

VITAE

Paul L. Joskow

Elizabeth and James Killian Professor of Economics
Department of Economics
E52-414
Cambridge, MA 02139
617-253-6664
917-741-0009 (mobile)
pjoskow@mit.edu

EDUCATION:

YALE UNIVERSITY
Ph.D., Economics, 1972
M. Philosophy, Economics, 1970

CORNELL UNIVERSITY
B.A. (with distinction in all subjects), Economics, 1968

EMPLOYMENT:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

2018-present	Elizabeth and James Killian Professor of Economics (post-tenure)
2010-2017	Elizabeth and James Killian Professor of Economics, Emeritus
1996-2010	Elizabeth and James Killian Professor of Economics, Department of Economics and (joint)
1989-2010	Professor of Economics and Management, Sloan School of Management
1999-2007	Director, MIT Center for Energy and Environmental Policy Research
1994-98	Head, Department of Economics
1993-94	Associate Head, Department of Economics
1989-96	Mitsui Professor of Economics, Department of Economics
1982-85	Associate Head, Department of Economics
1978-89	Professor of Economics, Department of Economics
1975-78	Associate Professor, Department of Economics
1972-75	Assistant Professor of Economics, Department of Economics

ALFRED P. SLOAN FOUNDATION

2008-2017 President and Chief Executive Officer
2018-present President, Emeritus

NATIONAL BUREAU OF ECONOMIC RESEARCH

1988-2007 NBER Research Associate
2018-present: NBER Research Associate

FELLOWSHIPS, HONORS AND AWARDS:

Phi Beta Kappa (Cornell)
Woodrow Wilson Fellow
National Science Foundation Traineeship (1968-1969)
National Science Foundation Graduate Fellowship (1969-1972)
Joel Dean Lecturer, Oberlin College (1983)
Fellow, Center for Advanced Study in the Behavioral Sciences (1985-1986)
Fellow, Econometric Society (1988)
John M. Olin Visiting Scholar, Harvard Law School (1988-1990)
Fellow, American Academy of Arts and Sciences (1991)
Distinguished Service Award, Public Utility Research Center,
University of Florida (1993)
International Association for Energy Economics, Best Paper Award (1993)
Edward A. Hewett Prize (with Richard Schmalensee and Natasha Tsukanova),
American Association for the Advancement of Slavic Studies (1995)
Distinguished Service Award, MIT School of Humanities and Social Sciences
(1998)
Keynote Lecturer, International Society for New Institutional Economics (2000)
President (2002-2003); Vice President (2001-2002), Board (2001-2007)
International Society for New Institutional Economics
Graduate Teaching Award, MIT Graduate Economics Association (1982)
Undergraduate Teaching Award, MIT Undergraduate Economics Association
(2002)
Fathauer Lecturer, University of Arizona (2002)
Keynote Lecturer, International Society for New Institutional Economics (2003)
Keynote Lecturer, Industrial Organization Society (2004)
Outstanding Contributions to the Profession Award, International Society for
Energy Economics (2004)
Beesley Lecturer (London Business School – October 2005)
Yale Medal (November 2005)
Gordon Y. Billard Award (MIT - 2006)
Doctor Honoris Causa Degree, University of Paris-Dauphine (January 2007)
Distinguished Fellow Award, Industrial Organization Society, (April 2007)
Hans Landsberg Memorial Lecturer, Resources for the Future (October 2008)
Distinguished Lecturer, Center for Regulatory and Market Studies, American

Enterprise Institute (February 2009)
Adelman-Frankel Award, United States Association for Energy Economics (June 2009)
Mullen Lecturer, University of Maryland Baltimore County (April, 2010)
Distinguished Fellow Award, American Economic Association (2013)
John and Cynthia Schultz Lecturer, University of Colorado Law School, (October 2016)
Founders Award, National Action Council for Minorities in Engineering, 2017

PROFESSIONAL ACTIVITIES:

Editorial Boards:

Co-Editor, Journal of Law, Economics and Organization (1992-1995)
Editorial Board, American Economic Review (1993-1999)
Editorial Advisory Board, The Electricity Journal (1992-present)
Editorial Board, Land Economics (1975-1980)
Associate Editor, Bell Journal of Economics (1976-1977; 1979-1983)
Co-Editor, Bell Journal of Economics (1977-1978)
Editorial Board, The Energy Journal (1981-1987; 2017- present)
Associate Editor, The Rand Journal of Economics (1984-1985)
Editorial Board, Journal of Law, Economics and Organization (1984-present)
Editorial Board, International Journal of Law and Economics (1987-1991)
Editorial Board, Politics and Economics (1990-1994)
Editorial Board, Journal of Financial Intermediation (1989-1992)
Editorial Board, Public Utilities Law Anthology (1995-1998)
Editorial Board, Journal of Managerial and Decision Economics (1997-2014)
Editorial Board, Utilities Policy (1997 – 2007)
Co-Editor, Economics of Energy and Environmental Policy (2011-2016)

Corporate and Non-Profit Boards:

Board of Directors, New England Electric System (1987- 2000)
Board of Directors, State Farm Indemnity Company (1991- 2002)
Board of Trustees, Putnam Mutual Funds (1997-present)
Board of Directors, National Grid plc (formerly National Grid Group and National Grid Transco) (2000 – 2007)
Board of Directors, TransCanada Corporation and TransCanada Pipelines Limited (2004 – 2013)
Board of Directors, Whitehead Institute for Biomedical Research (1993-2005; 2018-present)
President, Yale University Council (1993-2006)
Board of Overseers, Boston Symphony Orchestra (2005-2017)
Board of Advisors, Emeritus, Boston Symphony Orchestra (2018-present)
Board of Directors, Exelon Corporation, (2007 – present)
Board of Trustees, Yale University (Fellow, Yale Corporation) (2008-2020)

