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**EDUCATION:** Ph.D. Harvard University, Economics, June 1988

M.S. Cornell University, Agricultural Economics B.A. Northwestern University, Philosophy

**RESEARCH AND TEACHING FOCUS:** Environmental & Natural Resource Economics and Policy

#### **PUBLICATIONS:**

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- "Nordic Joint Implementation Negotiations: Evaluation of an Experiment." November 5, 1996. With S. Barrett and J. Hourcade. [F-12]
- "Benefit-Cost Analysis in Environmental, Health, and Safety Regulation." Washington, D.C.: American Enterprise Institute, The Annapolis Center, and Resources for the Future, 1996. With K. Arrow, M. Cropper, G. Eads, R. Hahn, L. Lave, R. Noll, P. Portney, M. Russell, R. Schmalensee, and K. Smith. [F-11]
- "Harnessing Market Forces for a Diversified Forest Economy, Summary of Project 88/Round II Workshop Proceedings, September 24, 1992." CSIA, Kennedy School of Government, Harvard University. [F-10]
- "Market-Based Mechanisms for Addressing Global Climate Change, Summary of Project 88/Round II Workshop Proceedings, March 12, 1992." CSIA, Kennedy School of Government, Harvard University. [F-9]
- "Market-Based Policy Mechanisms for Toxic and Hazardous Substance Management, Project 88/Round II Workshop Proceedings, January 16, 1992." CSIA, Kennedy School of Government, Harvard, #P-92-01, March 1992. [F-8]
- The Greening of America's Taxes: Pollution Charges and Environmental Protection. Policy Report No. 13, Progressive Policy Institute, Washington, D.C., February 1992. [F-7A]
- "Market-Based Strategies for Environmental Protection: A Tribute to Senator John Heinz of Pennsylvania, Forum Proceedings, May 16, 1991." CSIA, Project 88 Round II, Discussion Paper #91-6, September 1991. [F-7]

- "Incentive-Based Policies for Municipal Solid Waste Management, Summary of Workshop Proceedings, May 16, 1991." CSIA, Project 88 Round II, Discussion Paper #91-7, September 1991. [F-6]
- Project 88 Round II, Incentives for Action: Designing Market-Based Environmental Strategies. A Public Policy Study sponsored by Senator Timothy E. Wirth, Colorado, and Senator John Heinz, Pennsylvania. Washington, D.C.: May 1991. (editor) [F-5]
- "Project 88 Conference, Harnessing Market Forces to Protect the Environment." EEPC Staff Paper M-89-02, John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts, August 1989. [F-4]
- Project 88 Harnessing Market Forces to Protect Our Environment: Initiatives for the New President. A Public Policy Study sponsored by Senator Timothy E. Wirth, Colorado, and Senator John Heinz, Pennsylvania. Washington, D.C.: December 1988. (editor) [F-3]
- "The Welfare Economics of Alternative Renewable Resource Strategies: Forested Wetlands and Agricultural Production."
  Ph.D. thesis, Harvard University, Cambridge, Massachusetts, May 1988. Published in 1990 by Garland Publishing,
  Inc. [F-2]
- "Forecasting the Size Distribution of Farms: A Methodological Analysis of the Dairy Industry in New York State." M.S. thesis, Cornell University, Ithaca, New York, May 1979. [F-1]

### Blog Posts: An Economic View of the Environment

- "Trump's Paris Withdrawal: The Nail in the Coffin of U.S. Global Leadership?" June 6, 2017.
- "Why Trump Pulled the U.S. Out of the Paris Accord." June 5, 2017.
- "Why the U.S. Should Remain in the Paris Climate Agreement." April 22, 2017.
- "Delighted and Depressed." March 31, 2017.
- "An Explanation and Apology." February 5, 2017.
- "Trying to Remain Positive." January 3, 2017.
- "What Does the Trump Victory Mean for Climate Policy?" November 10, 2016.
- "This is Not a Time for Political Neutrality." October 9, 2016.
- "A Key Moment for California Climate Policy." September 20, 2016.
- "Market Mechanisms in the Paris Climate Agreement: International Linkage under Article 6.2." August 1, 2016.
- "Misleading Talk about Decoupling CO2 Emissions and Economic Growth." May 2, 2016.
- "The Future Role of Economics in the IPCC." April 4, 2016.
- "Can the WTO Take a Lesson from the Paris Climate Playbook?" January 31, 2016.
- "Paris Agreement: A Good Foundation for Meaningful Progress." December 12, 2015.
- "Paris Can be a Key Step." November 17, 2015.
- "The Papal Encyclical and Climate Change Policy." October 5, 2015.
- "A Key Element for the Forthcoming Paris Climate Agreement." September 1, 2015.
- "A Key Moment is Coming for the IPCC's Future." July 8, 2015.
- "Crude Oil Prices, Climate Change, and Global Welfare." May 27, 2015.
- "Assessing the Energy-Efficiency Gap." May 6, 2015.

