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Dr. Fox-Penner is an expert in energy and climate policy, regulated industries, and sustainable finance.

Specializing in the markets, policies, regulation, and transformation of the electricity industry, Dr. Fox-Penner has advised numerous major US energy companies, grid operators, and government agencies. He has testified on energy-related matters in more than 100 proceedings, including in front of federal courts, the Federal Energy Regulatory Commission (FERC), state courts, arbitrations, and at least 12 state public service commissions. Dr. Fox-Penner has also been a regulatory and strategic advisor to boards and executives at many utilities and energy companies.

With a career that has spanned consulting, senior government roles, and academia, Dr. Fox-Penner was the founding Director of Boston University's multidisciplinary Institute for Global Sustainability (IGS) and a Professor of Practice at the university's Questrom School of Business. He is a frequent public speaker on energy topics and the author of numerous published articles and books, including *Smart Power: Climate Change, the Smart Grid, and the Future of Electric Utilities* (Island Press, 2010). Dr. Fox-Penner's research – on topics such as electric power strategy, regulation, and governance – has been widely cited, including in one US Supreme Court decision.

Dr. Fox-Penner has served in various roles at Brattle, including as Office Director, board member, and the firm's longest-serving Chairman of the Board. Outside of the firm, he previously served as a senior official at the US Department of Energy and the White House Office of Science and Technology Policy and as the Chief Impact Officer at a clean energy investment platform, where he currently serves as Chairman for Impact.

AREAS OF EXPERTISE

- Regulatory Economics, Finance & Rates
- Electricity Litigation & Regulatory Disputes
- Electricity Wholesale Markets & Planning

EDUCATION

- **University of Chicago**
PhD in Economics
- **University of Illinois**
MS in Mechanical Engineering (Cum Laude)
BS in Electrical Engineering (Summa Cum Laude)

PROFESSIONAL EXPERIENCE

- **The Brattle Group (1996–Present)**
Principal (1996–2015, 2024–Present)
Senior Advisor (2016–2024)
Office Director (1996–2001, 2014–2015)
Chairperson (2001–2007, 2012–2013)
Chairperson Emeritus (2008–2012)
Co-Chairperson (2007–2008)
- **Energy Impact Partners (2022–Present)**
Chair, Impact (September 2024–Present)
Chief Impact Officer (2022–2024)
Chief Strategy Officer (2016–2021)
- **Boston University (2016–2021)**
Professor of the Practice (2016–2021)
Senior Fellow, Institute for Sustainable Energy (2022–Present)
Director, Institute for Sustainable Energy (2016–2021)
- **United States Department of Energy (1993–1996)**
Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy (1993–96)
Senior Advisor for Technology Policy (1995–1996)
Assistant to the Deputy Secretary of Energy (1996)
- **Charles River Associates (1987–1993)**
Vice President (1989–1993)
Senior Associate (1987–1989)
- **Center for Energy and Environmental Studies, Boston University (1991–1993)**
Professional Lecturer

- **Illinois Governor’s Office of Consumer Service (1980–1983)**
Chief Research Engineer
Research Engineer
 - **Office of Vice Chancellor for Energy Research, University of Illinois (1977–1980)**
Research Engineer
Research Assistant
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EXPERT TESTIMONY

- Arbitration between National Grid Long Island and the Long Island Power Authority on behalf of National Grid, August-September, 2021.
- Federal Energy Regulatory Commission, Docket No. EL01-10-085, September 21, 2012.
Subject: Prepared direct testimony on behalf of the California Parties re: examine two aspects respondents spot market sales activities to CERS during the CERS period.
Sponsor: California Parties
- Federal Energy Regulatory Commission, Docket No. EL00-95-248, August 25, 2011.
Subject: Prepared direct testimony on behalf of the California Parties re: tariff violations affected MCP.
Sponsor: California Parties
- Federal Energy Regulatory Commission, Docket No. EL02-71-000, December 17, 2009.
Subject: Rebuttal testimony of Drs. Fox-Penner and Reynolds on behalf of the California Parties, Lockyer Case
Sponsor: State of California, Attorney General
- Federal Energy Regulatory Commission, Docket No. EL00-95-000, et al., May 26, 2009.
Subject: Testimony of Dr. Peter Fox-Penner and Gerald A. Taylor on behalf of the California Parties, analysis of sellers in markets operated by CAISO and CALPX.
Sponsor: California Parties
- Federal Energy Regulatory Commission, Docket No. EL09-_-000, et al., May 23, 2009.
Subject: Testimony of Dr. Peter Fox-Penner on behalf of the People of the State of California, EX REL, Edmund G. Brown, Jr., Attorney General, examined seller behavior in bilateral spot market sales to CERS.
Sponsor: California Parties
- Public Utilities Commission of the State of Colorado, Docket No. 08S- 520E, March 20, 2009.
Subject: Rebuttal testimony on behalf of the Public Service Company of Colorado Regulatory

Treatment in Electric Utility Rate Cases.

Sponsor: Xcel Energy

- Public Utilities Commission of the State of Colorado, Docket No. 08S- 520E, November 14, 2008.
Subject: Direct Testimony on behalf of the Public Service Company of Colorado regarding Regulatory Treatment in Electric Utility Rate Cases.
Sponsor: Xcel Energy
- Public Utilities Commission of the State of Colorado, Docket No. 07A-447E, June 9, 2008.
Subject: Rebuttal testimony on behalf of Public Service Company of Colorado responding to the question of vertical integration vs. reliance of purchased power.
Sponsors: Xcel Energy
- U.S. Federal Energy Regulatory Commission, Docket No: EC08- -000, May 30, 2008.
Subject: Affidavit on behalf of Nevada Power Company analyzing the competitive effects of Nevada Power’s acquisition of Bighorn power plant on wholesale competition.
Sponsor: Nevada Power Company
- U.S. Federal Energy Regulatory Commission, Docket No: EL02-71-004, April 21, 2008.
Subject: Declaration before the FERC; demonstrating evidence of sellers’ exercise of market power, including evidence of gaming, withholding, and anomalous bidding, and explaining why market-wide relief is an economically appropriate way to compensate buyers who purchase power in markets where prices are profoundly affected by the exercise and abuse of market power.
Sponsor: California Parties
- U.S. Federal Energy Regulatory Commission, Docket No: QM07-5, November 17, 2007.
Subject: Testimony on behalf wind power clients re: SPP’s wholesale power markets did not provide Qualifying Facilities (QFs), particularly wind QFs, to have a meaningful opportunity to sell to third parties (Peter Fox-Penner and Romkaew Broehm).
Sponsor: AWEA, The Wind Coalition and John Deere Renewables
- Arizona Corporation Commission, Docket No. E-03965A-06-0168, August 31, 2007.
Subject: Testimony on behalf of New West Energy re: Broad overview of the successes and failures of retail and wholesale electric markets in the U.S. over the last 15 years.
Sponsor: New West Energy/Salt River Project
- California Public Service Commission, Rulemaking: 06-04-010, May 3, 2007.
Subject: Testimony on behalf of Pacific Gas and Electric Company re: Energy Efficiency

Shareholder Incentive Mechanism.