Public Service, Academic and Other Affiliations:

Massachusetts Energy Facilities Siting Task Force (1974)
Economics Task Force-National Commission for Review of the Anti-Trust Laws and Procedures (1978)
Regulatory Research Advisory Board, American Enterprise Institute (1978-1985)
Administrative Conference of the United States (1980-1982) (Public Member)
Electric Power Research Institute Advisory Council (1980-1984)
Brookline Historical District Commission (1981-1983)
Economic Research Coordinating Group, New England Council (1981-1983)
National Academy of Sciences, Committee on Electricity and Economic Growth (1984-1985)
National Science Foundation Regulation Sub-Panel (1984-1985)
Sloan Foundation Economics Advisory Board (1984-1989)
Keystone Foundation Energy Futures Project, Advisory Board (1989-1990)
U.S. EPA Acid Rain Advisory Committee (1990-1992)
Scientific Advisory Board of the Institut d'Economie Industrielle, Toulouse, France (1994-2006)
Chairman, Research Advisory Board, Committee for Economic Development, (1990-1994)
Governor's Advisory Committee on the State Energy Plan (Massachusetts) (1992-1996)
Chairman, Electric Power Research Institute, Economic Advisory Committee (1992-1995)
Yale University Council (1988-2008; President-1993-2006)
Presidential Economic Policy Advisory Board (1994-1997)
Science Advisory Board, Conservation Law Foundation (1997-2006)
Academic Advisory Board, the AEI-Brookings Joint Center for Regulatory Studies (1998-2007)
Member, U.S. Environmental Protection Agency, Science Advisory Board, Environmental Economics Advisory Committee (1998-2002)
National Commission on Energy Policy (2002 – 2004)
Scientific Council, Fondation Jean Jacques Laffont -Toulouse School of Economics (2006- 2015)
Member, Council on Foreign Relations (2008- present)
Chair, Board on Science, Technology and Economic Policy, National Academies (2010-2015)
Member, Economic Club of New York (2012- 2017)
Secretary of Energy Advisory Board (SEAB) (2013 - 2015)
Member, Economics Advisory Council, Environmental Defense Fund (2018-2021)
Member, Advisory Board, Institute of Policy Integrity, NYU School of Law (2018-present)
Member, Advisory Board, Columbia Center for Global Energy Research (2018-Present)

Professional Associations:

American Economic Association (Distinguished Fellow)
Econometric Society (Fellow)
International Association for Energy Economics
International Society for New Institutional Economics
(Vice-President, President)
American Academy of Arts and Sciences (Fellow)
Council on Foreign Relations

PUBLICATIONS AND WORKING PAPERS**PhD THESIS:**

"A Behavioral Theory of Public Utility Regulation," unpublished Ph.D. dissertation, Yale University, 1972

BOOKS AND MONOGRAPHS:

Electric Power in the United States: Models and Policy Analysis
(with Martin Baughman and Dilip Kamat), MIT Press, 1979.

Controlling Hospital Costs: The Role of Government Regulation, MIT Press, 1981.

Markets for Power: An Analysis of Electric Utility Deregulation (with Richard Schmalensee), MIT Press, 1983.

Economic Regulation, (Editor), Critical Ideas in Economics, Edward Elgar, 2000

Markets for Clean Air: The U.S. Acid Rain Program (with R. Schmalensee, A.D. Ellerman, J.P. Montero, and E. Bailey), Cambridge University Press, 2000.

Empirical Industrial Organization, (Editor with Michael Waterson), Critical Ideas in Economics Series, Edward Elgar, 2004.

Deregulation: Where Do We Go From Here? Center for Regulatory and Market Studies, American Enterprise Institute (October 2009).

Handbook on Electricity Markets, Glachant, Joskow and Pollitt, editors, Edward Elgar Publishing (2021).

ARTICLES, NOTES AND COMMENTS:

"Publicly Owned Electric Utility Profits and Resource Allocation: Comment," Land Economics, August, 1971.

"The Determination of the Allowed Rate of Return in a Formal Regulatory Hearing," Bell Journal of Economics and Management Science, 3:1, 1972, pp 632-644.

"Pricing Decisions of Regulated Firms: A Behavioral Approach", Bell Journal of Economics and Management Science, 4:1, Spring 1973, pp 118-140.

"The Fogel-Engerman Iron Model: A Clarifying Note", Journal of Political Economy (with Edward McKelvey), 81:5, September-October 1973, pp 1236-1240.

"Cartels, Competition and Regulation in the Property and Liability Insurance Industry," Bell Journal of Economics and Management Science, 4:2, 1973, 375-427.

"Energy Self-Sufficiency: An Economic Evaluation" (with several others), Technology Review, May 1974. Reprinted as a monograph by the American Enterprise Institute, pp 23-34.

"Inflation and Environmental Concern: Change in the Process of Public Utility Price Regulation", Journal of Law and Economics, XVII:2, October 1974, pp 291-327. Reprinted in Economic Regulation, (P.L. Joskow, ed.) Edward Elgar, 2000 (Another version of this paper appears in Electric Power Reform: Alternative for Michigan, University of Michigan, 1975.)

"The Effects of Fuel Prices on Residential Appliance Choice in the United States" (with Martin Baughman), Land Economics, February 1975, pp 41-49.

"Firm Decision-Making Processes and Oligopoly Theory", American Economic Review, 65:2, May 1975, pp 270-279.

