

L. Lynne Kiesling

Department of Economics Phone: 1-765-494-3771 (office) 1-773-484-0391 (mobile)
 Purdue University E-mail: lkieslin@purdue.edu and lynne@knowledgeproblem.com
 403 West State Street Website: <http://www.lynniekiesling.com> and <http://knowledgeproblem.com>
 West Lafayette, Indiana 47907 SSRN author page: <http://ssrn.com/author=240214>

Education

Ph.D. Economics, Northwestern University, December 1993
 B.S. *cum laude* Economics, Miami University, May 1987

- Phi Beta Kappa, 1987

Current Appointments

Visiting Associate Professor of Instruction Department of Economics, Purdue University	August 2017-present
Associate Director Purdue University Research Center in Economics	August 2017-present
Associate Director, Institute for Regulatory Law and Economics, Silicon Flatirons Program, University of Colorado Law School	September 2016-present

Current Leadership Positions

Smart Grid Advisory Council National Institute of Standards & Technology	August 2017-present
Electricity Markets Working Group Leader NextGrid Study, Illinois Commerce Commission	October 2017-present

Past Appointments

Associate Professor of Instruction Department of Economics, Northwestern University	September 2010-August 2017
Director, Electricity Policy Program, Searle Center on Law, Regulation, and Economic Growth, Northwestern University	September 2016-August 2017
Visiting Senior Lecturer Department of Political Economy, King's College London	September 2014-March 2015
Senior Lecturer, Social Enterprise at Kellogg (SEEK) Program, Kellogg School of Management, Northwestern University	September 2007-August 2011
Senior Lecturer, Department of Economics, Northwestern University	September 2001-August 2010
Research Scholar, Interdisciplinary Center for Economic Science at George Mason University	October 2003-October 2006
Director of Economic Policy, Reason Foundation	January 2001-September 2003
Visiting Associate Professor of Economics, Northwestern University	September 2000-September 2001
Subject Matter Expert (Contractor), UNext.com	May 2000-March 2001
Manager, International Economics, PricewaterhouseCoopers LLP	January 1997-January 2000
Assistant Professor of Economics, College of William and Mary	August 1992-December 1996

Primary Fields of Specialization

Regulation, Industrial Organization, Innovation & Technological Change, Political Economy. *Other areas of interest:* Institutional & Organizational Economics, Economic History, Experimental Economics, Austrian Economics, History of Economic Thought

Published and Forthcoming Articles, Peer-Reviewed

“Implications of Smart Grid Innovation for Organizational Models in Electricity Distribution,” in Chen-Ching Liu, Stephen McArthur, and Seung-Jae Lee, eds., *Wiley Smart Grid Handbook*. London: Wiley, 2016

“Competitive Joint Venture Ownership of Networks as an Alternative to Regulation,” in Arnold Picot, Massimo Florio, Nico Grove, and Johan Kranz, eds., *The Economics of Infrastructure Provisioning: The (Changing) Role of the State*. MIT Press, 2016 (joint with Federico Boffa)

“Regulation, Innovation, and Experimentation: The Case of Residential Rooftop Solar,” *Annual Proceedings of the Wealth and Well-Being of Nations* (2015) (joint with Mark Silberg)

“Incumbent Vertical Market Power, Experimentation, and Institutional Design in the Deregulating Electricity Industry,” *Independent Review* 19(2) (2014): 239-264

“Mirror Neuron Research and Adam Smith’s Concept of Sympathy: Three Points of Correspondence,” *Review of Austrian Economics* 25(4) (2012): 299-313

“Regulation’s Effect on Experimentation in Retail Electricity Markets,” *Annual Proceedings of the Wealth and Well-Being of Nations Volume IV* (2011-2012)

“Paved With Good Intentions: Rethinking the Ethics of ELSI Research,” *Journal of Research Administration* 42.2 (Fall 2011): 15-18 (joint with Daniel Seltzer, Laurie Zoloth, and Cristina Trainer)

“The Knowledge Problem, Learning, and Regulation: How Regulation Affects Technological Change in the Electric Power Industry,” *Studies in Emergent Order* 3 (2010): 149-171.

“Promoting Innovation in the Electricity Industry,” *Economic Affairs* (June 2010): 6-12

“Decentralized Coordination through Digital Technology, Dynamic Pricing, and Customer-Driven Control: The GridWise Testbed Demonstration Project,” *Electricity Journal* 21 (October 2008): 51-59 (joint with David Chassin)

“L’électricité, est-elle un bien public?” *Révue de l’OFCE* 101 (2007): (joint with Evens Salies and Michael Giberson)

“An Experimental Analysis of the Effects of Automated Mitigation Procedures on Investment and Prices in Wholesale Electricity Markets.” *Journal of Regulatory Economics*, 31 (2007): 313-334 (joint with Bart Wilson)

“Using Economic Experiments to Test Electricity Policy,” *Electricity Journal* 18 (November 2005): 43-50