Sponsor: Pacific Gas and Electric Company

- New York Public Service Commission Case No. 06-M-0878, March 7, 2007.
Subject: Rebuttal testimony on impacts of the transaction on competition in the Joint Petition of National Grid PLC and KeySpan Corporation for Approval of Stock Acquisition and other Regulatory Authorizations.
Sponsor: National Grid
- New York Public Service Commission Case No. 06-M-0878, October 27, 2006.
Subject: Direct testimony on impacts of the transaction on competition in the Joint Petition of National Grid PLC and KeySpan Corporation for Approval of Stock Acquisition and other Regulatory Authorizations.
Sponsor: National Grid.
- U.S. Federal Energy Regulatory Commission Docket No. EC06-427-003, September 25, 2006.
Subject: Supplemental testimony examining the nature and degree of regulatory control applied to Mystic units 8 and 9 from their conception.
Sponsor: Mystic Development, LLC
- U.S. Federal Energy Regulatory Commission Docket No. EC06-427-003, August 18, 2006.
Subject: Direct testimony examining the nature and degree of regulatory control applied to Mystic units 8 and 9 from their conception.
Sponsor: Mystic Development, LLC
- U.S. Federal Energy Regulatory Commission Docket No. RM04-7-000, August 7, 2006.
Subject: NOPR Comments on Filing to the FERC on Market-Base Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services.
Sponsor: Submitted on own behalf
- American Arbitration Association Case No. 72198&0065604VSS, June 27, 2006.
Subject: Rebuttal report, arbitration between Oakley and New West Energy regarding termination of agreement.
Sponsor: New West Energy
- American Arbitration Association Case No. 72198Y0065604VSS, June 9, 2006.
Subject: Arbitration between Sony Pictures Entertainment and New West Energy regarding termination of agreement.
Sponsor: New West Energy
- U.S. Federal Energy Regulatory Commission Docket No. EC06-____-000, May 23, 2006.
Subject: Affidavit on impact of the merger of National Grid and KeySpan Corporation on

competition in wholesale electricity and gas markets.

Sponsor: National Grid

- American Arbitration Association Case No. 73 198 Y 00019 05 MAVI, April 3, 2006.
Subject: Arbitration between Oakley and New West Energy regarding termination of agreement.
Sponsor: New West Energy
- U.S. Federal Energy Regulatory Commission Docket No. EC06-____-000, March 8, 2006.
Subject: Affidavit Impact of SCE’s Acquisition on Anaheim’s share of SONGS.
Sponsor: Southern California Edison Company

ARTICLES & PUBLICATIONS

- “Clean and Competitive: Opportunities for U.S. Manufacturing Leadership in the Global Low-Carbon Economy,” with Henry Kelly, Ryan C. Murphy, Kurt Roth, Andre Sharon, David M. Hart, Colin Cunliff, July 6, 2021.
- “More Urgency, Not Less: The COVID-19 Pandemic’s Lessons for Local Climate Leadership,” with Peter Plastrik, John Cleveland, Joyce Coffee, Jacqueline Ashmore, Ardeth Barnhart, and Cutler Cleveland, June 2020.
- “Decarbonized Resilience: Assessing Alternatives to Diesel Backup Power,” with Ryan Hledik, Roger Lueken, Tony Lee and Jesse Cohen, June 2020.
- “FixedBill+: Making Rate Design Innovation Work for Consumers, Electricity Providers, and the Environment,” with Ryan Hledik and Andy Lubershane, June 2020.
- “COVID-19 will slow the global shift to renewable energy but can’t stop it,” *The Conversation*, March 31, 2020. <https://theconversation.com/covid-19-will-slow-the-global-shift-to-renewable-energy-but-cant-stop-it-133499>.
- “Final Report: Integrating Electric Mobility Systems with the Grid Infrastructure,” with Christos G. Cassandras and Henry Kelly, November 2019.
- “Assessing the Potential for US Utility Green Bonds,” with Tan Lam and Jennifer Hatch, May 2019.
- “Clean Energy and the Green New Deal: A Goal, Not a Date,” February 20, 2019.
- “Cities and Climate Change: Strategic Options for Giving,” with Jennifer Hatch, John Cleveland, and Michael Silano, October 2018.

- “Self-Driving Cars Could Cause More Pollution – Unless Electric Grid Transforms Radically,” with Will Gorman and Jennifer Hatch, *EcoWatch*, October 28, 2018. <https://www.ecowatch.com/self-driving-cars-pollution-2615443313.html>.
- “Long-term U.S. transportation electricity use considering the effect of autonomous vehicles: Estimates & policy observations,” with Will Gorman and Jennifer Hatch, *Energy Policy*, July 2018. https://www.sciencedirect.com/science/article/pii/S0301421518304737?_rdoc=1&_fmt=html&_origin=gateway&_docanchor=&md5=b8429449ccfc9c30159a5f9aeaa92ffb.
- Prepared Statement Before the California Public Utilities Commission on Bank Hearing in Retail Choice, May 19, 2017.
- “Why solar ‘microgrids’ are not a cure-all for Puerto Rico’s power woes,” *The Conversation*, November 8, 2017. <https://theconversation.com/why-solar-microgrids-are-not-a-cure-all-for-puerto-ricos-power-woes-86437>.
- “Think Local, Not Global!” With Barbara Kates-Garnick and Benito Muller. *Commonwealth Magazine*, Boston, March 27, 2017. <http://oxfordclimatepolicy.com/blog/think-local-act-global/>.
- “Energy, Growth and Altruism: Forty Years On.” Mitchell Foundation Blog, August 15, 2016.
- “Clean Energy Resource Options for Massachusetts to Meet the Greenhouse Gas Goals in the Global Warming Solutions Act,” with J. Chang, M. Hagerty, W. Gorman, D. Cash, and A. Berwick, The Brattle Group, ISE, University of Massachusetts, Boston, Report to the Barr Foundation. June 12, 2016.
- “Bulk Power Markets in the United States: Challenges and Recommendations,” with Courtney Guard and Rachel Eckles, report to the U.S. Department of Energy, ISE Working Paper 16001, May 23, 2016.
- “Innovation, Meet Deployment: Climate Policy’s Twin Imperatives,” *Huffington Post*, January 5, 2016.
- “Why Apple is Getting into the Energy Business,” *Harvard Business Review*, November 25, 2016.
- “Comparative Generation Costs Scale and Residential Scale PV in Xcel Energy Colorado’s Service Area,” with B. Tsuchida, S. Sergici, B. Mudge, et al., prepared for First Solar, July 2015.
- “The Missing Smart Power Chapter,” *Huffington Post*, October 23, 2014.