- "When Reasonable Policy Discussions Become Unreasonable Personal Attacks." March 22, 2015.
- "The IPCC at a Crossroads." February 26, 2015.
- "A Challenge for the 2015 Paris Climate Agreement." February 2, 2015.
- "Assessing the Outcome of the Lima Climate Talks." December 14, 2014.
- "What to Expect at COP-20 in Lima." December 1, 2014.
- "The Final Stage of IPCC AR5 Last Week's Outcome in Copenhagen." November 4, 2014.
- "What Can Universities Do About Climate Change?" October 20, 2014.
- "The UN Climate Summit and a Key Issue for the 2015 Paris Agreement." September 27, 2014.
- "What are the Benefits and Costs of EPA's Proposed CO2 Regulation?" June 19, 2014.
- "EPA's Proposed Greenhouse Gas Regulation: Why are Conservatives Attacking its Market-Based Options?" June 5, 2014.
- "Understanding the IPCC: An Important Follow-Up." May 3, 2014.
- "Is the IPCC Government Approval Process Broken?" April 25, 2014.
- "Can There Be a Positive Prognosis for Climate Negotiations?" March 15, 2014.
- "Will Europe Scrap its Renewables Target? That Would Be Good News for the Economy and for the Environment." January 18, 2014.
- "The Warsaw Climate Negotiations, and Reason for Cautious Optimism." November 28, 2013.
- "Climate Change, Public Policy, and the University." October 22, 2013.
- "Remembering Ronald Coase's Contributions." September 12, 2013.
- "Economics and Politics in California: Cap-and-Trade Allowance Allocation and Trade Exposure." August 16, 2013.
- "The Importance of Getting it Right in California." July 30, 2013.
- "Thinking About the Energy-Efficiency Gap." June 19, 2013.
- "On the Origins of Research." March 17, 2013.
- "On Becoming an Environmental Economist." February 19, 2013.
- "The Second Term of the Obama Administration." January 27, 2013.
- "Reflections from Cambridge on the Climate Talks in Doha." December 20, 2012.
- "While International Climate Negotiations Continue, the World's Ninth Largest Economy Takes an Important Step Forward." December 1, 2012.
- "Cap-and-Trade, Carbon Taxes, and My Neighbor's Lovely Lawn." October 21, 2012
- "A Challenge for Climate Negotiators, and an Opportunity for Scholars." September 2, 2012.
- "Two Notable Events Prompt Examination of an Important Property of Cap-and-Trade." July 21, 2012.
- "Can Market Forces Really be Employed to Address Climate Change?" May 26, 2012.
- "Low Prices a Problem? Making Sense of Misleading Talk about Cap-and-Trade in Europe and the USA." April 25, 2012.
- "If the Durban Platform Opened a Window, Will India and China Close It?" March 16, 2012.
- "Reflections on Twenty Years of Policy Innovation." February 3, 2012