"Regulation and Financial Condition of the Electric Power Companies in the 1970's" (with Paul MacAvoy), American Economic Review, 65:20, May 1975, pp 95-301.

"Applying Economic Principles to Public Utility Rate Structures: The Case of Electricity," in Studies in Electric Utility Regulation (Cicchetti and Jurewitz, editors), Ballinger Books, 1975.

ARTICLES, NOTES AND COMMENTS-continued:

"Financing the Future Growth of the Electric Power Industry", Electric Power Financial Problems and Potential Solutions, Mitre, 1975.

"Contributions of the Theory of Marginal Cost Pricing," Bell Journal of Economics, 7:1, Spring 1976, pp 197-206.

"Energy Consumption by Residential and Commercial Consumers in the United States" (with Martin Baughman), Energy Systems and Policy, Spring 1976, pp 305-322.

"The Future of the U.S. Nuclear Energy Industry", Bell Journal of Economics, 7:1, Spring 1976, pp 3-32.

"The Nuclear Industry Today", Foreign Affairs, July 1976.

"Commercial Impossibility, the Uranium Market, and the Westinghouse Case", Journal of Legal Studies, VI:1, January 1977, pp 119-176. Reprinted in Corporate Counsel's Annual, 1978.

"The Effects of a Nuclear Moratorium on Regional Electricity Prices and Fuel Consumption by the Electric Utility Industry", Land Economics, 53:1, February 1977, pp 24-42.

"The Future of the Electric Power Industry" (with Martin Baughman), IEEE Journal, April 1977.

"Electric Utility Fuel Choice Behavior in the United States" (with Frederick Mishkin), International Economic Review, 18:3, October 1977, pp 719-736.

"Medical Efficacy versus Economic Efficiency: A Conflict in Values" (with William Schwartz), New England Journal of Medicine, 299, December 28, 1978, pp 1462-1464.

"Competition and Regulation in the Property/Casualty Insurance Industry", Report of the National Commission for the Review of Antitrust Laws and Procedures, U.S. Government Printing Office, January 22, 1979.

"The Effects of Learning by Doing on Nuclear Power Plant Operating Reliability", Review of Economics and Statistics, 61:2, May 1979, pp 166-168.

"Should Synfuels be Subsidized" (with Robert Pindyck), Regulation, September-October 1979, pp 18-43.

ARTICLES, NOTES AND COMMENTS-continued:

"Public Utility Regulatory Policy Act of 1978", Natural Resources Journal, 1979, pp 787-809.

"A Framework for Analyzing Predatory Pricing Policy" (with Alvin Klevorick), Yale Law Journal, December 1979, pp 493-552. Reprinted in Corporate Counsel's Annual, 1981.

"Electric Utility Rate Structures in the United States: Some Recent Developments", in Public Utility Ratemaking in an Energy Conscious Environment (W. Sichel, editor), Westview Press, 1979.

"The Effects of Competition and Regulation on Hospital Bed Supplies and the Reservation Quality of the Hospital", Bell Journal of Economics, 1980, 421-447.

"Duplicated Hospital Facilities" (with William Schwartz), New England Journal of Medicine, 303, December 18, 1980, pp 1449-1457.

"Siting Nuclear Power Plants" (with Joel Yellin), Virginia Journal of Natural Resource Law, 1:1, Summer, 1980, pp 2-68.

"The Political Content of Antitrust: Comments", Antitrust Law and Economics (Oliver Williamson, editor), Dame Publications, 1980.

"The Effects of FTC Advertising Regulation: A Comment", Journal of Law and Economics, XXIV, December 1981, pp 449-455

"Alternative Regulatory Mechanisms for Controlling Hospital Costs", A New Approach to the Economics of Health Care (Mancur Olsen, editor), American Enterprise Institute, 1981.

"Regulation in Theory and Practice: A Current Overview" (with Roger Noll), Studies in Public Regulation (G. Fromm, editor), MIT Press, 1981.

"Evaluating the Costs and Benefits of Appliance Efficiency Standards" (with J. Hausman), American Economic Review, 72:2, May 1982, pp 220-225.

"Industrial Cogeneration and Electricity Production in the United States", Regulatory Reform and Public Utilities (M. Crew, editor), Heath, Lexington, 1982.

ARTICLES, NOTES AND COMMENTS-continued:

"Problems and Prospects for Nuclear Power in the U.S.," in Energy, Economics, and the Environment (A. Daneke, editor), Lexington Books, 1982.

"The Simple Economics of Industrial Cogeneration" (with Donald Jones), The Energy Journal, January 1983, pp 1-22.

"Reimbursement Policy, Cost Containment and Non-Price Competition: Comment", Journal of Health Economics, 2, August 1983, pp 167-174.

"Local Telephone Pricing in a Competitive Environment: Comment" Telecommunications Today and Tomorrow (Eli Noam, editor), Harcourt Brace Jovanovich, 1983, pp 291-296.

"Adversary Hydro Relicensing Application: Using Economic Efficiency Criteria" (with Richard Schmalensee), Public Utilities Fortnightly, December 20, 1984, pp 1-7.

"The Effects of Fuel and Electricity Prices on Cogeneration in the Pulp and Paper Industry", Energy Systems and Policy, 8:1, 1984, pp 1-28.

"The Effects of Technological Change, Experience and Environmental Regulation on the Construction Costs of Coal-Burning Generating Units" (with Nancy Rose), Rand Journal of Economics, 16:1, Spring, 1985, pp 1-27.