- “Resilient and Sustainable Infrastructure for Urban Energy Systems,” *The Solutions Journal*, September- October 2014, p. 48-54.
- “Utility Investments in Resiliency: Balancing Benefits with Cost in an Uncertain Environment,” with William P. Zarakas, Sanem Sergici, Heidi Bishop and Jake Zahniser-Word, *The Electricity Journal*, Vol. 27, Issue 5, June 2014.
- “Exploring Natural Gas and Renewables in ERCOT, Part III: The Role of Demand Response, Energy Efficiency, and Combined Heat & Power,” with J. Weiss, I. Shavel, P. Ruiz, et al., prepared for The Texas Clean Energy Coalition May 29, 2014.
- “Exploring Natural Gas and Renewables in ERCOT Part II: Future Generation Scenarios for Texas,” with J. Weiss, I. Shavel, P. Ruiz, et al., prepared for The Texas Clean Energy Coalition, December 10, 2013.
- “A Trip to RIIO in Your Future?,” with Dan Harris and Serena Hesmondhalgh, *Public Utilities Fortnightly*, October 2013.
- “President Obama’s Climate Change Action Plan: Positives and One Big Regret Versus the Last Time Around,” *Huffington Post*, June 28, 2013.
- “Resilient and Sustainable Infrastructure for Urban Energy Systems,” *The Solutions Journal*, September- October 2014, p. 48-54.
- “A High Energy State of the Union,” *Huffington Post*, February 19, 2013. “Climate Adaption Equities,” *Huffington Post*, November 20, 2012.
- “Renewable Energy Standards: If It Ain’t Broke, Don’t Fix It,” *Climate Progress*, January 17, 2012.
- “SureWest’s Transformation and Its Lessons for Today’s Electric Utilities,” with Joe Wharton, The Brattle Group, December 2011.
- “Surprising Deployment Developments.” *IEEE Smart Grid*, August 2011.
- “Mission, Structure, and Governance in Future Electric Markets: Some Observations,” with Heidi Bishop, *The Oregon Law Review*, April 2011.
- “Smart Power, Energy Price Risk Management Evolution,” with Rich Goldberg and Jamie Read, *Electric Light and Power*, November 2010.
- “The Smart Meter Backslide,” *The Harvard Business Review Blog Network*, October 4, 2010.
- “The Smart Grid–Enabled Energy Services Utility: How Utilities Can Become Sustainable by Selling Less,” *The Solutions Journal*, September 2010, pp. 42-48.

- “Natural Gas in the Wake of Climate Change Legislation,” with Heidi Bishop, *American Gas*, August/September 2010, pp. 5-10.
- “Legislation Beats Regulation,” with Richard Schmalensee, *Roll Call*, June 28, 2010.
- “For Grid Expansion, Think ‘Sub regionally,’” with Johannes P. Pfeifenberger and Delphine Hou, *The Energy Daily*, June 8, 2010.
- “Smart Power Business Models for a Smarter Grid,” *Smart Grid News*, June 8, 2010.
- “Generation Cost Savings from Day 1 and Day 2 RTO Market Designs,” with James D. Reitzes, Adam C. Schumacher, and Daniel Gaynor, The Brattle Group, Inc., October 1, 2009.
- “The Anchor-Tenant Model – And Some of the Chickens and Eggs,” with Johannes Pfeifenberger, *The Electricity Journal*, July 2009, pp. 86-87.
- “Smart-Grid Strategy: Quantifying Benefits,” with Ahmad Faruqui and Ryan Hledik, *Public Utilities Fortnightly*, July 2009, pp. 33-36, 60.
- “Fix Utilities Before They Need a Rescue,” *Harvard Business Review*, July-August 2009, pp. 18-19.
- “Return of the Energy Services Model: How Energy Efficiency, Climate Change, and Smart Grid Will Transform American Utilities,” The Brattle Group, Inc., May 2009.
- “Transforming America’s Power Industry: The Investment Challenge 2010-2030,” with Marc W. Chupka, Robert Earle and Ryan Hledik, prepared for The Edison Foundation, November 2008.
- “The Zone of Reasonableness and Long-Term Power Contracts,” with Joseph B. Wharton, The Brattle Group, Inc., March 12, 2007.
- “Plugging Into the Grid,” with Joe Room, Progressive Policy Institute (PPI), March 2007.
- “The Demand Effect,” with Marc Chupka, Gregory Basheda, Adam Schumacher, *Electric Perspectives*, September/October 2006.
- “Why Are Electricity Prices Increasing?,” with Gregory Basheda, Marc Chupka, Johannes P. Pfeifenberger, Adam Schumacher, The Edison Foundation, June 2006.
- “Heard Around Town: Focus on Energy Policy and the Energy Efficiency Market,” The NAESCO Newsletter, November 2005.
- “A Welcome Truce in the Electricity Wars,” *Public Utilities Fortnightly*, October 2005.

- “Rethinking the Grid – Avoiding More Blackouts and Modernizing the Power Grid Will Be Harder than You Think,” *The Electricity Journal*, March 2005.
- “U.S. Needs a Plan to Keep the Lights On,” *The Plain Dealer*, August 26, 2004.
- “A Year Later, Lessons from the Blackout,” *The New York Times*, August 15, 2004.
- “Deregulated Electricity Pricing in the U.S.: Dramatic New Rules From the FERC,” with Romkaew Broehm, The Brattle Group, April 25, 2004.
- “Will Federal Legislation Fix the Grid?,” Progressive Policy Institute, October 7, 2003.
- “State Involvement in the Regional Transmission Planning Process,” with Greg Basheda, The Edison Electric Institute, October 2003.
- “The Regulation of Competition in Wholesale Electric Power Markets,” with James Bohn, Romkaew Broehm, and Gary Taylor, *Energy Law Journal* 23, No. 2, 2002: 281-348.
- “Geographic Market Definition in Electric Power Markets,” with William G. Moss, The Brattle Group, August 30, 2000, Revised & Submitted January 2002.
- “Easing Gridlock on the Grid: Electric Planning and Siting Compacts,” *The Electricity Journal*, November 2001.
- “Clean Growth: A Balanced Energy Policy for the 21st Century,” Progressive Policy Institute’s Policy Report, October 2001.
- “A Short Honeymoon for Utility Deregulation,” with Greg Basheda, *Issues in Science and Technology*, Spring 2001.
- “What not to learn from the California Crisis,” (Op-ed) *The Providence Journal*, March 3, 2001.
- “Epitaph for Electric Deregulation,” prepared for the National Council on Competition and the Electric Industry, December 2000 meeting, October 2000.
- “Monopoly Power After Reform? A Time for Soul-Searching,” with Frank Graves, *Public Utilities Fortnightly*, May 2000.
- “Federal Restructuring Legislation: Any Chance in This Congressional Session?,” *Energy Efficiency Journal*, March 2000.
- “Electric Power Deregulation: Blessings and Blemishes, A Non-Technical Review of the Issues Associated with Competition in Today’s Electric Power Industry,” prepared for the National Council on Competition and the Electric Industry, March 14, 2000.

