and Testimony for a Canadian Gas Distributor. 1997.
46. Bundled Power Service Benchmarking for a Northeast Electric Utility. 1997.
47. Design of a Price Cap Plan for a South American Regulator. 1997.
48. White Paper on Utility Brand Name Policy for a U.S. Trade Association. 1997.
49. Bundled Power Service Benchmarking and Testimony for a Western Electric Utility. 1997.
50. Review of a Power Purchase Contract Dispute for a Midwest City. 1997.
51. Research on Benchmarking and Stranded Cost Recovery for a U.S. Trade Association. 1997.
52. Research and Testimony on Productivity Trends for a Northeast Gas Distributor. 1997.
53. PBR Plan Design, Benchmarking, and Testimony for a Southeast Gas Distributor. 1997.
54. White Paper on Power Distribution PBR for a U.S. Trade Association. 1997-99.
55. White Paper and Public Appearances on PBR Options for Australian Power Distributors. 1997-98.
56. Gas and Power Distribution PBR Research and Testimony for a Western Energy Utility. 1997-98.
57. Research on the Cost Structure of Power Distribution for a U.S. Trade Association. 1998.
58. Research on Cross-Subsidization for a U.S. Trade Association. 1998.
64. Testimony on Brand Names for a U.S. Trade Association. 1998.
65. Research and Testimony on Economies of Scale in Power Supply for a Western Electric Utility. 1998.
66. PBR Plan Design and Testimony for a Western Electric Utility. 1998-99.
67. PBR and Bundled Power Service Testimony and Testimony for Two Southeast U.S. Electric Utilities. 1998-99.
68. Statistical Benchmarking for an Australian Power Distributor. 1998-9.
69. Testimony on Functional Separation of Power Generation and Delivery for a U.S. Trade Association. 1998.
70. Design of a Stranded Benefit Passthrough Mechanism for a Restructuring Electric Utility. 1998.
71. Consultation on PBR and Code of Conduct Issues for a Western Electric Utility. 1999.
72. PBR and Bundled Power Service Benchmarking Research and Testimony for a Southwest Electric Utility. 1999.

73. Power Transmission and Distribution Cost Benchmarking for a Western Electric Utility. 1999.
74. Cost Benchmarking for Three Australian Power Distributors. 1999.
75. Bundled Power Service Benchmarking for a Northeast Electric Utility. 1999.
76. Benchmarking Research for an Australian Power Distributor. 2000.
77. Critique of a Commission-Sponsored Benchmarking Study for Three Australian Power Distributors. 2000.
78. Statistical Benchmarking for an Australian Power Transco. 2000.
79. PBR and Benchmarking Testimony for a Southwest Electric Utility. 2000.
80. PBR Workshop (for Regulators) for a Northeast Gas and Electric Utility. 2000.
81. Research on Economies of Scale and Scope for an Australian Electric Utility. 2000.
82. Research and Testimony on Economies of Scale in Power Delivery, Metering, and Billing for a Consortium of Northeast Electric Utilities. 2000.
83. Research and Testimony on Service Quality PBR for a Consortium of Northeast Energy Utilities. 2000.
84. Power and Natural Gas Procurement PBR for a Western Electric Utility. 2000.
85. PBR Plan Design for a Canadian Natural Gas Distributor. 2000.
86. TFP and Benchmarking Research for a Western Gas and Electric Utility. 2000.
87. E-Forum on PBR for Power Procurement for a U.S. Trade Association. 2001.
88. PBR Presentation to Florida's Energy 2000 Commission for a U.S. Trade Association. 2001.
89. Research on Power Market Competition for an Australian Electric Utility. 2001.
90. TFP and Other PBR Research and Testimony for a Northeast Power Distributor. 2000.
91. PBR and Productivity for a Canadian Electric Utility. 2002
92. Statistical Benchmarking for an Australian Power Transco. 2002.
93. PBR and Bundled Power Service Benchmarking Research and Testimony for a Midwest Energy Utility. 2002.
94. Consultation on the Future of Power Transmission and Distribution Regulation for a Western Electric Utility. 2002.
95. Benchmarking and Productivity Research and Testimony for Two Western U.S. Energy Distributors. 2002.
96. Workshop on PBR (for Regulators) for a Canadian Trade Association. 2003.
97. PBR, Productivity, and Benchmarking Research for a Mid-Atlantic Gas and Electric Utility. 2003.
98. Workshop on PBR (for Regulators) for a Southeast Electric Utility. 2003.
99. Strategic Advice for a Midwest Power Transmission Company. 2003.
100. PBR Research for a Canadian Gas Distributor. 2003.
101. Benchmarking Research and Testimony for a Canadian Gas Distributor. 2003-2004.
102. Consultation on Benchmarking and Productivity Issues for Two British Power Distributors. 2003.
103. Power Distribution Productivity and Benchmarking Research for a South American Regulator. 2003-2004.
104. Statistical Benchmarking of Power Transmission for a Japanese Research Institute. 2003-4.
105. Consultation on PBR for a Western Gas Distributor. 2003-4.
106. Research and Advice on PBR for Gas Distribution for a Western Gas Distributor. 2004.
107. PBR, Benchmarking and Productivity Research and Testimony for Two Western Energy Distributors. 2004.
108. Advice on Productivity for Two British Power Distributors. 2004.
109. Workshop on Service Quality Regulation for a Canadian Trade Association. 2004.
110. Strategic Advice for a Canadian Trade Association. 2004.
111. White Paper on Unbundled Storage and Local Gas Markets for a Midwestern Gas Distributor. 2004.
112. Statistical Benchmarking Research for a British Power Distributor. 2004.
113. Statistical Benchmarking Research for Three British Power Distributors. 2004.
114. Benchmarking Testimony for Three Ontario Power Distributors. 2004.
115. Indexation of O&M Expenses for an Australian Power Distributor. 2004.