“Analyzing the Blackout Report’s Recommendations: Alternatives For A Flexible, Dynamic Grid,” *Electricity Journal* 17 (July 2004): 51-59 (joint with Michael Giberson)

“The North American Blackout and Electricity Policy: Alternatives to Transmission Construction,” *Economic Affairs* 24 (March 2004): 53-57

“Standard Market Design in Wholesale Electricity Markets: Can FERC’s Proposed Structure Adapt to the Unknown?” *Electricity Journal* 16 (March 2003): 11-19 (joint with Brian Mannix)

“The Black Death and Property Rights.” *Journal of Legal Studies* XXXI(2) (2002) (joint with David Haddock)

“Institutional Change and Contestability: Electricity Transmission Policy, Technology, and Entry Barriers.” *Proceedings of the U.S. Association of Energy Economics*, October 2002 (joint with Adrian Moore)

“The Long Road to Recovery: Post-Crisis Coordination of Private Charity and Public Relief in Victorian Lancashire.” *Social Science History* 21 (1997): 219-244

“Explaining the Rise in Antebellum Pauperism, 1850-1860: New Evidence.” *Quarterly Review of Economics and Finance* 37 (1997): 405-417 (joint with Robert A. Margo)

“Was There a Welfare Magnet in the Nineteenth Century? Preliminary Results from New York City and Brooklyn.” *Quarterly Review of Economics and Finance* 37 (1997): 439-448 (joint with Kyle Kauffman)

“Institutional Choice Matters: The Poor Law and Implicit Labor Contracts in Victorian Lancashire,” *Explorations in Economic History* 33 (1996): 65-85

“Collective Action and Assisting the Poor: The Political Economy of Income Assistance during the Lancashire Cotton Famine,” *Journal of Economic History* 55 (June 1995): 380-383 (dissertation summary from Gerschenkron Prize nomination)

Published Books

Deregulation, Innovation, and Market Liberalization: Electricity Restructuring in a Constantly Evolving Environment. Routledge Studies in Business Organizations and Networks. London: Routledge, 2008

Published Books – Edited

Avner Greif, L. Lynne Kiesling, and John V. C. Nye, editors. *Institutions, Innovation, and Industrialization: Essays in Economic History and Development*. Princeton University Press, 2015

L. Lynne Kiesling and Andrew N. Kleit, editors. *Electricity Restructuring: The Texas Experience*, Washington, DC: AEI Press, 2009

Book Chapters, Review Articles, Encyclopedia Entries, and Other Publications

“Organizational Form and the Wires,” in Sebastian Eyre and Michael Pollitt, eds., *Competition and Regulation in Electricity Markets*. International Library of Critical Writings in Economics. London: Edward Elgar, 2016

“Responsibility and the Environment,” in Tom Palmer, ed., *Self Control or State Control? You Decide*. Ottawa, IL: Jameson Books, 2016

“The Connected Home and an Electricity Market Platform for the Twenty-First Century,” in Christopher Coyne, Michael Munger, Robert Whaples, eds., *Future: Economic Peril or Prosperity?* Oakland, CA: Independent Institute, 2016

“Knowledge Problem,” in Peter Boettke and Christopher Coyne, eds., *Oxford Handbook of Austrian Economics*, Oxford, UK: Oxford University Press, 2015

“Introduction,” in Avner Greif, Lynne Kiesling, and John V. C. Nye, eds., *Institutions, Innovation, and Industrialization: Essays in Economic History and Development*. Princeton University Press, 2015 (joint with Avner Greif and John V. C. Nye)

“Energy Policy,” in Timothy C. Haab and John C. Whitehead, eds., *Environmental and Natural Resource Economics: An Encyclopedia*, Santa Barbara: Greenwood Press, 2014

“Introduction,” in Lynne Kiesling and Andrew Kleit, eds., *Electricity Restructuring: The Texas Story*, Washington, DC: AEI Press, 2009 (joint with Andrew Kleit)

“Retail Restructuring and Market Design in Texas,” in Lynne Kiesling and Andrew Kleit, eds., *Electricity Restructuring: The Texas Story*, Washington, DC: AEI Press, 2009

“Markets, Technology and Institutions: Increasing Energy Efficiency Through Decentralized Coordination,” *Project Energy Code*, EcoAlign paper series, Issue 2, 2009

Busch, G., Peterson, C., Thomas, C., Kiesling, L., and Kelly, J. *Empowering Consumers Through A Modern Electric Grid*. Illinois Smart Grid Initiative final report, April 2009

“Achieving Decentralized Coordination in the Electric Utility Industry,” *The Utilities Project*, Volume 8, 2008

Pacific Northwest GridWise™ Testbed Demonstration Projects, Volume I: The Olympic Peninsula Project. Technical Report to the U.S. Department of Energy, 2007 (joint with D. Hammerstrom, Ambrosio, R., Brous, J., Carlon, T., Chassin, D., DeSteeze, J., Guttromson, R., Horst, G., Järregren, O., Kajfasz, R., Katipamula, S., Le, N., Michie, P., Oliver, T., Pratt, R., Thompson, S., and Yao, M.)