"Vertical Integration and Long Term Contracts: The Case of Coal Burning Electric Generating Plants", Journal of Law, Economics and Organization, 1:1, Spring, 1985, pp 33-80. (Reprinted in Industrial Organization (O.E. Williamson, editor) Elgar Publishing, 1990, 1996; reprinted in Transactions Costs Economics, O.E. Williamson and S.E. Masten, editors, Elgar Publishing, 1995)

"Long Term Vertical Relationships and the Study of Industrial Organization and Government Regulation", Zeitschrift fur die gesamte Staatswissenschaft (Journal of Institutional and Theoretical Economics), December 1985, 587-593.

"Comments on the Residential Electricity Time-of-Use Pricing Experiments", Social Experimentation (J. Hausman and D. Wise, editors), University of Chicago Press, 1985.

"Mixing Regulatory and Antitrust Policies in the Electric Power Industry: the Price Squeeze and Retail Market Competition, Antitrust and Regulation: Essays in Memory of John J. McGowan (F. Fisher, editor), MIT Press, 1985.

ARTICLES, NOTES AND COMMENTS-continued:

"The Stochastic Determinants of Hospital-Bed Supply: Reply", Journal of Health Economics, 4, 1985, pp 183-185.

"Estimated parameters as Independent Variables with an Application to the Costs of Electric Generating Units" (with Richard Schmalensee), Journal of Econometrics, 31, April 1986, 275-305.

"Incentive Regulation for Electric Utilities", (with Richard Schmalensee), Yale Journal on Regulation, December 1986, pp 1-49. Reprinted in Public Utilities Law Anthology, 1986 and in Economic Regulation, P.L. Joskow ed., Edward Elgar, 2000.

"Productivity Growth and Technical Change in the Generation of Electricity," The Energy Journal, Research Reports, January 1987, pp 17-38.

"Contract Duration and Relationship Specific Investments: Empirical Evidence from Coal Markets", American Economic Review, 77:1, March 1987, pp 168-185. (Reprinted in Transaction Cost Economics, O.W. Williamson and S.E. Masten, editors, Elgar Publishing 1995 (hardcover); and 1999 paperback. Reprinted in Case Studies in Contracting and Organization, Scott Masten, editor, Oxford University Press, 1996)

"The Performance of Coal-Burning Electric Generating Units in the United States: 1960-1980" (with Richard Schmalensee), Journal of Applied Econometrics, 2:2, April 1987, pp 85-109.

"Price Adjustment in Long Term Contracts: The Case of Coal", Journal of Law and Economics, XXXI, April 1988, pp 47-83.

"Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence", Journal of Law, Economics and Organization, IV:1, Spring 1988, pp 95-117. (Reprinted in The Nature of the Firm, O.E. Williamson and S. Winter, editors, Oxford University Press, 1991.)

"The Evolution of Competition in the Electric Power Industry", Annual Review of Energy, 13, 1988, pp 215-238.

"Foreword" to The Economics of Regulation by A.E. Kahn, in the MIT Press reprint of these volumes, 1988.

"The Effects of Economic Regulation" (with Nancy Rose), in Handbook of Industrial Organization (R. Schmalensee and R. Willig, editors), North-Holland, 2, 1989.

ARTICLES, NOTES AND COMMENTS-continued:

"Regulatory Failure, Regulatory Reform and Structural Change In The Electric Power Industry", Brookings Papers on Economic Activity: Microeconomics, 1989, pp 125-208. Reprinted in Economic Regulation, P.L. Joskow, ed., Edward Elgar, 2000.

"Opportunity Costs As A Legitimate Cost of Transmission Service", Public Utilities Fortnightly, (with J. Landon and J. Pace), December 7, 1989, pp 30-73.

"Understanding the Unbundled Conservation Bidding Proposal", Public Utilities Fortnightly, 125:1, January 7, 1990, 3-28.

"The Performance of Long-Term Contracts: Further Evidence from Coal Markets", Rand Journal of Economics, 21:2, Summer, 1990, pp 251-274.

"The Diffusion of New Technology: Evidence From the Electric Utility Industry", (with Nancy Rose), Rand Journal of Economics, 21:3, 1990, pp 354-373.

"Integrating Conservation Into Competitive Generation Bidding Programs", in Competition in Electricity: New Markets and New Structures, Public Utility Reports, Spring 1990.

"The Evolution of an Independent Power Sector and Competitive Procurement of New Generating Capacity", Research in Law and Economics, 13, 1991, pp 63-100.

"McCarran-Ferguson Act Reform: More Competition or More Regulation?" Journal of Risk and Uncertainty, (with Linda McLaughlin), 4, 1991, pp 373-401.

"The Role of Transactions Cost Economics in Antitrust and Public Utility Regulatory Policies", Journal of Law, Economics and Organization, 7, 1991, pp 53-82.

"Expanding Competitive Opportunities in Electricity Generation", Regulation, Winter, 1992, pp 25-37.

"Accounting For Environmental Externalities", The Electricity Journal, May 1992.

"What Does a Negawatt Really Cost? Evidence From Electric Utility Conservation Programs", (with Donald Marron), The Energy Journal, 13:4, 1992.

"Carbon Taxes and Economic Welfare: Comments", Brookings Papers on Economic Activity: Microeconomics, 1992, pp 393-454.

ARTICLES, NOTES AND COMMENTS-continued:

"Regulatory Constraints on CEO Compensation," Brookings Papers on Economic Activity: Microeconomics (with N. Rose and A. Shepard), 1993:1, 1993, pp. 1-58.

"What Does Utility-subsidized Energy Conservation Really Cost?" Science, 260, April 16, 1993, pp 281, 379.