- "Economics of the Environment, Sixth Edition." January 8, 2011.
- "The Platform Opens a Window: An Unambiguous Consequence of the Durban Climate Talks." January 1, 2012.
- "Assessing the Climate Talks—Did Durban Succeed?" December 12, 2011.
- "Can the Durban Climate Negotiations Succeed?" November 28, 2011.
- "The Promise and Problems of Pricing Carbon." October 30, 2011.
- "What's Good for the Goose is Good for the Gander: Rahm's Doctrine and Mercutio's Complaint." September 25, 2011.
- "The Credit Downgrade and the Congress: Why Polarized Politics Paralyze Public Policy." August 11, 2011.
- "A Golden Opportunity to Please Conservatives and Liberals Alike." July 24, 2011.
- "Canada's Step Away from the Kyoto Protocol Can Be a Constructive Step Forward." June 10, 2011.
- "Misguided Objection to Progressive Policy: The EJ Lawsuit Against Implementation of California's AB 32 Climate Policy." May 23, 2011.
- "Good News from the Regulatory Front." April 25, 2011.
- "A Wave of the Future: International Linkage of National Climate Change Policies." March 31, 2011.
- "Reflecting on a Century of Progress and Problems." February 21, 2011.
- "Pursuing Real Environmental Justice in California." January 31, 2011.
- "Renewable Energy Standards: Less Effective, More Costly, but Politically Preferred to Cap-and-Trade?" January 11, 2011.
- "Why Cancun Trumped Copenhagen." January 1, 2011.
- "What Happened (and Why): An Assessment of the Cancun Agreements." December 13, 2010.
- "Defining Success for Climate Negotiations in Cancun." November 19, 2010.
- "Both Are Necessary, But Neither is Sufficient: Carbon-Pricing and Technology R&D Initiatives in a Meaningful National Climate Policy." October 21, 2010.
- "AB 32, RGGI, and Climate Change: The National Context of State Policies for a Global Commons Problem." October 1, 2010
- "In Defense of Markets." September 11, 2010.
- "Beware of Scorched-Earth Strategies in Climate Debates." July 27, 2010.
- "The Real Options for U.S. Climate Policy." June 23, 2010.
- "Here We Go Again: A Closer Look at the Kerry-Lieberman Cap-and-Trade Proposal." May 18, 2010.
- "Eyes on the Prize: Federal Climate Policy Should Preempt State and Regional Initiatives." April 22, 2010.
- "Who Killed Cap-and-Trade?" March 28, 2010.
- "Opportunities and Ironies: Climate Policy in Tokyo, Seoul, Brussels, and Washington." March 21, 2010.
- "What's the Proper Role of Individuals and Institutions in Addressing Climate Change?" March 8, 2010.
- "Any Hope for Meaningful U.S. Climate Policy? A Somewhat Positive View." February 8, 2010.
- "Unintended Consequences of Government Policies: The Depletion of America's Wetlands." January 27, 2010.
- "Another Copenhagen Outcome: Serious Questions About the Best Institutional Path Forward." January 5th, 2010.
- "What Hath Copenhagen Wrought? A Preliminary Assessment of the Copenhagen Accord." December 20, 2009.

- "Chaos and Uncertainty in Copenhagen?" December 18, 2009.
- "Only Private Sector Can Meet Finance Demands of Developing Countries." December 14, 2009.
- "Defining Success for Climate Negotiations in Copenhagen." December 7, 2009.
- "Approaching Copenhagen with a Portfolio of Domestic Commitments." November 29, 2009.
- "Confusion in the Senate Regarding Allowance Allocation." October 22, 2009.
- "Cap-and-Trade versus the Alternatives for U.S. Climate Policy." October 5, 2009.
- "Can Countries Cut Carbon Emissions Without Hurting Economic Growth?" September 24, 2009.
- "Three Pillars of a New Climate Pact." September 21, 2009.
- "Too Good to be True?" September 16, 2009.
- "What is the Future of U.S. Coal?" September 3, 2009.
- "Cap-and-Trade: A Fly in the Ointment? Not Really." August 12, 2009.
- "Policies Can Work in Strange Ways." July 30, 2009.
- "What Role for U.S. Carbon Sequestration?" July 21, 2009.
- "Is Benefit-Cost Analysis Helpful for Environmental Regulation?" July 8, 2009.
- "National Climate Change Policy: A Quick Look Back at Waxman-Markey and the Road Ahead." June 29, 2009.
- "Worried About International Competitiveness? Another Look at the Waxman-Markey Cap-and-Trade Proposal." June 18, 2009.
- "The Wonderful Politics of Cap-and-Trade: A Closer Look at Waxman-Markey." May 27, 2009.
- "The New Auto Fuel-Efficiency Standards Going Beyond the Headlines." May 21, 2009.
- "Straight Talk about Corporate Social Responsibility." May 12, 2009.
- "Does economic analysis shortchange the future?" April 27, 2009.
- "What Baseball Can Teach Policymakers." April 20, 2009.
- "The Making of a Conventional Wisdom." April 13, 2009.
- "Moving Beyond Vintage-Differentiated Regulation." April 6, 2009.
- "Using Markets to Make Fisheries Sustainable." March 31, 2009.
- "A Tale of Two Taxes." March 19, 2009.
- "Misconceptions About Water Pricing." March 14, 2009.
- "Green Jobs." March 7, 2009.
- "As Reservoirs Fall, Prices Should Rise." March 3, 2009.
- "The Myths of Market Prices and Efficiency." March 3, 2009.
- "The Myth of Simple Market Solutions." February 23, 2009.
- "The Myth of the Universal Market." February 17, 2009.
- "Opportunity for a Defining Moment." February 6, 2009.