- “Transmission Access, Episode II: FERC’s Journey,” with Johannes P. Pfeifenberger, *Public Utilities Fortnightly*, August 1999.
- “The FERC, Stranded Cost Recovery, and Municipalization,” with Gregory N. Basheda, Darrell B. Chodorow, Jason A. Hicks, Eric Hirst, James K. Mitchell, Dean M. Murphy and Joseph B. Wharton, *Energy Law Journal* 19, 1998: 351-386.
- “In What Shape is Your ISO?,” with J.P. Pfeifenberger, P.Q. Hanser, and G.N. Basheda, *The Electricity Journal*, July 1998.
- “Transco vs. ISO: A Sideshow?,” *Public Utilities Fortnightly*, June 1, 1998.
- “Fostering Market Center Development and Integration of the Natural Gas Grid Through Improved Pipeline Ratemaking,” with Matt O’Loughlin, prepared for NorAm Gas Transmission Company, May 1998.
- “An Open Letter to the President,” *The Electricity Journal*, March 1997.
- “Real-Time Pricing: Restructuring’s Big Bang?,” with Philip Q. Hanser and Joseph B. Wharton, *Public Utilities Fortnightly*, March 1997.
- “Critical Trends in State Utility Regulation,” *Natural Resources and Environment* 8, Winter 1994, pp 17-20.
- “Electricity in A Competitive Environment: The Real Issue is Not Retail Wheeling,” *Edison Times IRP Quarterly*, Fall 1994.
- “Efficiency and the Public Interest: QF Transmission and the Energy Policy Act of 1992,” *Energy Law Journal* 14, 1993: 51-73.
- “Electricity Fuel Contracting: Relationships with Coal and Gas Suppliers,” with Karen Palmer, David Simpson, and Michael Toman, *Energy Policy*, October 1993: 1045-1054.
- “A Proposal for Design-Based Auto Industry Environmental Regulation,” with Chris Fitzgerald, *Total Quality Environmental Management* 2, Spring 1993, pp 323-327.
- “Due Diligence and the Demand for Electricity: A Cautionary Tale,” with Franklin M. Fisher, Joen Greenwood, William G. Moss, and Almarin Phillips, *Journal of Industrial Organization*, 1992.
- “Comparative Employment Impacts of Infrastructure Options,” December 2, 1992.
- “The Private DSM Industry - A Gleam in Whose Eye?,” *The Electricity Journal* 4, December 1991, pp 21-25

- “Cogeneration After PURPA: Energy Conservation and Industry Structure,” *Journal of Law and Economics* 33, October 1990: 517-552.
- “Regulating Independent Power Producers: Lessons of the PURPA Approach,” *Resources and Energy* 12, 1990: 117-141.
- “Competitive Procurement of Electric Utility Resources,” (EPRI CU-6898s), with Paul D. O'Rourke and Peter J. Spinney, Electric Power Research Institute, July 1990.
- “Bidding Update,” with Mark Horton and Peter Spinney, *Cogeneration & Resource Recovery* 9, no. 7, November/December 1990, pp 6–11.
- “Bid Policies Overhauled,” with Edward Kee, *Cogeneration & Resource Recovery* 9, no. 7, November/December 1990, pp 14–15.
- “Comments on Notice of Proposed Rulemaking Concerning Avoided Costs,” before the Federal Energy Regulatory Commission, Docket RM88-4, June 1988.
- “Allowing for Regulation in Forecasting Load and Financial Performance,” *Public Utilities Fortnightly*, January 7, 1988.
- “Price Formula Issues Associated with SPR Release Programs,” prepared for the Office of Energy Emergencies, U.S. Department of Energy, 1988.
- “The Immediate Consequences of an Oil Supply Emergency for the Financial Markets and Major User Groups,” prepared for the Office of Energy Emergencies, U.S. Department of Energy, 1988.
- “Independent Load Forecast for the Commonwealth Edison Service Territory,” with others, Governor's Office of Consumer Services, Chicago, June 1981. ICC Docket No. 80-0706.
- “The Norwegian Power Planning Process,” Institute for Environmental Studies, University of Oslo, Norway, 1981.
- “A Dynamic Input-Output Analysis of Net Energy Effects in Single Fuel Economics,” *Energy Systems and Policy* 5, no. 2, 1981.
- “An Energy Conservation Tax: Impacts and Policy Implications,” with Bruce M. Hannon and Robert Herendeen, *Energy Systems and Policy* 5, no. 2, 1981.
- “A 1972 Energy and Labor Commodity-Commodity Input-Output Model,” with R. Herendeen, Energy Research Group, University of Illinois, Urbana, IL, March 1980.
- “Correspondence Between the EDIO Input-Output Model and the ERG-90 and 360-Order Input-Output Model,” Energy Research Group, University of Illinois, Urbana, IL, March 1980.

- “Energy and Labor Cost of Alternative Coal-Electric Fuel Cycles,” with J. Kurish, Energy Research Group, University of Illinois, Urbana, IL, February 1980.
- “Handbook of Research Techniques,” Energy Research Group Technical Memo 123, revised December 1979.
- “Gasohol: Does It or Doesn't It . . . Produce Positive Net Energy?,” with R.S. Chambers, R.A. Herendeen, and J.J. Joyce, *Science* 206, no. 4420, November 1979: 789-795.
- “A Structure of the Electric Utility Industry, 1990,” Energy Research Group Technical Memo 121, November 1979.
- “Calculation of Alpha in the Determination of Primary Energy,” with B. Hannon and R. Herendeen, Energy Research Group, University of Illinois, Urbana, IL, November 1979.
- “Notes of the Bechtel ESPM/ERG I/O Bridge for Operating (Annual) and Capital (Investment) Costs, Purchasers Prices, 1978,” Energy Research Group Technical Memo 119, August 1979.
- “Transformation of Brookhaven National Laboratories 110-Order I/O Data into ERG-Usable Form,” Energy Research Group Technical Memo 118, July 1979.
- “Considerations of Energy Cost and Versatility in Choosing Optimal Stockpile Forms,” *Resources Policy* 5, no. 2, June 1979: 414-448.
- “The Acoustic Specification and Design of a Modern Recording Studio,” *Journal of the Audio Engineering Society*, June 1979.
- “1967-1977 Price Indices for Use with the Energy Research Group Energy Input-Output Policy Models,” Energy Research Group Technical Memo 117, June 1979.
- “Direct Energy Transactions Matrix for 1971,” Energy Research Group, University of Illinois, Urbana, IL, June 1979.
- “Energy Analysis: Handbook for Combining Process and Input- Output Analysis,” with Clark Bullard and David Pilati, *Resources and Energy*, June 1979. Also published by the Energy Research and Development Administration, Washington, DC, E RDA, 77-61.
- “New Hybrid 1971 Energy Intensities,” with R.A. Herendeen and T. Milke, *Energy* 4, 1979: 469-473.
- “Cynics, Martyrs, and the Value of Energy Conservation,” *Science and Public Policy* 5, 1978: 105-110.