"Electricity Agenda Items for the New FERC", The Electricity Journal, June 1993, 18-28.

"What Does a Negawatt Really Cost? Further Thoughts and Additional Evidence," (with Donald Marron), The Electricity Journal, July 1993.

"Deregulation and Regulatory Reform During 1980s", (with Roger Noll), in American Economic Policy During the 1980s (M. Feldstein, editor) University of Chicago Press, 1994.

"More from the Guru of Energy Conservation: There Must Be A Pony!", The Electricity Journal, May 1994, pp 50-61.

"Competition Policy in Russia During and After Privatization", (with Richard Schmalensee and Natasha Tsukanova), Brookings Papers on Economic Activity: Microeconomics, 1994, pp 301-381.

"The New Institutional Economics: Alternative Approaches", Journal of Theoretical and Institutional Economics, 151:1, March 1995, 248-259.

"Competition in the U.S. Electric Power Industry: Some Recent Developments", in Competition in the Electricity Supply Industry, DJOF Publishing Company, Copenhagen, 1995, 16-66.

"Privatization in Russia: What Should Be A Firm?" (with Richard Schmalensee), International Journal of the Economics of Business, 2:2, 1995, pp 297-327. Reprinted in Transaction Cost Economics, Claude Menard, Editor, Edward Elgar Press, 1997.

"Utility-Subsidized Energy Efficient Programs", Annual Review of Energy and the Environment, 20, 1995, pp. 526-534.

"L'espeansione della concorrenza nell' industria elettrica statunitense", Energia, XVI:4, December 1995.

ARTICLES, NOTES AND COMMENTS-continued:

"Political Constraints on Executive Compensation: Evidence From the Electric Utility Industry", (with Nancy Rose and Catherine Wolfram), Rand Journal of Economics, 27:1, Spring, 1996, pp 165-182. (Reprinted in The Economics of Executive Compensation, Kevin Hallock and Kevin Murphy (editors), Edward Elgar Publishing Ltd., UK, 1998).

"Introducing Competition into Regulated Network Industries: From Hierarchies to Markets in Electricity", Industrial and Corporate Change, 5:2, 1996, pp 341-382. Reprinted in Firms, Markets and Hierarchies (eds. Glenn R. Carroll and David J. Teece) Oxford University Press, 1999.

"How Will It All End? The Electric Utility Industry in 2005", The Electricity Journal, 9:1, January/February, 1996, pp 67-73.

"Comment on 'Power Struggles: Explaining Deregulatory Reform in Electricity Markets'", Brookings Papers on Economic Activity: Microeconomics, 1996, pp 251-264.

"Restructuring, Competition and Regulatory Reform in the U.S. Electricity Sector", Journal of Economic Perspectives, 11:3, Summer, 1997, pp 119-138. Reprinted as Chapter 2 in Designing Competitive Electricity Markets, Hung-Po, Chao and Hillard, G. Huntington, Editors, Kluwer Academic Publishers, 1998.

"An Electric Utility Merger: Constellation", in The Antitrust Revolution, 3rd Edition, John Kwoka and Lawrence White, editors, Oxford University Press, 1998.

"Electricity Sectors in Transition." The Energy Journal, 19:2, 1998, pp 24-52.

"The Market for Sulfur Dioxide Emissions", American Economic Review, (with R. Schmalensee and E. Bailey), 88:4, September 1998, pp 669-685.

"An Interim Evaluation of Sulfur Dioxide" Symposium SO₂ Trading, Journal of Economic Perspectives, (with R. Schmalensee, A.D. Ellerman, J. Montero, and E. Bailey), 12:3, Summer, 1998, pp 53-68. Reprinted in Economics of the Environment (Fourth Edition, R. Stavins Ed.), W.W. Norton & Company, New York, 1999.

ARTICLES, NOTES AND COMMENTS-continued:

"The Political Economy of Market-Based Environmental Policy: The 1990 U.S. Acid Rain Program", (with Richard Schmalensee) Journal of Law and Economics, XLI:1, April 1998, pp 36-83. Reprinted in Economics of the Environment (Fourth Edition, R. Stavins Ed.), W.W. Norton & Company, New York, 1999. Reprinted in The Political Economy of Environmental Regulation, R. Stavins, editor, Elgar Publishing, 2005.

"Asset Specificity and Vertical Integration", The New Palgrave Dictionary of Economics and Law, Peter Neuman, Editor, MacMillan, 1998.

"Restructuring Electric Utilities: BG&E and PEPCO Propose to Merge". Printed in The Antitrust Revolution: Economics, Competition and Policy, Kwoka, John and White, Lawrence, Editors; Oxford University Press, 1998.

"Regulatory Priorities for Infrastructure Sectors in Developing Countries, Annual World Bank Conference on Development Economics 1998, The World Bank, April 1999, pp 191-223.

"Summary Evaluation of the U.S. Sulfur Dioxide Emissions Trading Program as Implemented in 1995", with R. Schmalensee, A.D. Ellerman, Elizabeth Bailey, and J. Montero, in Pollution for Sale: Emissions Trading and Joint Implementation edited by Steve Sorrell and Jim Skea (London, Edward Elgar Publishing.), 1999.

"The Bell Doctrine: Applications in Telecommunications, Electricity and Other Network Industries," (with Roger Noll), Stanford Law Review, May 1999.

"Por que reforma el sector electrico en Mexico?" Reforma Estructural del Sector Electrico, (Ramiro Tovar Landa, editor), Asociacion Mexicana de Cultura, 2000.