#### PROFESSIONAL EXPERIENCE:

A. J. Meyer Professor of Energy & Economic Development, John F. Kennedy School of Government, Harvard University, 2017- present (Albert Pratt Professor of Business and Government, 1998-2017; Professor of Public Policy, 1997-98; Associate Professor, 1992-1997; Assistant Professor, 1988 - 1992).

Chairman, Environment and Natural Resources Faculty Group, 1998 - present.

Director, Harvard Environmental Economics Program, 2000 - present.

Director of Graduate Studies for Doctoral Program in Public Policy and Doctoral Program in Political Economy and Government, Chairman of the Kennedy School Ph.D. Committee, and Chairman of the Graduate School of Arts and Sciences (GSAS) Standing Committee on Higher Degrees in Public Policy, 2006 - present.

Co-Chair, Harvard Business School-Kennedy School Joint Degree Programs, 2007 - present.

Director, Harvard Project on Climate Agreements, 2005 - present.

University Fellow, Resources for the Future, Washington, D.C., 1989 - present.

Research Associate, National Bureau of Economic Research, 2007 - present.

Co-Editor, Review of Environmental Economics and Policy (Oxford University Press), 2009 – present (Editor, 2006-2009).

Member, Board of Directors, Resources for the Future, Washington, D.C., 2003 – 2012, 2014 – present.

Member, Scientific Advisory Board, Fondazione Eni Enrico Matei (FEEM), Milan, 2009 - 2013.

Editor, Journal of Wine Economics, and Vice President, American Association of Wine Economists, 2006 - present.

Member, Editorial Council, Environmental Economics and Policy Studies, 2010 - present.

Member, Editorial Board, Climate Change Economics, 2009 – present.

Member, Advisory Board, Strengthening the U.S. Energy Innovation System, MIT, Cambridge, Massachusetts, 2008-2010.

Chair, Environmental Economics Advisory Committee, Science Advisory Board, U.S. Environmental Protection Agency, 1997-2002 (Member, 1992 - 2003).

Member, Executive Board, Science Advisory Board, U.S. Environmental Protection Agency, 1997-2002; 2004-2007.

Chairman, Executive Office of Environmental Affairs Scientific Advisory Board, Commonwealth of Massachusetts, 2005 - 2007.

Faculty Chair, Environment and Natural Resources Program, John F. Kennedy School of Government, Harvard University, 1997-2002.

Member, Board of Directors, Association of Environmental and Resource Economists, January 1996 - December 1998.

Member, Executive Committee, Harvard University Center for the Environment (formerly Harvard University Committee on the Environment), 1999-2004; Member, University Working Group on Environment, Harvard University, 1990 - 1992.

Member, Board of Directors, Robert and Renée Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University, 1997-present.

Member, the Board of Academic Advisors, AEI-Brookings Joint Center for Regulatory Studies, August 1998-present.

Member, Editorial Board, B.E. Journals of Economic Analysis & Policy, 2001-present.

Member, Editorial Board, Land Economics, 2001 - 2006.

Member, Board of Editors, Resource and Energy Economics, 1998 - 2005.

Member, Editorial Council, The Journal of Environmental Economics and Management, 1996 - 2004.