“Post-Blackout Transmission Policy: A Dynamic 21st-Century Grid,” in Andrew Kleit, ed., *Electric Choices: Deregulation and the Future of Electric Power*. Rowman and Littlefield, 2007 (joint with Michael Giberson)

“The Role of Retail Pricing in Electricity Restructuring,” in Andrew Kleit, ed., *Electric Choices: Deregulation and the Future of Electric Power*. Rowman and Littlefield, 2007

“Retail Electricity Deregulation: Prospects and Challenges for Dynamic Pricing and Enabling Technologies,” *Annual Review of Regulation*, Searle Center on Law, Regulation, and Economic Growth, Northwestern University, May 2007

A Market-Based Model for ISO-Sponsored Demand Response Programs. Center for the Advancement of Energy Markets-Distributed Energy Financial Group Study, October 2005 (joint with Vernon L. Smith)

“Adam Smith,” in Joel Mokyr, ed., *Oxford Encyclopedia of Economic History*. Oxford University Press, 2003

“Contract Enforcement Through History,” in Joel Mokyr, ed., *Oxford Encyclopedia of Economic History*. Oxford University Press, 2003

“The History of Energy Regulation,” in Joel Mokyr, ed., *Oxford Encyclopedia of Economic History*. Oxford University Press, 2003

Working Papers and Ongoing Research Projects

“Innovation, Interconnection, and Institutions: Evolving Electric Power Systems in the Early 20th Century.” Manuscript, July 2016. Joint with Karen Clay. *Presented at:* Property & Environment Research Center Energy Workshop, July 2016; Society for Institutional & Organizational Economics conference, June 2017; Property & Environment Research Center Lone Mountain Fellow workshop, August 2017; NU Searle Center on Law, Regulation, and Economic Growth energy research roundtable, November 2017

“From Airbnb to Solar: Toward a Transaction Cost Model of a Retail Electricity Distribution Platform.” Manuscript, October 2017. Joint with Michael Munger and Alexander Theisen. *Presented at:* Public Choice Society meetings, March 2017; Tilburg University-TILEC Workshop on Economic Governance in Data-Driven Industries, October 2017. *Earlier versions presented at:* Boston University Platform Symposium, July 2016; Public Choice Society meetings, March 2015; King’s College London, February 2015; University of Cambridge, February 2015

“Blockchain for Watergy: A Technology Platform for Transactive Energy and Water.” Manuscript, October 2016. Joint with Toby Considine and James Workman. *Presented at:* Property & Environment Research Center Energy Workshop, July 2016, NU Searle Center on Law, Regulation, and Economic Growth energy research roundtable, November 2016; Southern Economic Association conference, November 2016

“Mirroring, Classification, and Social Institutions: Implications of Recent Neuroscience Research for Interpreting Hayek’s *The Sensory Order*.” Manuscript, October 2010. Joint with Steven Horwitz. *Presented at:* Society for the Development of Austrian Economics conference, November 2010

Op-Ed and Popular Writing

Owner, Editor, Knowledge Problem web site (www.knowledgeproblem.com), June 2002-present

A Revolution in Power: Where We've Come from, Where We're Headed. Electricity Policy, September 2016 (joint with Dick Munson)

"Dynamic Pricing is Smart Grid's Secret Sauce," *Smart Grid Newsletter*, May 13, 2008

"Socket to California: Preventing Another Energy Crisis," *Wall Street Journal*, October 28, 2003 (joint with Vernon L. Smith)

"Demand, Not Supply," *Wall Street Journal*, August 20, 2003 (joint with Vernon L. Smith)

"The Market Laboratory," *Wall Street Journal*, October 10, 2002

Undergraduate Teaching, Advising, and Administration, Northwestern University, 2000-2017

Introduction to Microeconomics

Monopoly, Competition, and Public Policy

Environmental and Natural Resource Economics

History of Economic Thought

Western Economic History

Introduction to Environmental and Natural Resource Economics

Introduction to Macroeconomics: Winter 2011

Institute for Sustainability and Energy at Northwestern (ISEN): Climate Change and Sustainability: Economic and Ethical Dimensions (team-taught)

Interim Director, Environmental Policy & Culture program, Northwestern University, 2013-2014

Freshman Adviser, Weinberg College of Arts & Sciences, Northwestern University, 2004-2013

Freshman Seminar: Economics of Innovation and Technological Change

Freshman Seminar: Complexity and Economics: Growth, Technology, Networks, and Adaptation

Freshman Seminar: Adam Smith and the Scottish Enlightenment

Freshman Seminar: Economics of Energy Markets

Graduate Teaching, Northwestern University

Environmental Management and Sustainability, Kellogg School of Management, Fall 2007, Spring 2008, Fall 2008, Winter 2010