116. Statistical Benchmarking of O&M Expenses for a Canadian Gas Distributor. 2004.
117. Benchmarking Testimony for a Canadian Power Distributor. 2005.
118. Statistical Benchmarking for a Canadian Power Distributor. 2005.
119. White Paper on Power Distribution Benchmarking for a Canadian Trade Association. 2005.
120. Statistical Benchmarking for a Southeast Bundled Power Utility. 2005.
121. Statistical Benchmarking of a Nuclear Power Plant and Testimony. 2005.
122. White Paper on Utility Rate Trends for a U.S. Trade Association. 2005.
123. TFP Research for a Northeast U.S. Power Distributor, 2005.
124. Seminars on PBR and Statistical Benchmarking for a Northeast Electric Utility, 2005.
125. Statistical Benchmarking and Testimony for a Northeast U.S. Power Distributor, 2005.
126. Testimony Transmission PBR for a Canadian Electric Utility, 2005.
127. TFP and Benchmarking Research and Testimony for Two California Energy Utilities. 2006.
128. White Paper on Power Transmission PBR for a Canadian Electric Utility. 2006.
129. Testimony on Statistical Benchmarking for a Canadian Electric Utility. 2006.
130. White Paper on PBR for Major Plant Additions for a U.S. Trade Association. 2006.
131. PBR Plan Design for a Canadian Regulatory Commission. 2006.
132. White Paper on Regulatory Benchmarking for a Canadian Trade Association. 2007.
133. Productivity Research and Testimony for a Northeastern Power Distributor. 2007.
134. Revenue Decoupling Research and Presentation for a Northeast Power Distributor. 2007.
135. Gas Utility Productivity Research and PBR Plan Design for a Canadian Regulator. 2007.
136. Productivity Research and PBR Plan Design for a Western Bundled Power Service Utility. 2007.
137. Statistical Benchmarking for a Canadian Energy Regulator. 2007.
138. Research and Testimony in Support of a Revenue Adjustment Mechanism for a Northeastern Power Utility. 2008.
139. Consultation on Alternative Regulation for a Midwestern Electric Utility. 2008.
140. Research and Draft Testimony in Support of a Revenue Decoupling Mechanism for a Large Midwestern Gas Utility. 2008.
141. White Paper: Use of Statistical Benchmarking in Regulation. 2005-2009.
142. Statistical Cost Benchmarking of Canadian Power Distributors. 2007-2009.
143. Research and Testimony on Revenue Decoupling for 3 US Electric Utilities. 2008-2009.
144. Benchmarking Research and Testimony for a Midwestern Electric Utility. 2009.
145. Consultation and Testimony on Revenue Decoupling for a New England DSM Advisory Council. 2009.
146. Research and Testimony on Forward Test Years and the cost performance of a Vertically Integrated Western Electric Utility. 2009.
147. White Paper for a National Trade Association on the Importance of Forward Test Years for U.S. Electric Utilities. 2009-2010.
148. Research and Testimony on Altreg for Western Gas and Electric Utilities Operating under Decoupling. 2009-2010.
149. Research and Report on PBR Designed to Incent Long Term Performance Gains. 2009-2010.
150. Research and Report on Revenue Decoupling for Ontario Gas and Electric Utilities. 2009-2010.
151. Research and Testimony on the Performance of a Western Electric Utility. 2009-2010.
152. Research on Decoupling for a Western Gas Distributor. 2009-2010.
153. Research on AltReg Precedents for a Midwestern Electric Utility. 2010.
154. Research on Revenue Decoupling for a Northwestern Gas & Electric Utility. 2010.
155. Benchmarking Research and Report on the Performance of a Midwestern Electric Utility. 2010.
156. Research and Testimony on Forward Test Years and the cost performance of a large Western Gas Distributor. 2010-2011.
157. Research and Testimony in Support of Revenue Decoupling for a Midwestern Power Distributor. 2010-2011.