"Deregulation and Regulatory Reform in the U.S. Electric Power Sector," in Deregulation of Network Industries: The Next Steps (S. Peltzman and Clifford Winston, eds.), Brookings Press, 2000.

"Transmission Rights and Market Power on Electric Power Networks," (with Jean Tirole), Rand Journal of Economics, 31:3, 2000, pp 450-487.

"Regulating the Electricity Sector in Latin America, Comments," Economia, 1:1, Fall 2000, pp 199-215.

"California's Electricity Crisis," Oxford Review of Economic Policy, 17:3, 2001, pp 365-388.

ARTICLES, NOTES AND COMMENTS-continued:

"Transaction Cost Economics, Antitrust Rules and Remedies," Journal of Law, Economics and Organization, 18:1, April 2002, pp 95-116.

"California: la Crisi Elettrica," Energia, 23:2, Guigno, 2002, pp 16-37.

"U.S. Energy Policy During the 1990s," in United States Economic Policy During the 1990s, J. Frankel and P. Orszag (eds.), MIT Press, 2002. A version of this paper was reprinted in *Current History*, March 2002.

"Electricity Sector Restructuring and Competition: A Transaction Cost Perspective," The Economics of Contracts: Theories and Applications, Eric Brousseau and Jean-Michel Glachant (eds.), Cambridge University Press, 2002.

"California's Electricity Crisis: A Postmortem," The Milken Institute Review, Second Quarter, 2002, pp 32-44.

"A Quantitative Analysis of Pricing Behavior in California's Wholesale Electricity Market During Summer 2000" (with Edward Kahn), The Energy Journal, 23:4, 2002, pp 1-35.

Emissions Trading in the United States (with A.D. Ellerman and D. Harrison), Pew Center on Global Climate Change, Washington, D.C., May 2003.

"Energy Policies and Their Consequences After 25 Years," The Energy Journal, 24:4, October 2003.

"Electricity Sector Restructuring and Competition: Lessons Learned," Cuadernos de Economia (Latin American Journal of Economics), 40:121, December 2003, pp 548-558.

The Future of Nuclear Power, Joint MIT Faculty Study Group, July 2003.
<http://web.mit.edu/nuclearpower/>

"Vertical Integration," Handbook of New Institutional Economics, (C. Menard and M. Shirley, eds), 2005, Springer.

"The Difficult Transition to Competitive Electricity Markets in the United States," Electricity Deregulation: Choices and Challenges, (J. Griffin and S. Puller, eds.) University of Chicago Press, 2005.

"Merchant Transmission Investment," (with Jean Tirole). Journal of Industrial Economics, June 2005.

ARTICLES, NOTES AND COMMENTS-continued:

“Regulation and Deregulation After 25 Years: Lessons for Research,”
Review of Industrial Organization, 26: 169- 193, 2005.

“Transmission Policy in the United States,” Utilities Policy, 13: 95-115, 2005.

“Markets for Power in the United States: An Interim Assessment,” The Energy Journal, 27(1), 1-36, 2006.

“Electricity Sector Liberalization: Lessons Learned From Cross-Country Studies,” in Electricity Market Reform: An International Perspective, (F.P. Sioshansi and W. Pfaffenberger, editors), Elsevier, 2006.

“Patterns of Transmission Investment,” Competitive Electricity Markets and Sustainability (Francois Leveque, ed.), Edward Elgar, 2006

“Retail Electricity Competition,” (with Jean Tirole), Rand Journal of Economics, 37(4), Winter 2006, 799-815 (Published August 2007)

“Incentive Regulation for Electricity Networks,” Journal for Institutional Comparisons (CESifo DICE REPORT), 2006.

“Competitive Electricity Markets and Investment in New Generating Capacity,”
The New Energy Paradigm (Dieter Helm, editor), Oxford University Press, 2007.

“Reliability and Competitive Electricity Markets,” (with Jean Tirole), Rand Journal of Economics, Spring 2007, 38(1), 68-84. (Published November 2007)

“Supply Security on Competitive Electricity and Natural Gas Markets,” (2005 Beesley Lecture), in Utility Regulation in Competitive Markets (Colin Robinson, Editor), Edward Elgar, 2007.

“Regulation of Natural Monopoly,” Chapter 16, Handbook of Law and Economics, A.M. Polinsky and S. Shavell, editors, Elsevier, 2007.
<http://econ-www.mit.edu/files/1180> .

“Electricity from Uranium,” The Milken Institute Review, Fourth Quarter 2007, 32-43.

“Lessons Learned from Electricity Market Liberalization,” *The Energy Journal*, Special Issue on the Future of Electricity, pp. 9-42, 2008.

“New Institutional Economics: A Report Card,” *New Institutional Economics*, J-M Glachant and E. Brouseau, eds. Cambridge University Press, 2008.

“Capacity Payments in Imperfect Electricity Markets: Need and Design,” *Utilities Policy*, 16: 159-170, 2008.
<http://econ-www.mit.edu/files/2093>

The EU Emissions Trading System in Perspective (with A. Denny Ellerman), Pew Center for Global Climate Change, May 2008.

“Vertical Integration,” *Issues in Competition Law and Policy*, Wayne Dale Collins (ed.), Volume 1, Chapter 11, American Bar Association Section on Antitrust Law, August 2008.

“Incentive Regulation and Its Application to Electricity Networks,” *Review of Network Economics*, Volume 7, issue 4, December 2008.

“Forward,” *Electricity Reform in Europe* (J-M Glachant and F. Leveque, eds), Edward Elgar, 2009.

“The Economic Future of Nuclear Power,” (with John Parsons), *Daedalus*, Fall 2009, Volume 1, 45-59.