Sustainability Lab, Kellogg School of Management, Spring 2009, Spring 2010, Spring 2011

Policy Research

Alternatives to Net Metering: Grid Services Rate Design for Decentralized Electricity Markets. R Street Policy Paper, February 2016

Permissionless Innovation: Energy policy recommendations for UK electricity distribution. Adam Smith Institute Policy Paper, October 2015

A Prosperous and Cleaner Future: Markets, Innovation, and Electricity Distribution for the 21st Century. Conservation Leadership Council Policy Paper, June 2015

A Federal Ethanol Mandate: Is It Worth It? Policy Study 315, Reason Public Policy Institute, November 2003 (joint with Matthew McCormick and Scott Freifeld)

Movin' Juice: Making Electricity Transmission More Competitive. Policy Study 314, Reason Public Policy Institute, August 2003

Standard Market Design in Wholesale Electricity Markets: Can FERC's Proposed Structure Adapt to the Unknown? Policy Study 301, Reason Public Policy Institute, November 2002 (joint with Brian Mannix)

National Energy Policy: In Need of a More Dynamic Approach. Institute for Research on the Economics of Taxation Congressional Advisory 135, September 2002

Russia's Role in the Shifting World Oil Market. Policy Brief, Caspian Studies Program, Harvard University, May 2002 (joint with Joe Becker)

Getting Electricity Deregulation Right: How Other States and Nations Have Avoided California's Mistakes. Policy Study 281, Reason Public Policy Institute, April 2001

Powering Up California: Policy Alternatives for the California Energy Crisis. Policy Study 280, Reason Public Policy Institute, February 2001 (joint with Adrian Moore)

Submitted Regulatory Comments and Expert Testimony

Submitted Testimony to Illinois Commerce Commission on behalf of the Citizens Utility Board in *Commonwealth Edison Proposed General Increase in Electric Rates*, Docket No. 07-0566, (rebuttal testimony) April 2008

Submitted Testimony to Illinois Commerce Commission on behalf of the Citizens Utility Board in *Commonwealth Edison Proposed General Increase in Electric Rates*, Docket No. 07-0566, February 2008

Submitted Testimony to New York Public Service Commission (with Andrew N. Kleit) on behalf of Direct Energy in *Proceeding on Motion of the Commission as to Policies, Practices and Procedures For Utility Commodity Supply Service to Residential and Small Commercial and Industrial Customers*, Case 06-M-1017, December 2006

Submitted Testimony in Illinois Commerce Commission review of *Commonwealth Edison Company Proposed Revisions to Rate BES-H Basic Electric Service Hourly Energy Pricing* on behalf of the Citizens Utility Board, ICC Docket No. 06-0617, October 2006

Submitted Testimony in New York Public Service Commission (with Andrew N. Kleit) rate review case on behalf of Direct Energy Services, Case No. 05-E-1222, March 2006

An Analysis of Electricity Capacity Markets in California. Testimony in response to California Public Utility Commission White Paper on Capacity Markets, September 2005

PJM Capacity Market Design. Federal Energy Regulatory Commission, Technical Conference on the Capacity Construct Used in the PJM Region, June 2005

Public Interest Comment on Midwest ISO Proposal Concerning Reactive Power Procurement, submitted to Federal Energy Regulatory Commission. Mercatus Center at George Mason University, July 2004 (joint with Michael Giberson)

Book Reviews

Knowledge and Coordination: A Liberal Interpretation, Daniel B. Klein. *Review of Austrian Economics*, 2015

U.S. Energy Policy and the Pursuit of Failure, Peter Z. Grossman. *Independent Review* 2014

The Not-So Wild West, Terry Anderson and Peter J. Hill. *Pacific Northwest Quarterly*, 2005

Energy and the Rise and Fall of Political Economy, Bernard Beaudreau. *Technology and Culture* 2003

Bowling Alone, Robert Putnam. *Cato Journal* 2000

Escape from the Market, Michael Huberman. *Journal of Economic History* 1998

Public Goods and Private Communities: The Market Provision of Social Services, Fred Foldvary. *Independent Review* 1996

Patterns of European Industrialization, R. Sylla and G. Toniolo, editors. *Business History Review* 1996

The European Economy 1750-1914: A Thematic Approach, D. Aldcroft and S. Ville, editors. *Business History Review* 1996

Prices, Food and Wages in Scotland 1550-1780, A. J. S. Gibson and T. C. Smout. *Journal of Economic History* 1995

Capitalism in Context: Essays on Economic Development and Cultural Change in Honor of R. M. Hartwell, John James and Mark Thomas, editors. *Journal of Economic History* 1995

Industry, Business and Society in Scotland Since 1700, A. J. G. Cummings and T. M. Devine, editors. *Albion* 1995

The Great Highland Famine: Hunger, Emigration and the Scottish Highlands, T. M. Devine. *Albion* 1993

Departmental Research Presentations (since 2004)