Contributing Editor, Environment, 1997 - 2007.

Member, Advisory Board, Environmental Economics Abstracts, 1996 - present.

Member, Editorial Board, Economic Issues, 1996 - present.

Member, Advisory Board, Environmental Law and Policy Abstracts, 1996 - present.

Member, Subcommittee on Energy, Clean Air, and Climate Change, Clean Air Act Advisory Committee, U.S. Environmental Protection Agency, 1997 - present.

Lead Author, Working Group III, Intergovernmental Panel on Climate Change (IPCC), United Nations Environment Program and World Meteorological Organization, 1993 - present.

Member, Reducing Risk Project Steering Committee, Science Advisory Board, U.S. Environmental Protection Agency, 1996 - present.

Member, External Review Panel, Department of Agricultural and Resource Economics, University of California, Berkeley, October 1995.

Member, Workshop Committee, Association of Environmental and Resource Economists (AERE) 1996-1999 (chair in third year of appointment).

Member, Eco-Efficiency Task Force, President's Council on Sustainable Development, 1994 - 1995.

Member, Energy Modeling Forum Working Group on Energy Conservation (EMF 13), Stanford University, 1992 - 1994.

Member, Advisory Panel on Emissions Trading, Sierra Club, Washington, D.C., 1994 - 1995.

Affiliated Faculty Member, Harvard Center for Risk Analysis, Harvard School of Public Health, Boston, Massachusetts, 1991 - present.

Academic Advisor for Environmental Journalism Program, Foundation for American Communications, 1992 - 1998 (Lecturer, 1989 - present).

Director, Project 88 and Project 88/Round II, co-sponsored by U.S. Senators Timothy Wirth (D-Colorado) and John Heinz (R-Pennsylvania), 1988 - 1992.

Principal, Harvard-Japan Project on Energy and the Environment, 1992 - 1995.

Member, Governor's Task Force on Energy and Environmental Policy, Massachusetts, 1992 - 1994.

Consultant to foundations, private industry, non-governmental organizations, state & local governments, Federal government departments and agencies, and international bodies on environmental economics.

Referee, The American Economic Review, The Quarterly Journal of Economics, The Economic Journal, The RAND Journal of Economics, The Review of Economics and Statistics, The Journal of Environmental Economics and Management, Land Economics, The Energy Journal, Energy and Resource Economics, Energy Policy, The Journal of Policy Analysis and Management, Economic Inquiry, Science, Policy Studies Journal, The Journal of the Air and Waste Management Association, and Harvard University Press.

Member, Risk Reduction Committee, Science Advisory Board, U.S. Environmental Protection Agency, Washington, D.C., 1989 - 1990.

Member, Working Group on Human Interactions with Global Change, National Research Council, Washington, D.C., 1989 - 1990.

Staff Economist, Environmental Defense Fund, Berkeley, California, 1982 - 1983.

Consultant, Public Interest Economics Foundation, Inc., Berkeley, California, September 1980 - June 1982.

Economist, Giannini Foundation of Agricultural Economics, University of California, Berkeley, 1979 - 1981.

Research Specialist, Department of Agricultural Economics, Cornell University, 1977 - 1979.

- Agricultural Representative, Peace Corps Recruitment, Champaign, Illinois, September 1975 August 1976.
- Peace Corps Volunteer, Ministry of Agriculture and Natural Resources, Sierra Leone, West Africa, 1969 1973.