- “Energy Intensity of Electric Commuter Railways,” Center for Advanced Computation Technical Memo 24, June 1974. Reprinted as “Total Energy and Labor Requirements for an Electric Commuter Railroad.” *Energy* 3, 1978: 539-542.
- “Background Energy Cost Calculations for ACR Gasohol Production,” with Jack Joyce, report to ACR Processes, Inc., November 1977.
- “Net Energy Effects and Resource Depletion: An All-Nuclear Economy,” with Clark Bullard and Donna Amado, Center for Advanced Computation Document 238, September 1977.
- “Taking Appropriate Technology to Task,” WIN 13, April 7, 1977, pp 8-10.
- “Net Energy Effects and Resource Depletion: An All-Oil Economy,” with Donna Amado, Center for Advanced Computation Document 231, April 1977.
- “Standardization of Energy Accounting Techniques,” Center for Advanced Computation Technical Memo 83, January 1977.
- “Stockpile Optimization and Versatility Consideration for Strategic and Critical Materials,” with Jaap Spek, Center for Advanced Computation Document 217, May 1976.
- “Energy Requirements and Aerosol and Alternative Packaging: A Case Study,” Center for Advanced Computation Document 204, February 1976, 2nd revision, July 1976.
- “The Energy Research Group Resource Energy-Employment Model and Its Uses in Stockpile Policymaking,” with Bruce Hannon, report to the Office of Preparedness, General Services Administration, July 1975.
- “The Coal Future: Capital and Fuel Cycle Energy Costs of a 1000 MW Nuclear Reactor,” Appendix B to Michael Rieber’s Center for Advanced Computation Document 163, May 1975.
- “Summary of Techniques Used for Calculating the Energy Costs of Constructing a Commercial Nuclear Reactor,” Center for Advanced Computation Technical Memo, April 1975.
- “The Dollar, Energy and Labor Impact of 1971 Regular Route Intercity Bus Transportation,” Center for Advanced Computation Technical Memo 31, July 1974.
- “Energy Intensity of Motorcycle Travel,” Center for Advanced Computation Technical Memo 30, July 1974.

MONOGRAPHS AND BOOKS

- *Power After Carbon*. Harvard University Press, 2020.

- *Melting the ICE*, with David Jermain and Justin Ren, eds., Institute for Sustainable Energy, 2019.
- *Market Power and Market Manipulation in Energy Markets: From the California Crisis to the Present*, with Gary Taylor, J.D., Shaun Ledgerwood, Ph.D., J.D., and Romkaew Broehm, Ph.D., Reston, VA: Public Utilities Reports, Inc., 2015.
- *Smart Power: Climate Change, the Smart Grid, and the Future of Electric Utilities*, Washington, DC: Island Press, 2010.
- *Electric Utility Restructuring: A Guide to the Competitive Era*, Vienna, VA: Public Utility Reports, 1997.
- *Power Plant Fuel Supply Contracts: The Changing Nature of the Long-Term Supply Relationship*, with Karen Palmer, David Simpson, and Michael Toman, Arlington, VA: Public Utility Reports, 1992.
- *Electric Power Transmission and Wheeling: A Technical Primer*, Washington, DC: The Edison Electric Institute, 1990.

BOOK CHAPTERS

- "The Banality of Greed: An American Businessman's Essay on Ethics," Foreword, by John A. Wing, Self-Published, 2019.
- "The Implications of Vehicle Electrification and Autonomy for Global Decarbonization," in *Digital Decarbonization: Promoting Digital Innovations to Advance Clean Energy Systems*, Varun Sivaram, ed. Council on Foreign Relations, June 2018.
- "Promoting Use of Plug-In Electric Vehicles through Utility Industry Acquisitions and Leasing of Batteries," with Dean Murphy, Mariko Geronimo, and Matthew McCaffree (The Edison Foundation), Chapter 14 in *Plug-In Electric Vehicles: What Role for Washington*, David B. Sandalow, Ed., Brookings Institution Press, 2009.
- Network Access, Regulation and Antitrust. Introduction "Economics of Legal Relationships," with Diana Moss, Routledge (London), 8th Vol. in series, 2005, pp. 1-9.
- "Price-Responsive Electric Demand: A National Necessity, Not an Option," with Romkaew Broehm, Chapter 10 in *Electricity Pricing in Transition*. Ed, Ahmad Faruqui and B. Kelly Eakin," Kluwer Academic Publishers, 2002.
- "Value Drivers in the Utility Industry of 2002," with Ellen Craig and Adam Schumacher, *PUR Analysis of The Nation's Largest Investor-Owned Electric and Gas Utilities*, Public Utilities Reports, December 2001 Edition.

- “What Role Should the Federal Government Play in Energy Efficiency?,” in *Policy Evolution: Energy Conservation to Energy Efficiency*, Douglas A. Decker and Alan Berolzheimer, eds, Liburn, GA: The Fairmount Press, 1997.
- “Energy Policy: Today's View from the Federal Government,” in *The Energy Crisis: Unresolved Issues and Enduring Legacies*, David Feldman, Ed., Johns Hopkins University Press, 1996.

PUBLICATIONS AT ENERGY IMPACT PARTNERS

- Annual ESG Performance and Impact Reports, 2019-2024. Available at [impact - \(energyimpactpartners.com\)](http://energyimpactpartners.com).
- Know Your Impact: Our Approach to Emissions Reductions Measurement, with Gabriella Rocco and Morgan Sheil, November 2022. Available at <http://www.energyimpactpartners.com/wp-content/uploads/2022/12/Know-Your-Impact-Our-Approach-to-Emissions-Reductions-Measurement-Energy-Impact-Partners-2022.pdf>.

PRESENTATIONS & SPEAKING ENGAGEMENTS (SINCE 2000)

- Presenter, “Electric Demand Growth Forecasting in A Time of Change,” National Association of State Energy Offices Webinar, July 8, 2024.
- Panelist, “Evolution of New Public and Private Markets Strategies Dedicated to Supporting Climate Trans, Clean IQ,” Sustainable Fixed Income & Finance Forum, Boston, June 27, 2024.
- Presenter, “Electricity Demand – A New Era,” Presentation to CEBA Spring Summit, Denver, CO, May 23, 2024.
- Speaker, Fireside Chat on Climate Impact Investing, Private Equity Wire – US Emerging Manager Summit, New York City, March 13, 2024.
- Presenter, “Electric Utilities and the Trilemma Outlook for 2024,” Gridwise Alliance Annual Meeting, Washington DC, December 6, 2023.
- Presenter, “Accelerating Climate Solutions Through Industrial Partnerships,” with Hans Kobler, Naso Moosa, Siri Kalwig, Global Impact Investor Network Annual Impact Forum, Copenhagen, October 5, 2023.
- Invited Participant, USA Roundtable on Accelerating Clean Power, CSIS and World Economic Forum, Washington, DC, June 22, 2023.