“An Uber for Electricity: Institutional Theory and Practice for a Regulated Industry in a Technologically Dynamic Environment.” Department of Political Economy, King’s College London, February 2015

“An Uber for Electricity: Institutional Theory and Practice for a Regulated Industry in a Technologically Dynamic Environment.” Energy Policy Research Group, University of Cambridge, February 2015

“Electricity Regulation in an Environment of Technological Change and Competitive Retail Markets: Implications of the Bell Doctrine and Economic Experimentation.” Department of Economics, San Jose State University, October 2013

“Beneficial Complexity: A Field Experiment in Technology, Institutions, and Institutional Change in the Electric Power Industry.” Ostrom Workshop in Political Theory and Policy Analysis, Indiana University, September 2008

“Beneficial Complexity: Regulatory Change for Distributed Electric Networks.” Technology and Policy Development group, Pacific Northwest National Laboratory, January 2007

“Electric Network Reliability As A Public Good.” Université de Paris-Sud, April 2005

“Investment Incentives and Dynamic Efficiency in Electricity Markets: An Experimental Analysis.” Manuscript, October 2004. Purdue University, February 2005

“Investment Incentives and Dynamic Efficiency in Electricity Markets: An Experimental Analysis.” Manuscript, October 2004. West Virginia University, December 2004

“Investment Incentives and Dynamic Efficiency in Electricity Markets: An Experimental Analysis.” Interdisciplinary Center for Economic Science at George Mason University, October 2004

“Investment Incentives and Dynamic Efficiency in Electricity Markets: An Experimental Analysis.” Federal Reserve Bank of Dallas, August 2004

Conference Presentations (since 2004)

“From Airbnb to Solar: Toward a Transaction Cost Model of a Retail Electricity Distribution Platform.” Midwest Economic Association meetings, Association of Environmental and Resource Economists session, March 2018 (proposal accepted)

“Innovation, Interconnection, and Institutions: Evolving Electric Power Systems in the Early 20th Century.” Public Choice Society meetings, March 2018 (proposal submitted)

“Innovation, Interconnection, and Institutions: Evolving Electric Power Systems in the Early 20th Century.” NU Searle Center on Law, Regulation, and Economic Growth energy research roundtable, November 2017

“From Airbnb to Solar: Toward a Transaction Cost Model of a Retail Electricity Distribution Platform.” Tilburg University-TILEC Workshop on Economic Governance in Data-Driven Industries, October 2017

“Innovation, Interconnection, and Institutions: Evolving Electric Power Systems in the Early 20th Century.” Property & Environment Research Center Lone Mountain Fellow Workshop, August 2017

“Innovation, Interconnection, and Institutions: Evolving Electric Power Systems in the Early 20th Century.” Society for Institutional & Organizational Economics annual meeting, June 2017

“From Airbnb to Solar: Toward a Transaction Cost Model of a Retail Electricity Distribution Platform.” Public Choice Society meetings, March 2017

“Blockchain for Watergy: A Technology Platform for Transactive Energy and Water.” Southern Economic Association conference, November 2016

“Blockchain for Watergy: A Technology Platform for Transactive Energy and Water.” NU Searle Center on Law, Regulation, and Economic Growth energy research roundtable, November 2016

“An Uber for Electricity: Institutional Theory and Practice for a Regulated Industry in a Technologically Dynamic Environment.” Boston University Platform Symposium, July 2016

“Innovation, Interconnection, and Institutions: Evolving Electric Power Systems in the Early 20th Century.” Property & Environment Research Center Energy Workshop, July 2016

“Blockchain for Watergy: A Technology Platform for Transactive Energy and Water.” Property & Environment Research Center Energy Workshop, July 2016

“The Connected Home and Permissionless Innovation: Technology and Regulation for a Cleaner and Prosperous Future.” PERC Workshop on Environmental Policy in the Anthropocene, December 2015.

“An Uber for Electricity: Institutional Theory and Practice for a Regulated Industry in a Technologically Dynamic Environment.” Public Choice Society meetings, March 2015.

“Innovation for Energy,” Economics for Energy Conference, Fundacion Ramon Areces, Madrid, Spain, January 2015.

“Incumbent Vertical Market Power, Experimentation, and Institutional Design in the Deregulating Electricity Industry.” International Society for New Institutional Economics annual meeting, June 2014.

“Electricity Regulation in an Environment of Technological Change and Competitive Retail Markets: Implications of the Bell Doctrine and Economic Experimentation.” Society for the Development of Austrian Economics annual meetings, November 2013.

“Electricity Regulation in an Environment of Technological Change and Competitive Retail Markets: Implications of the Bell Doctrine and Economic Experimentation.” Public Choice Society annual meetings, March 2013.

“Electricity Regulation in an Environment of Technological Change and Competitive Retail Markets: Implications of the Bell Doctrine and Economic Experimentation.” Southern Economic Association conference, November 2012.