158. Benchmarking Research and Report on the Generation Maintenance Performance of a Midwestern Electric Utility. 2010-2011.
159. Research and Testimony on the Design of an Incentivized Formula Rate for a Canadian Gas Distributor. 2010-2011.
160. White Paper for a National Trade Association on Remedies for Regulatory Lag. 2010-2011.
161. Benchmarking Research and Report on the Performance of a Midwestern Electric Utility. 2011.
162. Assistance with an Alternative Regulation Settlement Conference for a Northeastern Power Distributor. 2011.
163. Research and Testimony on Remedies for Regulatory Lag for Four Northeastern Power Distributors. 2011-2012.
164. Research and Testimony on Projected Attrition for a Western Electric Utility. 2011-2012.

### Publications:

1. Public vs. Private Management of Mineral Inventories: A Statement of the Issues. Earth and Mineral Sciences 53, (3) Spring 1984.
2. Review of Energy, Foresight, and Strategy, Thomas Sargent, ed. (Baltimore: Resources for the Future, 1985). Energy Journal 6 (4), 1986.
3. The Changing Role of the United States in World Mineral Trade in W.R. Bush, editor, The Economics of Internationally Traded Minerals. (Littleton, CO: Society of Mining Engineers, 1986).
4. Assessing Metals Demand in Less Developed Countries: Another Look at the Leapfrog Effect. Materials and Society 10 (3), 1986.
5. Modeling the Convenience Yield from Precautionary Storage of Refined Oil Products (with junior author Bok Jae Lee) in John Rowse, ed. World Energy Markets: Coping with Instability (Calgary, AL: Friesen Printers, 1987).
6. Pricing and Storage of Field Crops: A Quarterly Model Applied to Soybeans (with junior authors Joseph Glauber, Mario Miranda, and Peter Helmberger). American Journal of Agricultural Economics 69 (4), November, 1987.
7. Storage, Monopoly Power, and Sticky Prices. les Cahiers du CETAI no. 87-03 March 1987.
8. Monopoly Power, Rigid Prices, and the Management of Inventories by Metals Producers. Materials and Society 12 (1) 1988.
9. Review of Oil Prices, Market Response, and Contingency Planning, by George Horwich and David Leo Weimer, (Washington, American Enterprise Institute, 1984), Energy Journal 8 (3) 1988.
10. A Competitive Model of Primary Sector Storage of Refined Oil Products. July 1987, Resources and Energy 10 (2) 1988.
11. Modeling the Convenience Yield from Precautionary Storage: The Case of Distillate Fuel Oil. Energy Economics 10 (4) 1988.
12. Speculative Stocks and Working Stocks. Economic Letters 28 1988.
13. Theory of Pricing and Storage of Field Crops With an Application to Soybeans [with Joseph Glauber (senior author), Mario Miranda, and Peter Helmberger]. University of Wisconsin-Madison College of Agricultural and Life Sciences Research Report no. R342I, 1988.
14. Competitive Speculative Storage and the Cost of Petroleum Supply. The Energy Journal 10 (1) 1989.
15. Evaluating Alternative Measures of Credited Load Relief: Results From a Recent Study For New England Electric. In Demand Side Management: Partnerships in Planning for the Next Decade (Palo Alto: Electric Power Research Institute, 1991).
16. Futures Prices and Hidden Stocks of Refined Oil Products. In O. Guvanen, W.C. Labys, and J.B. Lesourd, editors, International Commodity Market Models: Advances in Methodology and Applications (London: Chapman and Hall, 1991).
17. Indexed Price Caps for U.S. Electric Utilities. The Electricity Journal, September-October 1991.