- Presenter, “Future of Utilities and the Transmission Grid,” Climate Jobs 2050 Commission, Airlie VA, June 1, 2023.
- Presenter, Energy Transition Session, Impact Investor Global Summit, London, May 16, 2023.
- Panelist, “How New Regulations at Home and Abroad Will Define the PE Space Over the Next 12 Months,” Private Equity Emerging Managers Summit, New York, March 30, 2023.
- Panelist, “Thinking Systematically About Energy Transition,” CERA Week Agora, Houston, TX, March 9, 2023.
- Presenter, “Project Frame – Investing for Future GHG Impact,” with Pratima Rangarajan, CERA Week Agora, Houston TX, March 8, 2023.
- Presenter, “Setting Justification for Renewables and Smart Power,” Energy Law Institute at Queen Mary University of London, March 19, 2021.
- Speaker, “Climate Change and the Prospects for the Rapid Decarbonization of Energy Supplies,” Boston University Board of Trustees Advisory Committee on Socially Responsible Investing, with C. Cleveland, February 25, 2021.
- Speaker, Energy Leaders Webinar Series: Guiding Principles for Sound Energy Policy, presented via video for OurEnergyPolicy.org, February 10, 2021.
- Speaker, Avista Utilities Board Meeting, February 5, 2021.
- Presentation, University of Illinois ENG571, with John Abelson, February 3, 2021.
- Speaker, ENRP/HUCE/MRCBG Energy Policy Seminar: Power After Carbon, Harvard Kennedy School of Government, February 1, 2021.
- Moderator, Energy of the Future Series (BU-ISE), with Congressman Sean Casten, January 29, 2021.
- Speaker, Avista Utilities Tech Talk, January 28, 2021.
- Speaker, Transmission Time – Planning for the Future: FERC’s Opportunity to Spur More Cost-Effective Transmission Infrastructure, Americans for a Clean Energy Grid, January 27, 2021.
- Virtual Reception Keynote Speaker, North American Reliability Corporation Reliability Summit, January 27, 2021.
- Speaker, Tenaga Nasional Berhad Malaysia, January 6, 2021.

- Panelist, World Resource Institute/Resources for the Future Workshop on Market Designs for the Clean Energy Transition: Advancing Long-Term Approaches, December 16, 2020.
- Panelist, gridCONNEX Virtual 2020, December 10, 2020.
- Panelist, MassCEC CEO & Investor Summit, December 9, 2020.
- Speaker, National Commissioners Forum: How to Align Utility Finances, December 3, 2020.
- Presenter, Utility Business Model Workshop (UBM), EPRI, December 1, 2020.
- Keynote Speaker, "Big Grid vs. Little Grid," 2020 MGA and OMS Transmission Summit, November 18, 2020.
- Contributor, WCEEE Book Club, October 21, 2020.
- Moderator and Presenter, Cambridge EPRG, October 20, 2020.
- Podcast Recording, PBS Open Mind, September 21, 2020.
- Speaker, WEI Annual Meeting, September 14, 2020.
- Presenter, Energy Storage Policies for a Zero-Carbon Grid, Center on Global Energy Policy at Columbia University, Energy Foundation-China, September 10, 2020.
- Presenter, "Power after Carbon: Findings and Insights for State Policymakers," Clean Energy State Alliance, September 9, 2020.
- Speaker, Harvard Advanced Leadership Initiative, August 19, 2020.
- Speaker, Summer Energy Talks: COVID-19's Impact on Energy and Environment Perceptions, presented to the University of Texas at Austin Energy Institute, August 11, 2020.
- Speaker, University of Texas Austin, August 1, 2020.
- Panelist, "Power After Carbon: Transitioning to Low-Carbon Power in the United States," Columbia Center on Global Energy Policy, July 29, 2020.
- Podcast Recording, The Climate Champions, July 23, 2020.
- Speaker, NRRI Author Spotlight: Dr. Peter Fox-Penner, *Power after Carbon*, presented to National Regulatory Research Institute, July 16, 2020.
- Speaker, Boston University Economics Department, July 16, 2020.
- Speaker, Enchanted Rock/Utility Drive Webinar, June 30, 2020.
- Podcast Recording, Columbia Energy Exchange, June 22, 2020.
- Speaker, "Power After Carbon," GridWise Alliance Policy Council Webinar, June 3, 2020.

- Speaker, Climate Change Mitigation and Adaption Group, June 2, 2020.
- Presenter, “Power after Carbon: Building a Resilient Grid,” Edison Electric Institute, May 21, 2020.
- Live Q&A on Facebook Live, DRIVA, May 21, 2020.
- Presenter, “The World View – Melting the ICE,” EVCx Forum: Past, Present, and Future of Transportation Electrification, May 20, 2020.
- Presentation for DRIVA, Recorded for Facebook, May 14, 2020.
- Speaker and Panelist, Emerging New Trends Series: New Business Models for Electrification Webinar, presented to the Northeast Clean Energy Council, May 6, 2020.
- Speaker, “Environmental Impact of COVID-19: Sustainable Energy, Climate, and Societal Shifts” Webinar, with P. Warburg, Boston University, April 22, 2020.
- Presenter, “Bringing Power and Progress to Africa in a Financially and Environmentally Sustainable Manner Event,” with R. Stuebi, E. Adukonu, L. Jones, April 16, 2020.
- Interviewer, ESQ-IQ Forum, Interviewee, President of Tech Ventures at Chevron, February 26, 2020.
- Speaker, Freeing Energy Podcast, February 10, 2020.
- Speaker, Research on Tap: Accelerating the Energy Transition: Transformative Pathways to Decarbonization and Sustainability Event, with R. Kleinberg, J. Ashmore, E. Ryan, D. Jermain, J. Ren, L. Hutrya, C. Cleveland, M. Caramanis, M. Gevelber, J. Levy, December 4, 2019.
- Speaker at COP25: Multilateral Responses to Climate Change from an Interdisciplinary Perspective Event, December 2, 2019.
- Speaker, HUCE Event, December 2, 2019.
- Mobility and Infrastructure Introduction,” Boston University Questrom School of Business, November 21, 2019.
- Presenter, “Advanced Energy Economy Executive Forum: Microgrids, Energy Storage, & Renewable Natural Gas: Capturing Value for Consumers,” November 14, 2019.
- Speaker, MIT’s Sloan Foundation, “Integrating Electric Mobility Systems with Grid Infrastructure Workshop,” November 6, 2019.
- Presenter, “GEIDCO Climate Week,” September 29, 2019.