“The U.S. Energy Sector: Progress and Challenges, 1972-2009,” *Dialogue*, Volume 17, No. 2, August 2009 (USAEE Adelman-Frankel award lecture).

“Vertical Integration,” Symposium in Honor of Oliver Williamson, *The Antitrust Bulletin*, 35(3), Fall 2010, pp. 545-586.

“Market Imperfections vs. Regulatory Imperfections,” *CESifo DICE Report*, 8 (3), 2010, pp. 3-7.

“Comparing the Costs of Intermittent and Dispatchable Generating Technologies,” *American Economic Review, Papers and Proceedings*, 101(3): 238-241, May, 2011.

“Creating a Smarter U.S. Electricity Grid,” *Journal of Economic Perspectives*, 26(1), 29-48, Winter 2012

“Dynamic Pricing of Electricity,” (with Catherine Wolfram), *American Economic Review Papers and Proceedings 2012*, 102(3):381-385.

- “The Future of Nuclear Power After Fukushima,” (with John Parsons), *Economics of Energy and Environmental Policy*, 1(2): 99-113, 2012.
- "Alfred E. Kahn, 1917-2010," (with Roger G. Noll), July 2012.
Review of Industrial Organization, 42 (2):107-126 (March 2013).
- “Natural Gas: From Scarcity to Abundance in the U.S.,” *American Economic Review Papers and Proceedings*, 103(3), 338-343 May 2013.
- “Symposium on ‘Capacity Markets,’ *Economics of Energy and Environmental Policy* 2 (2), pp. v-vi, September 2013.
- “Incentive Regulation in Theory and Practice: Electric Distribution and Transmission Networks,” Chapter 5 in *Economic Regulation and its Reform: What Have We Learned?* (Nancy Rose, ed.), University of Chicago Press, 2014.
- “Symposium on Energy Efficiency,” *Economics of Energy & Environmental Policy*, 5(2), pp. 1-6, 2016.
- “Jerry Hausman,” *Journal of Econometrics*, 211 (2019), 11-15.
- “Challenges for Wholesale Electricity Markets with Intermittent Generation at Scale: The U.S. Experience,” *Oxford Review of Economic Policy*, 35(2), 2019, 291-331. <https://doi.org/10.1093/oxrep/grz001>
- “Transmission Capacity is Needed to Decarbonize the Electricity Sector Efficiently,” *Joule* (2019), <https://doi.org/10.1016/j.joule.2019.10.011>.
- “Competition for Electric Transmission Projects in the U.S.: FERC Order 1000,” *Transmission Network Investment in Liberalized Power Markets*,” Hesamzadeh, Rosellon and Vogelsang, editors, Springer 2020.
- “Optimal Wholesale Pricing and Investment in Generation (with Thomas Olivier-Leautier), Chapter 2 in *Handbook on Electricity Markets*, Glachant, Joskow and Pollitt, editors, Edward Elgar Publishing (2021).
- “From Hierarchies to Markets in Electricity and Partially Back Again: Responding to Deep Decarbonization Commitments and Security of Supply Criteria,” *Journal of Institutional Economics*, (18(2), April 2022).
<https://doi.org/10.1017/S1744137421000400>
- “Facilitating Transmission Expansion to Support Efficient Decarbonization of the Electricity Sector,” *Economics of Energy and Environmental Policy*, (10(2), 2021). <https://doi.org/10.5547/2160-5890.10.2.pjos>

UNPUBLISHED WORKING PAPERS AND REPORTS:

"The Fire Insurance Industry: An Overview," Rand IN-21285, September, 1972.

"Regulation and Deregulation in the Property Insurance Industry," NBER Conference on Government Regulation, University of Chicago, November, 1973.

"Research and Development Strategies for Nuclear Power in the United Kingdom, France and Germany," presented at the NSF Conference on Breeder Reactor Commercialization, August, 1975.

"Regional Fuel Consumption by Electric Utility Industry: 1975-1995," MIT Energy Laboratory, Working Paper, May, 1976.

"Exports of Nuclear Power Technology and Strategies for Managing the Market" (with Ted Greenwood), U.S./German Workshop on Nuclear Energy Problems, January, 1977.

"Regulatory Activities of Government Agencies," MIT Economics Department, Working Paper. No. 171, revised, 1977.

"The Effects of Technological Change, Experience and Environmental Regulation on the Construction Costs of Coal Burning Generating Units-1981-82 Update" (with Nancy Rose), Mimeo, August, 1985.

"Energy and the Environment," Background paper prepared for the Committee for Economic Development, April 1991.

"Managerial Implications of Transaction Cost Economics," presented at the Allied Social Sciences Association Meetings, January 1993.

"Conflicts Between Competition, Conservation, and Environmental Policies Affecting the Electric Power Industry," presented at the Public Utility Research Center, University of Florida, April 29, 1993.

"CEO Pay and Firm Performance: Dynamics, Asymmetries, and Alternative Performance Measures," (with Nancy Rose), NBER Working Paper No. 4976, December 1994.

"Restructuring to Promote Competition in Electricity: In General and Regarding the POOLCO vs. Bilateral Contracts Debate," presented at the AEA meetings in San Francisco, January 1996.

UNPUBLISHED WORKING PAPERS AND REPORTS-continued:

"Sulfur Dioxide Emissions Trading Under Title IV of the 1990 Clean Air Act Amendments: Evaluation of Compliance Costs and Allowance Market Performance," with R. Schmalensee, Elizabeth Bailey, A.D. Ellerman, and J.P. Montero, Report prepared for the National Acidic Precipitation Assessment Program in support of its Quadrennial Report to Congress.