“Mirroring, Classification, and Social Institutions: Implications of Recent Neuroscience Research for Interpreting Hayek’s *The Sensory Order*.” Joint with Steven Horwitz. Southern Economic Association/Society for the Development of Austrian Economics conference, November 2010.

“Is There a Neurological Foundation for Institutions? Mirroring, Sympathy, and Institutional Design,” (early version of “Mirroring and the Sympathetic Process: Some Implications of Mirror Neuron Research for Sympathy and Institutions in Adam Smith”) International Society for New Institutional Economics annual meeting, June 2010.

“Beneficial Complexity: A Field Experiment in Technology, Institutions, and Institutional Change in the Electric Power Industry,” International Society for New Institutional Economics annual meeting, June 2009.

“Beneficial Complexity: A Field Experiment in Technology, Institutions, and Institutional Change in the Electric Power Industry,” International Association of Energy Economics annual meeting, June 2009.

“Beneficial Complexity: A Field Experiment in Technology, Institutions, and Institutional Change in the Electric Power Industry,” Research Roundtable, Searle Center on Law, Regulation, and Economic Growth, Northwestern University, June 2009.

“Smart Policies for a Smart Grid: Enabling a Consumer-Oriented Transactive Network,” Harvard Electricity Policy Group quarterly workshop, March 2009.

“What Gives You the Right? Consumption Data Access Rights and Retail Competition in the Electric Power Industry,” Conference on Property Rights and Innovation, Searle Center on Law, Regulation, and Economic Growth, November 2008.

“Retail Dynamic Pricing and Enabling Technologies in the Electric Power Industry: Applying Complexity Principles to Policy.” Dynamics & Complexity in People & Society Workshop, Northwestern University, October 2007.

“Retail Dynamic Pricing and Enabling Technologies in the Electric Power Industry: A Field Experiment in Institutions and Technology.” Ford Center seminar, Kellogg School of Management, Northwestern University, October 2007.

“Technological Change and the Electric Power Network: Policy Implications.” Foundation for Research in Economics and the Environment, Economics, Energy and the Law Workshop, August 2007.

“Retail Electricity Deregulation: Prospects and Challenges for Dynamic Pricing and Enabling Technologies.” International Society for New Institutional Economics conference, June 2007.

“Bringing the Electric System Into the Information Age: GridWise Interoperability Principles,” Carnegie Mellon University Electricity Conference, March 2007.

“Bringing the Electric System Into the Information Age: The Evolution of Technology, Policy, and Markets,” Modern Grid Initiative Grid Modernization Summit, November 2006

“Design Problems in Retail Electricity Competition.” U.S. Association for Energy Economics conference, September 2006.

“Competitive Joint Venture Ownership of Networks as an Alternative to Regulation.” International Society for New Institutional Economics conference, September 2006.

“Competitive Joint Venture Ownership of Networks as an Alternative to Regulation.” International Industrial Organization Conference, April 2006.

“Reliability Insurance and the Value of Flexibility in the Changing Electric Power Industry.” Carnegie Mellon University Conference on the Valuation of Distributed Monitoring and Sensing, January 2006.

“Demand Response: Progress and Barriers.” MIT Center for Energy and Environment Policy Research Fall Workshop, November 2005.

“Electric Network Reliability As A Public Good.” Northwestern Institute on Complex Systems, November 2005.

“Capacity Markets.” Federal Energy Regulatory Commission Technical Conference on Capacity Markets in PJM, June 2005.

“Has 'Deregulation' Benefited Consumers?” Global Energy Management Institute-University of Houston, June 2005.

“Experimental Economics and Demand Response in the U.S.” International Energy Agency, April 2005.

“Experimental Economics and Electric Power Market Design Research in the U.S.” Ecole Normale Supérieur d'Electricité, Paris, April 2005.

“Electric Network Reliability As A Public Good.” Carnegie-Mellon University Conference on Electric Power Transmission and Distribution, December 2004.

“Energy and Ethics: A Market Process Experiment.” University of Notre Dame Energy and Ethics Conference, October 2004.

“Investment Incentives and Dynamic Efficiency in Electricity Markets: An Experimental Analysis.” International Society for New Institutional Economics Annual Meetings, October 2004.

“Regulatory Reform for the Digital Era: Electric Power.” Heartland Institute, October 2004.

“Market Processes: An Experiment, and the Basics.” Pacific Northwest National Laboratory Summer Study Session, August 2004.

“Electric Network Reliability As A Public Good.” U.S. Association of Energy Economics Annual Meetings, July 2004.

“U.S. Regulatory Change and Demand Response: Experimental Evidence.” Mexican Energy Commission, May 2004.

“Electricity and Energy Reform.” Mercatus Center Capitol Hill Chief of Staff Retreat, February 2004.

“State of U.S. Energy Markets.” Mercatus Center Capitol Hill Campus, February 2004.