- “Long-Term Transportation Electricity Use Considering Autonomy: Estimates and Policy Observations,” with Will Gorman and Jennifer Hatch, for General Motors, June 11, 2019.
- Speaker, “Utility of the Future,” MIT Energy Conference, April 5, 2019.
- “The State Agenda in Climate and Energy Policy,” National Association of State Energy Officials, February 6, 2019.
- “EV Public Infrastructure and Policies: Selected Results from Melting the ICE and Carbon-Free Boston,” Bloomberg New Energy Future of Mobility Summit, February 5, 2019.
- Panelist, “Electric Vehicle Charging in China and the U.S.,” BNEF Mobility Forum, San Francisco, CA, February 5, 2019.
- “Decarbonizing the World’s Energy System: The Five+ Engineering Miracles Needed,” Boston University Questrom School of Business, January 15, 2019.
- Panelist, Engineering EXCOM Retreat, Boston, MA, January 15, 2019.
- Bloomberg Workshop on Coal Plant Retirements, New York, NY, December 7, 2018.
- Panelist, “Boston ESG Utilities Discussion,” Council on Foreign Relations, Webinar, November 17, 2018.
- Speaker, The Sustainability Retreat at Boston University, Boston, MA, November 5, 2018.
- Keynote Speaker, “NAESCO Conference on How the Shifting Utility Paradigm Affects the Value of Energy in a Distributed Energy Future,” Orlando, FL, November 1, 2018.
- Webinar Moderator, “Designing Climate Solutions for Post-Carbon Cities Security and Sustainability Forum,” September 25, 2018. <https://vimeo.com/291811404>.
- Speaker and Panelist, “UNECE Sustainable Energy Week,” Geneva, Switzerland, September 25-28, 2018.
- Presenter, “GEIDCO Project,” China-U.S. Energy Summit, September 12, 2018.
- Panelist, “PSEG Business Planning Strategy Session,” New York, NY, June 19, 2018.
- Panelist, “Clean Energy Ministerial 2018,” Malmö/Copenhagen, May 23, 2018.
- Guest Lecture, “Carbon-Free Boston TAG Meeting,” Boston, MA, April 6, 2018.
- Guest Lecture, MIT’s “Energy Financing and Innovative Business Models,” Cambridge, MA, March 3, 2018.
- Panelist, “Opportunities for Digital Innovations in Mobility and Smart Cities,” Council on Foreign Relations Digital Innovations Workshop, February 22, 2018.

- Keynote, SEPA and SEIA Solar Power Northeast Conferences, January 8, 2018.
- Testimony before Boston City Council on Carbon-Free Boston, December 11, 2017. Burstein Scholar in Residence Lecture, Temple Israel, November 17, 2017.
- Electric Systems Digitalization: Real World Examples from the EIP Portfolio, MIT Center for Energy and Environmental Policy Annual Conference, November 16, 2017.
- Guest Lecture, Technology and Regulatory Systems in Power Industry, Harvard History of Science HST 231, with Professor Naomi Oreskes, November 1, 2017.
- Speaker, Power Decarbonization through 2050: Narratives and Equity, ClimateWorks, San Francisco, CA, April 5, 2016.
- “Prospects for Radical Change in the U.S. Electric Industry: What Can Utilities and State Utility Regulators Do Today?,” presented with NRRI, December 17, 2014.
- “Public Power in the Age of Smart Power,” presented to the American Public Power Association Annual Board Meeting, October 6, 2014.
- “The Future of Electric Utility Business Models: The View from 2013,” presented at California Energy Efficiency Industry Council, June 25, 2013.
- “Empowering Consumers with Options,” moderated discussion at The Clean Energy Summit, Las Vegas, NV, August 7, 2012.
- “Electricity: Seeking Progress in an Uncertain Environment: Regulatory Issues,” Session Chair at the Aspen Energy Policy Forum, Aspen, CO, July 4, 2012.
- “The Future of Electric Utilities in the U.S. and China,” with Judy Chang, presented to the State Grid Energy Research Institute, Beijing, China, June 25, 2012.
- Invited Participant, “PG&E/RMI Electricity Roundtable: Exploring Innovative Strategies for a Distributed Energy Future,” October 25, 2011.
- “The End of the Traditional Utility,” presented to Enel, Rome, Italy, October 21, 2011.
- “The Future of Utilities: Business Models and Strategy,” presented at the Electricity Policy Research Group (EPRG), Cambridge, U.K. October 19, 2011.
- “Energy Efficiency and Utility Demand-Side Management Programs,” with Ahmad Faruqui, presented at The World Bank, July 14, 2011.
- “Policy Challenges Associated with Renewable Energy Integration,” with Judy Chang, Philip Q Hanser and Kamen Madjarov, presented at the 2011 MITEI Symposium, “Managing Large-Scale Penetration of Intermittent Renewables,” Cambridge, MA, April 20, 2011.

- “Smart Power and the Future of Electric Utilities,” presented to the New England Electricity Restructuring Roundtable, April 15, 2011.
- “Assessing Competition in the Network Industries: Some Observations,” presented at ABA’s Annual Spring Program, “An Update on Competition Analysis in Regulated Industries,” March 7, 2011.
- “Capsule Overview of Global Energy Policy and Issues,” presented to Hogan and Lovells’ Global Energy Summit, March 5, 2011.
- “Surviving the Coming Era—Cordially,” presented at The Energy Bar Association’s Mid-Year Meeting, Ronald Reagan Building and International Trade Center, December 9, 2010.
- “Electric Utility Business and Regulatory Models of the Future,” presented at NARUC 122nd Annual Conference, Atlanta, GA, November 16, 2010.
- “Impediments to the Vision,” presented at the Aspen Energy Policy Forum, Aspen, CO, July 4, 2010.
- “Electric Utility Business Models of the Future,” presented at the Colorado Public Utility Commission, July 1, 2010.
- “Mission, Structure, and Governance in Future Electric Markets: Some Observations,” presented to the American Antitrust Institute, “Public and Private: Are the Boundaries in Transition?,” Washington, D.C. June 24, 2010.
- “The Smart Grid: Challenges and Opportunities for Communications Services Providers,” with William Zarakas, presented at US Telecom Board of Directors Meeting, Williamsburg, VA, June 18, 2010.
- “Smart Power: Climate Change, the Smart Grid, and the Future of Electric Utilities,” presented on a Merrill Lynch Investor conference call, May 21, 2010.
- “Regulation, The Smart Grid, and Industry Structural Change,” presented at an American Enterprise Institute meeting, March 18, 2010.
- “Issues in The Future of Power 2010,” presented to Sensus’ Executive Retreat, Raleigh, NC, January 31, 2010.
- “Transmission Investment Needs and Cost Allocation: New Challenges and Models,” with Johannes P. Pfeifenberger and , presented to Federal Energy Regulatory Commission staff, December 1, 2009.