18. Gas Supply Cost Incentive Plans for Local Distribution Companies. Proceedings of the Eight NARUC Biennial Regulatory Information Conference (Columbus: National Regulatory Research Institute, 1993).
19. TFP Trends of U.S. Electric Utilities, 1975-92 (with Herb Thompson). Proceedings of the Ninth NARUC Biennial Regulatory Information Conference, (Columbus: National Regulatory Research Institute, 1994).
20. A Price Cap Designers Handbook (with Lawrence Kaufmann). (Washington: Edison Electric Institute, 1995.)
21. The Treatment of Z Factors in Price Cap Plans (with Lawrence Kaufmann), Applied Economics Letters 2 1995.
22. Performance-Based Regulation of U.S. Electric Utilities: The State of the Art and Directions for Further Research (with Lawrence Kaufmann). Palo Alto: Electric Power Research Institute, December 1995.
23. Forecasting the Productivity Growth of Natural Gas Distributors (with Lawrence Kaufmann). AGA Forecasting Review, Vol. 5, March 1996.
24. Branding Electric Utility Products: Analysis and Experience in Regulated Industries (with Lawrence Kaufmann), Washington: Edison Electric Institute, 1997.
25. Price Cap Regulation for Power Distribution (with Larry Kaufmann), Washington: Edison Electric Institute, 1998.
26. Controlling for Cross-Subsidization in Electric Utility Regulation (with Lawrence Kaufmann), Washington: Edison Electric Institute, 1998.
27. The Cost Structure of Power Distribution with Implications for Public Policy (with Lawrence Kaufmann), Washington: Edison Electric Institute 1999.
28. Price Caps for Distribution Service: Do They Make Sense? (with Eric Ackerman and Lawrence Kaufmann), *Edison Times*, 1999.
29. Performance-Based Regulation of Utilities (with Lawrence Kaufmann), Energy Law Journal, 2002.
30. "Performance-Based Regulation and Business Strategy" (with Lawrence Kaufmann), Natural Gas, February 2003
31. "Performance-Based Regulation and Energy Utility Business Strategy (With Lawrence Kaufmann), in Natural Gas and Electric Power Industries Analysis 2003, Houston: Financial Communications, 2003.
32. "Price Control Regulation in North America: The Role of Indexing and Benchmarking", Methods to Regulate Unbundled Transmission and Distribution Business on Electricity Markets: Proceedings, Stockholm: Elforsk, 2003.
33. "Performance-Based Regulation Developments for Gas Utilities (with Lawrence Kaufmann), Natural Gas and Electricity, April 2004.
34. "Econometric Cost Benchmarking of Power Distribution Cost" (with Lullit Getachew and David Hovde), Energy Journal, July 2005.
35. "Alternative Regulation for North American Electric Utilities" (with Lawrence Kaufmann), Electricity Journal, 2006.
36. "Regulating Natural Gas Distributors with Declining Average Use" (with Lullit Getachew and Steven Fenrick), USAEE Dialogue, 2006.
37. "AltReg Rate Designs Address Declining Average Gas Use" (with Lullit Getachew, David Hovde and Steve Fenrick), *Natural Gas & Electricity*, April 2008.
38. "Price Control Regulation in North America: Role of Indexing and Benchmarking", Electricity Journal, January 2009
39. "Statistical Benchmarking in Utility Regulation: Role, Standards and Methods," (with Lullit Getachew), Energy Policy, 2009.
40. "Alternative Regulation, Benchmarking, and Efficient Diversification", USAEE Dialogue, August 2009.
41. "The Economics and Regulation of Power Transmission and Distribution: The Developed World Case" (with Lullit Getachew), in Lester C. Hunt and Joanne Evans, eds., International Handbook on the Economics of Energy, 2009.



42. "Econometric TFP Targets, Incentive Regulation and the Ontario Gas Distribution Industry," Review of Network Economics, December 2009.