"Transmission Rights and Market Power on Electric Power Networks I: Financial Rights," (with Jean Tirole), MIT Center for Energy and Environmental Policy Research, January 1999.

"Transmission Rights and Market Power on Electric Power Networks II: Physical Rights," (with Jean Tirole), MIT Center for Energy and Environmental Policy Research, January 1999.

"Why Do We Need Electricity Retailers or Can You Get it Cheaper Wholesale?" February 2000

"A Quantitative Analysis of Pricing Behavior In California's Wholesale Electricity Market During Summer 2000," (with Edward Kahn), January 15, 2001, National Bureau of Economic Research Working Paper 8157

"Identifying the Exercise of Market Power: Refining the Estimates," with Edward Kahn, July 5, 2001.

"A Quantitative Analysis of Pricing Behavior in California's Wholesale Electricity Market During Summer 2000: The Final Word," (with Edward Kahn), February 2002. http://econ-www.mit.edu/faculty/download_pdf.php?id=548

"Merchant Transmission Investment," (with Jean Tirole), February 2003 (Revised May, 2003). http://econ-www.mit.edu/faculty/download_pdf.php?id=538

"The Difficult Transition to Competitive Electricity Markets in the United States," Prepared for the conference "Electricity Deregulation: Where From Here?" at the Bush Presidential Conference Center. Texas A&M University, April 4, 2003, (revised, May, 2003).
http://econ-www.mit.edu/faculty/download_pdf.php?id=537

The Future of Nuclear Power, MIT Faculty Study Group, July 2003.
<http://web.mit.edu/nuclearpower/>

UNPUBLISHED WORKING PAPERS AND REPORTS-continued:

“Patterns of Transmission Investment,” Commission de Regulation de l’Energie Seminar, March, 2005.

http://econ-www.mit.edu/faculty/download_pdf.php?id=1133

“Retail Electricity Competition,” (with Jean Tirole), April 21, 2004 (REVISED April 2005).

http://econ-www.mit.edu/faculty/download_pdf.php?id=918

“Incentive Regulation in Theory and Practice: Electric Distribution and Transmission Networks,” CEEPR Working Paper WP-2005-014, September 2005, <http://web.mit.edu/ceepr/www/2005-014.pdf>

“Vertical Integration,” ABA Antitrust Section “Competition Law and Policy Project,” September 2005.

http://econ-www.mit.edu/faculty/download_pdf.php?id=1228

“Reliability in Competitive Electricity and Natural Gas Markets,” Beesley Lecture, December 2005 (REVISED).

“Reliability and Competitive Electricity Markets,” (with Jean Tirole), December, 2006 (REVISED).

http://econ-www.mit.edu/faculty/download_pdf.php?id=917

“The Future of Nuclear Power in the United States,” AEI-Brookings Joint Center Working Paper 06-25, December 2006.

<http://www.aei-brookings.org/publications/abstract.php?pid=1141>

“Time and Location Differentiated NO_x Control in Competitive Electricity Markets Using Cap-and-Trade Mechanisms,” with Katherine Martin and A. Denny Ellerman, mimeo, January 1, 2007

The Future of Coal, An interdisciplinary MIT Study, March 2007.

<http://web.mit.edu/coal/> .

“Deregulation,” Distinguished Lecture, AEI Center for Regulatory and Market Studies, February 2009.

“Comparing the Costs of Intermittent and Dispatchable Generating Technologies,” MIT CEEPR Working Paper WP-2010-013 (revised February 2011). <http://econ-www.mit.edu/files/6317>.

“Competition for Electric Transmission Projects: FERC Order 1000, MIT CEEPR Working Paper 2019-004 (As revised November 2019).

<http://economics.mit.edu/files/18708>.

“From Hierarchies to Markets in Electricity and Partially Back Again: Responding to Deep Decarbonization Commitments and Security of Supply Criteria,” CEEPR Working Paper WP-2021. Revised version in *Journal of Institutional Economics*, (in press 2021). <http://economics.mit.edu/files/21573>

“Facilitating Transmission Expansion to Support Efficient Decarbonization of the Electricity Sector,” MIT CEEPR Working Paper 2021-009, Revised June 27, 2021, Final version in *Economics of Energy and Environmental Policy*, (in press 2021) <http://economics.mit.edu/files/21629>

“Properties of Deeply Decarbonized Electric Power Systems with Storage,” with six other authors, CEEPR Working Paper 2022-003, February 2022. <http://economics.mit.edu/faculty/pjoskow/papers>

“Electricity Sector Policy Reforms to Support Deep Decarbonization,” with H. Gruenspecht, H. Pfeifenberger, and R. Schmalensee,” CEEPR Working Paper 2002-007, April 2022. <http://economics.mit.edu/faculty/pjoskow/papers>,

“From Scarcity to Abundance: Government and Private Initiatives to Manage the Allocation of N95 Masks During the COVID-19 Pandemic,” NBER Working Paper 29876, March 2022. <http://economics.mit.edu/faculty/pjoskow/papers>,

BOOK REVIEWS:

"Approving Nuclear Power Plants: Scientific Decision-Making or Administrative Charade?" *Bell Journal of Economics and Management Science*, Spring 1974, reprinted in *Public Utilities Law Anthology*, II, 1975-1976.

Review of Industrial Market Structure and Economic Performance by F.M. Scherer, *Antitrust Bulletin*, Spring, 1976.

"America's Many Energy Futures," *Bell Journal of Economics*, Spring, 1980.

April 1, 2022