- “Building Smart Power: Redesigning the Grid for Renewable Resources and Energy Efficient Services,” presented on a Merrill Lynch Investor conference call, September 24, 2009.
- “Passing a Climate Policy in Today’s Downturn: The Time is Now” presented at IIT Chicago-Kent College of Law, “Moving the Midwest Forward: The Benefits of Building a Low-Carbon Economy,” Chicago, IL, July 22, 2009.
- “Statement of Dr. Peter Fox-Penner before the Natural Resources Committee National Governors Association,” Biloxi, MS, July, 19, 2009.
- “Developments in Energy Efficiency, Renewable Power, and Transmission in the U.S.,” presented to the Comisión Nacional de Energía, Madrid, Spain, May 5, 2009.
- “Keynote Address at the AAI 9th Annual Energy Roundtable,” presented at the AAI 9th Annual Energy Roundtable, Arlington, VA, March 3, 2009.
- “Smart Grid Opportunities for the Design Professional Industry,” presented at Design Profession Coalition Winter Membership Meeting, Washington, DC, March 2, 2009.
- “A New Electricity Business Model for a Low-Carbon World,” presented at The Global Energy and Environmental Institute (GEEI) at SAIS, John Hopkins University, February 18, 2009.
- “Smart Grid Observations on the Eve of the Obama Administration,” presented at the GridWise Alliance Membership Meeting, Houston, TX, December 9, 2008.
- “A New Electricity Business Model for a Low Carbon World,” presented at the 2008 Marketing Executives’ Conference Retreat, Coeur d’Alene, Idaho, October 12, 2008.
- “Supplying the Navy’s Energy: Trends and Challenges,” with Dean Murphy, presented at NAVFAC, May 28, 2008.
- “Transforming America’s Power Industry: The Investment Challenge, Preliminary Findings,” presented at an Edison Foundation Conference, “Keeping the Lights On: Our National Challenge,” New York City, April 21, 2008.
- “Global Climate Change: Exploring the Implications for Travel & Tourism,” presented at the Travel Industry Association 2008 Policy Council Meeting, Washington, DC, March 13, 2008.
- “Developments and Issues in Utility Energy Efficiency, 2008,” presented to Consumers Affairs Committee of the National Association of Regulatory Utility Commissioners (NARUC), Washington, DC, February 17, 2008.
- “Electric Rate ‘Decoupling’ and Energy Efficiency Programs,” Edison Electric Institute’s 2007 Spring Legal Conference, Charleston, SC, April 16, 2007.

- “Overview of Demand-Side Climate-Friendly Technologies,” presented at The Edison Foundation Climate Change Technologies in the Power Sector Workshop, December 7, 2006.
- “Why Are Electricity Prices Increasing? An Industry Wide Perspective,” presented at the Foundation for American Communications’ Seminar, November 2, 2006.
- “Why Are Electricity Prices Increasing? An Industry Wide Perspective,” presented at Edison Electric Institute’s Annual Conference, June 20, 2006.
- “Renewable Energy and the Oil/Gas Price Shock,” presented at ACORE’s “Renewable Energy in America: Policies for Phase II,” Washington, DC, October 17, 2005.
- “The Global Power Industry: Is it Really Back to the Future?,” presented at The Discover Showcase, Toronto, Canada, October 25, 2004.
- “Natural Gas - Electric Issues in New England,” with Greg Basheda, presented at Edison Electric Institute’s New England CEO Dialogue, Manchester, New Hampshire, April 27, 2004.
- “Efficient Grid Expansion and Participant Funding,” presented at the Harvard Electric Policy Group meeting, December 11, 2003.
- “The Role of an Expert Witness in Testimony and Litigation Support: What We Teach Our Own,” with Lynda Borucki, presented at the Energy Bar Association’s Mid-Year Meeting, December 5, 2003.
- “The Role of Alternative Energy in the US Supply,” with Adam Schumacher, presented to the 54th Annual Program on Oil and Gas Law, Houston, Texas, February 20-21, 2003.
- “Market Measurement and The Delivered Price Test Under Standard Market Design.,” with Gary Taylor, Romkaew Broehm and Metin Celebi, presented to the staff of the Federal Energy Regulatory Commission, November 15, 2002.
- “Enron and Electricity Deregulation,” presented at Le Centre Francais sur les Etats-Unis (CFE), May 15, 2002.
- “At the Crossroads or on the Brink? U.S. Electric Industry Trends in Early 2002,” presented at Cooperative Finance Corporation’s CEO Conference, April 10, 2002.
- “Revenues, Regulations and ITC Business Models,” presented at the Executive Transmission Forum, January 29, 2002.
- “A ‘Securities’ Versus ‘Antitrust’ of the Competitive Power Industry and its Implication for RTO Market Monitoring,” Remarks before the American Antitrust Institute Conference on Electricity Market Monitoring, December 11, 2001.

- “What Does the California Experience Tell Us About Fixing the Rest of America’s Power Markets?,” with Joseph B. Wharton, presented at the National Association Business Economics Regional/Utility Roundtable, April 24, 2001.
- “Taming the Lions in America’s Electric Markets: Five Major Challenges,” presented at National Governors’ Association Center for Best Practices, Executive Policy Forum on Energy, “Is Electricity Restructuring in Jeopardy?,” Washington, DC, April 5, 2001.
- “The Challenge to Co-operatives in the Electric Power Industry of the 21st Century,” NRECA’s 30th Annual CEO Leadership Conference, Keystone, CO, August 2, 2000.
- “Price-Responsive Electric Demand: A National Priority,” The Electric Power Research Institute’s International Energy Pricing Conference, Washington, DC, July 26, 2000.

SELECTED HONORS & AWARDS

2022	Peter Fox-Penner Prize established by Boston University’s Institute for Global Sustainability
1981	NSF Travel Fellow
1977–1980	Sigma Tau Beta, Phi Kappa Phi, Eta Kappa Nu
1978	MIT Institute Fellowship
1978	Earle C. Anthony Fellowship
1977–1978	Union Carbide Fellow
1976	Michigan Annual Giving Scholarship
1976	Illinois State Scholar
1976	National Merit Scholar

SELECTED PROFESSIONAL ASSOCIATIONS & MEMBERSHIPS

2024–Present	GFANZ workstream on Transition Finance and the Real Economy <i>Member</i>
2022–Present	Project Frame and the Venture Climate Alliance <i>Co-Founder and Steering Committee Member</i>
2020	World Resources Institute/Resources for the Future Project on Electricity Markets <i>Reviewer</i>
2019–2020	National Association of Regulatory Utility Commissioners <i>Advisory Board, Regulatory Training Initiative</i>

- 2013–2016 Georgetown University Center for Business and Public Policy
Senior Policy Scholar
- 2000–2016 The Solar Foundation
Member of the Board
- 2000–2004 Progressive Policy Institute, Washington, DC
Advisor
- 1993–1997 Center for National Policy, Washington, DC
Advisor
- 1993–1996 Massachusetts Institute of Technology Energy Laboratory
Advisory Board