Invited Speeches and Presentations (since 2005)

“Economic Thinking and the Knowledge Problem,” Cato University in Economics, Cato Institute, July 2017

“Markets and the Environment,” Cato University in Economics, Cato Institute, July 2017

“Spontaneous Order,” Cato University in Economics, Cato Institute, July 2017

“Decentralized Markets and Innovation in Electricity: Smart Grid and Renewable Resources,” Classical Liberalism Speaker 2016-2017, Whitman College, March 2017

“Transactive Energy and the Internet of Things Around the Electricity Distribution Edge,” Northwestern University Office of Research Development, Launching Interdisciplinary Connections series, February 2017

“Regulation and Innovation: The Case of Electricity,” Mercatus Center Bastiat Fellows seminar, February 2017

“The Political Economy of the ‘Utility of the Future’,” Strata Ph.D. Summit, Utah State University, January 2017

“Regulation and Innovation: The Case of Electricity,” Property & Environment Research Center Student Seminar, June 2016

“Transactive Energy,” Electricity Advisory Committee, U.S. Department of Energy, June 2016

“Regulation and Innovation: The Case of Electricity,” guest speaker, PPE class, Prof. Michael Munger, Duke University, November 2015

“Regulation and Innovation: The Case of Electricity,” Property & Environment Research Center Student Seminar, June 2015

“Can Vertical Disintegration, Deregulation, and Innovation Be a Win, Win, Win for Electricity Markets?” Michael Beesley Memorial Lecture, Institute of Economic Affairs (UK), November 2014

“Understanding the Effects of 20th Century Regulation on 21st Century Experimentation in Electricity Markets,” Upton Forum, Beloit College, November 2014

- “How Markets Benefit the Environment,” International Students for Liberty Conference, February 2014
- “Adam Smith and Jane Austen: Themes of Design and Control in *Emma*,” International Students for Liberty Conference, February 2014
- “Regulation and Experimentation in the Electricity Industry,” Michigan State University, September 2013
- “Knowledge Problem,” Students for Liberty Chicago Regional Conference, November 2012
- “Regulation, Competition, and New Technology Adoption: Applying the Bell Doctrine to Retail Electricity Markets,” Great Lakes Symposium on Smart Grid, Illinois Institute of Technology, September 2012
- “Regulation’s Effect on Experimentation in Retail Electricity Markets,” Upton Forum, Beloit College, October 2011
- “Beneficial Complexity,” Students for Liberty Chicago Regional Conference, October 2011
- “Electricity Regulation, Policy, and Innovation,” Summer Institute on Sustainability and Energy, University of Illinois-Chicago, August 2011
- “Promoting Innovation in the Electricity Industry,” campus lecture, Berry College, November 2010
- “Promoting Innovation in the Electricity Industry,” campus lecture, St. Lawrence University, April 2010
- “Economics, Technology, and Smart Grid Policy,” Lifelong Learners Course Series, Northwestern University, October 2009
- “Promoting Innovation in the Electricity Industry,” Michael Beesley Memorial Lecture, Institute of Economic Affairs (UK), October 2009
- “Electricity Restructuring in Texas.” Mercatus Center Staff Retreat for Texas Legislative Staff, July 2008
- “Retail Dynamic Pricing and Enabling Technologies in the Electric Power Industry: Applying Complexity Principles to Policy.” Northwestern Institute for Complex Systems Faculty Luncheon, Northwestern University, March 2008
- “Innovations in Electricity Pricing, Technology, and Regulation,” Lifelong Learners Course Series, Northwestern University, October 2007
- “Technological Change and the Electric Power Network,” Foundation for Research on Economics and the Environment, Economics, Energy, and the Law Workshop, July 2007
- “The Interaction of Regulation, Markets, and Technology: Consumer Empowerment in the Electric Utility Industry,” Moor Lecture Series, Capital University, March 2007
- “The Interaction of Regulation, Markets, and Technology: Consumer Empowerment in the Electric Utility Industry,” Clarke Forum Speaker Series, Dickinson College, February 2007
- “Experimental Economics for Demand Response Market Design and Education,” Midwest Demand Response Initiative, February 2007
- “Experimental Economics and Electric Power Market Design Research in the U.S.,” École Supérieure d’Électricité (Supélec), France, April 2005

Campus Service, Northwestern University

Phi Beta Kappa, Alpha of Illinois chapter

- Treasurer, September 2012-August 2017
- Membership selection committee, 2010-August 2017

Program Committee Member, Chicago Field Studies program, September 2015- August 2017

Faculty Adviser, Northwestern University Triathlon Team (club sport), September 2007- August 2017

Program Committee Member, Environmental Science program, September 2013-September 2014

Working group on enterprise website coordination and integration, November 2012-June 2013

Professional Service and Other Activities

Member, Academic Advisory Board, Institute for Regulatory Law and Economics, 2003-present

Member, Academic Advisory Council, Institute of Economic Affairs (UK), 2003-present