### AWARDS, HONORS, AND GRANTS:

- Publication of Enduring Quality Award, Association of Environmental and Resource Economists, June 2017, for "The Induced Innovation Hypothesis and Energy-Saving Technological Change," by Richard G. Newell, Adam B. Jaffe, and Robert N. Stavins, *Quarterly Journal of Economics*, Vol. 114, No. 3 (1999), pp. 941-975.
- Edmund G. "Pat" Brown Award, California Council for Environmental and Economic Balance, 2016.
- Fellow, Association of Environmental and Resource Economists, 2009.
- Principal Investigator, grant from the Doris Duke Charitable Foundation, "The Harvard Project on International Climate Agreements," July 2007 June 2009 (\$750,000)
- Principal Investigator, grant from the U.S. Environmental Protection Agency, "Regulating Pollution Through Information Disclosure: Facility Response to the Toxics Release Inventory," July 2002 June 2005 (\$395,459)
- Principal Investigator, grant from the National Science Foundation, "Climate Change Response Strategies for Water Resources: Price and Non-Price Demand Management," March 2001 February 2003 (\$238,000)
- Principal Investigator, grant from AVINA Foundation, "Land Use and Climate Change," September 2000 January 2003 (\$125,000)
- Principal Investigator, grant from the U.S. Department of Energy, "The Effects of Government Policies on the Invention, Innovation, and Diffusion of Energy-Efficient Technologies," October 1, 1998 December 14, 2001 (\$519,000)
- Principal Investigator, grant from the U.S. Department of Energy, "Land-Use Change and Carbon Sinks: Econometric Estimation of the Carbon Sequestration Supply Function," December 15, 1998 December 14, 2001 (\$200,000)
- Principal Investigator, grant from the U.S. Department of Energy, "Energy-Efficiency Innovation and the Economic and Regulatory Environment," September 1995 November 1998 (\$461,000)
- Principal Investigator, grant from the U.S. Environmental Protection Agency, "Estimating a CO2 Sequestration Supply Function," June 1993 August 1994 (\$130,000).
- Principal Investigator, grant from the W. Alton Jones Foundation, "Environmental Policy Reform in the First 100 Days of the New Administration," February 1993 May 1993 (\$40,000).
- Principal Investigator, grant from the Office of Research and Development, U.S. Environmental Protection Agency, "Evaluating the Relative Effectiveness of Economic Incentives and Direct Regulation for Environmental Protection: Impacts on the Diffusion of Technology," September 1991 August 1993 (\$186,000).
- Principal Investigator, grant from the W. Alton Jones Foundation, "Project 88 Round II, Incentives for Action: Implementing Market-Based Environmental Policies," November 1990 August 1992 (\$75,000).
- Principal Investigator, grant from the Pew Charitable Trusts, "Project 88 Round II, Incentives for Action: Implementing Market-Based Environmental Policies," January 1991 August 1992 (\$75,000).
- Principal Investigator, grant from the Surdna Foundation, "Project 88 Round II, Incentives for Action: Implementing Market-Based Environmental Policies," March 1991 August 1992 (\$50,000).
- Principal Investigator, grant from the U.S. Environmental Protection Agency, "Project 88 Round II, Incentives for Action: Implementing Market-Based Environmental Policies," March 1991 -August 1992 (\$50,000).
- Principal Investigator, grant from Carnegie Corporation of New York, "Economic Incentives for Environmental Protection: A Public Policy Sequel to Project 88," June 1990 September 1991 (\$97,600).
- Principal Investigator, grant from Resources for the Future, "Wetland Losses and Willingness-to-Pay for Fishing Opportunities," 1990-1991 (\$20,905).

- Project Director, grant from the Richard King Mellon Foundation, Pittsburgh, Pennsylvania, "Harvard-Project 88 Conference," 1989 (\$35,000).
- Project Director, grants from the Carnegie Corporation of New York, the Richard King Mellon Foundation, the Rockefeller Family and Associates, and the Keystone Center/Madison Associates, "Project 88 Harnessing Market Forces to Protect the Environment: Initiatives for the New President," 1988-89 (\$50,000).
- Principal Investigator, grant from the Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C., "Welfare Analysis of Alternative Uses of Forested Wetlands," 1987-88 (\$10,000).
- Research Grant from the National Center for Food and Agricultural Policy, Resources for the Future, Washington, D.C., 1986-87 (\$15,000).
- Mentorship Grant in Humanities and Social Sciences, Harvard University, Cambridge, Massachusetts, Fall 1986. With H. S. Houthakker (\$10,000).
- Dissertation Research Grant from the National Center for Food and Agricultural Policy, Resources for the Future, Washington, D.C., 1985-86 (\$15,000).
- Principal Investigator, grant from U.S. Department of the Interior, Washington, D.C., "Impact of Federal Programs on Wetlands," 1985-86 (\$100,000).
- Outstanding Master's Thesis 1979. National competition of the American Agricultural Economics Association, Champaign, Illinois, July 18, 1980.