### Professional Presentations:

1. American Institute of Mining Engineering, New Orleans, LA, March 1986
2. International Association of Energy Economists, Calgary, AL, July 1987
3. American Agricultural Economics Association, Knoxville, TN, August 1988
4. Association d'Econometrie Appliquée, Washington, DC, October 1988
5. Electric Council of New England, Boston, MA, November 1989
6. Electric Power Research Institute, Milwaukee, WI, May 1990
7. New York State Energy Office, Saratoga Springs, NY, October 1990
8. National Association of Regulatory Utility Commissioners, Columbus, OH, September 1992
9. Midwest Gas Association, Aspen, CO, October 1993
10. National Association of Regulatory Utility Commissioners, Williamsburg, VA, January 1994
11. National Association of Regulatory Utility Commissioners, Kalispell, MT, May 1994
12. Edison Electric Institute, Washington, DC, March 1995
13. National Association of Regulatory Utility Commissioners, Orlando, FL, March 1995
14. Illinois Commerce Commission, St. Charles, IL, June 1995
15. Michigan State University Public Utilities Institute, Williamsburg, VA, December 1996
16. Edison Electric Institute, Washington DC, December 1995
17. IBC Conferences, San Francisco, CA, April 1996
18. AIC Conferences, Orlando, FL, April 1996
19. IBC Conferences, San Antonio, TX, June 1996
20. American Gas Association, Arlington, VA, July 1996
21. IBC Conferences, Washington, DC, October 1996
22. Center for Regulatory Studies, Springfield, IL, December 1996
23. Michigan State University Public Utilities Institute, Williamsburg, VA, December 1996
24. IBC Conferences, Houston TX, January 1997
25. Michigan State University Public Utilities Institute, Edmonton, AL, July 1997
26. American Gas Association, Edison Electric Institute, Advanced Public Utility Accounting School, Irving, TX, Sept. 1997
27. American Gas Association, Washington, DC [national telecast], September 1997
28. Infocast, Miami Beach, FL, Oct. 1997
29. Edison Electric Institute, Arlington, VA, March 1998
30. Electric Utility Consultants, Denver, CO, April 1998
31. University of Indiana, Indianapolis, IN, August 1998
32. Edison Electric Institute, Newport, RI, September 1998
33. University of Southern California, Los Angeles, CA, April 1999
34. Edison Electric Institute, Indianapolis, IN, August 1999
35. IBC Conferences, Washington, DC, February 2000
36. Center for Business Intelligence, Miami, FL, March 2000
37. Edison Electric Institute, San Antonio, TX, April 2000
38. Infocast, Chicago, IL, July 2000
39. Edison Electric Institute, July 2000
40. IOU-EDA, Brewster, MA, July 2000
41. Infocast, Washington, DC, October 2000
42. Wisconsin Public Utility Institute, Madison, WI, November 2000
43. Infocast, Boston, MA, March 2001
44. Florida 2000 Commission, Tampa, FL, August 2001

45. Infocast, Washington, DC, December 2001
46. Canadian Gas Association, Toronto, ON, March 2002
47. Canadian Electricity Association, Whistler, BC, May 2002
48. Canadian Electricity Association, Montreal, PQ, September 2002
49. Ontario Energy Association, Toronto, ON, November 2002
50. Canadian Gas Association, Toronto, ON, February 2003
51. Louisiana Public Service Commission, Baton Rouge, LA, February 2003
52. CAMPUT, Banff, ALTA, May 2003
53. Elforsk, Stockholm, Sweden, June 2003
54. Edison Electric Institute, national e forum, June 2003
55. Eurelectric, Brussels, Belgium, October 2003
56. CAMPUT, Halifax, May 2004
57. Edison Electric Institute, national eforum, March 2005
58. Edison Electric Institute, Madison, August 2005
59. Edison Electric Institute, national e forum, August 2005
60. Edison Electric Institute, Madison, WI, August 2006
61. EUCI, Arlington, VA, 2006
62. EUCI, Arlington, VA, 2006 [Conference chair]
63. EUCI, Seattle, WA, 2007. [Conference chair]
64. Massachusetts Energy Distribution Companies, Waltham, MA, July, 2007.
65. Edison Electric Institute, Madison, WI, July-August 2007.
66. Institute of Public Utilities, Lansing, MI, 2007.
67. EUCI, Denver, CO, 2008. [Conference chair]
68. EUCI, Chicago, IL, 2008. [Conference chair]
69. EUCI, Toronto, ON, 2008. [Conference chair]
70. Edison Electric Institute, Madison WI, August 2008
71. EUCI, Cambridge, MA, March 2009 [Conference chair]
72. Edison Electric Institute, national eforum, May 2009
73. Edison Electric Institute, Madison WI, July 2009
74. EUCI, Cambridge, MA, March 2010[Conference chair]
75. Edison Electric Institute, Madison, WI, July 2010
76. EUCI, Toronto, ON, November 2010[Conference chair]
77. Edison Electric Institute, Madison, WI, July 2011
78. EUCI, Philadelphia, PA, November 2011 [Conference chair]

#### Journal Referee:

Agribusiness  
American Journal of Agricultural Economics  
Energy Journal  
Journal of Economic Dynamics and Control  
Materials and Society