Faculty member, Institute for Regulatory Law & Economics, 2004-present

Senior Fellow, Fraser Institute, 2013-present

Senior Fellow, Reason Foundation, October 2003-present

Peer Review Board member, Illinois Science & Energy Innovation Foundation, 2013-present

Executive Board member (elected), Society for the Development of Austrian Economics, 2014-present

Referee, *Review of Economics and Statistics*, *Public Choice*, *International Journal of Industrial Organization*, *Energy Journal*, *IEEE Transactions on Power Systems*, *Energy Policy*, *European Economic Review*, *Independent Review*, *Review of Austrian Economics*, *Journal of Economic Behavior and Organization*, *Journal of Institutional Economics*, *Adam Smith Review*, *Technology & Culture*, *Discrete Applied Mathematics*, *Neuroethics*, *Journal of Economic History*, *American Journal of Sociology*

Grant Proposal Reviewer, National Science Foundation

Book Manuscript Reviewer, Princeton University Press, Cambridge University Press, Oxford University Press, W. W. Norton, McGraw-Hill, Lexington Books

Workshop Director, "Energy Regulation, Technology, and Transaction Costs: Cross-Cutting Perspectives," Searle Center on Law, Regulation, and Economic Growth, Northwestern University, November 2016, November 2017

Workshop Director, "Innovation, Decentralization, and Regulation in Energy Markets," Property & Environment Research Center, July 2016

Workshop Director, "Property Rights, Innovation, and the Structures of Energy: Firm Structure, Market Structure, and Infrastructure," Property & Environment Research Center, August 2017

Conference Co-Organizer, Northwestern Electricity Dialogue, Searle Center on Law, Regulation, and Economic Growth, Northwestern University, April 2015, April 2016, April 2017

Graduate Research Fellowship panel reviewer, National Science Foundation, 2014-2015

Council Member (elected), U.S. Association of Energy Economics, September 2009-September 2011

GridWise Architecture Council Member, May 2005-January 2010 (*emerita* member, 2010-present)

- Co-Chair, GridWise Architecture Council-National Institute of Standards & Technology Business & Policy Domain Expert Working Group, November 2008-January 2010
- Conference Co-Chair, GridEcon conference, March 2009

Research Proposal Technical Reviewer, U.S. Department of Energy, 2007, 2009

Faculty Coordinator, Lifelong Learners lecture series, Northwestern University, September 2009-December 2009

Workshop Co-Director, "Research Roundtable: Energy, Technology, and Institutions," Searle Center on Law, Regulation, and Economic Growth, Northwestern University, June 2009

Illinois Smart Grid Initiative, project team member and facilitator, May 2008-October 2008

Director, Center for Applied Energy Research, Interdisciplinary Center for Economic Science at George Mason University, October 2003-October 2006

Conference Program Committee, International Society for New Institutional Economics, 2007

Strategy Committee, U.S. Association of Energy Economics, August 2005-August 2006
Conference Co-Chair, U.S. Association of Energy Economics, 2006
Faculty member, Pacific Northwest National Lab Summer Study Session on Electric Power Markets, 2004
Faculty member, Mercatus Center Congressional Chief of Staff Retreat, 2004
Faculty member, Institute for Humane Studies Social Change Graduate Workshop, 2003, 2004
Faculty member, Ronald Coase Institute Workshop on Institutional Analysis, 2002, 2003
Faculty member, with Vernon Smith and Bart Wilson (George Mason University), The Economics of Electricity Markets, Federal Energy Regulatory Commission staff education, July 2002
Instructor, Institute for Humane Studies summer seminars, 1994-1996, 2002-2010, 2013
Consultant, Department of Environmental Quality, Commonwealth of Virginia, 1996
Participant, PERC Summer Seminar on Free-Market Environmentalism, 1995

Awards and Honors

Invited Classical Liberalism Speaker 2016-2017, Whitman College
Institute for Sustainability and Energy at Northwestern (ISEN) Booster Grant, 2014-2015
Philosophy, Politics, and Economics (PPE) Speaker Series grant, Charles G. Koch Foundation, 2013-2014
Undergraduate reading group grant, Charles G. Koch Foundation, 2011, 2012, 2013
Research grant, Searle Center on Law, Regulation, and Economic Growth, Northwestern University, 2008
Research grant, Searle Fund for Policy Research, 2003-2004, 2004-2005, 2006-2007
Research grant, International Foundation for Research in Experimental Economics, 2003, 2005, 2006
Visiting Scholar, Northwestern University, Summer 1995
College of William and Mary Summer Research Grant, Summer 1994, Summer 1995
Gerschenkron Prize nominee, Economic History Association, 1994
Cole Grant-in-Aid, Economic History Association, June 1994
Visiting Research Fellow, University of Manchester (UK), Summer 1994
Claude R. Lambe Fellowship, Institute for Humane Studies, 1990-1991, 1991-92
Summer Research Fellowship, Institute for Humane Studies, 1990
Northwestern University Dissertation Year Grant, 1990-91