#### JOSEPH E. ALDY

ASSISTANT PROFESSOR OF PUBLIC POLICY HARVARD KENNEDY SCHOOL

John F. Kennedy School of Government

Taubman 382, Mailbox 57 79 John F. Kennedy Street Cambridge, MA 02138

V: 617-496-7213

E: joseph aldy@hks.harvard.edu

I: <a href="http://www.hks.harvard.edu/fs/jaldy/index.html">http://www.hks.harvard.edu/fs/jaldy/index.html</a>

## **Education**:

Doctor of Philosophy, Department of Economics, Harvard University, 2005 Master of Environmental Management, Nicholas School of the Environment, 1995 Bachelor of Arts, Duke University, 1993

## **Professional Experience:**

2009-present	Assistant Professor of Public Policy
	Harvard Kennedy School
	(public service leave 2009-2010; paternity leave 2012)
2011-present	Visiting Fellow
	Resources for the Future
2011-present	Faculty Research Fellow
	National Bureau of Economic Research
2009-2010	Special Assistant to the President for Energy and Environment
	National Economic Council and Office of Energy and Climate Change,
	The White House
2005-2009	Fellow
	Resources for the Future
2007-2008	Adjunct Assistant Professor
	Department of Economics, Georgetown University
2008	Adjunct Professor
	Georgetown Public Policy Institute
2007	Lecturer
	Applied Economics Master's Program, Johns Hopkins University
1999-2000	Senior Economist for the Environment and Natural Resources
	Council of Economic Advisers, Executive Office of the President
1998-1999	Senior Advisor for the Global Environment
	Council of Economic Advisers, Executive Office of the President
1997-1998	Staff Economist for the Environment and Natural Resources

	Council of Economic Advisers, Executive Office of the President
1996-1997	Economist
	Natural Resources and Environment Division, Economic Research Service
1995-1996	Associate in Research
	Nicholas School of the Environment

# **Other Professional Affiliations:**

2011-present	Faculty Chair, Regulatory Policy Program, Mossavar-Rahmani Center for
	Business and Government
2011-present	Member, Editorial Board, Economics of Energy and Environmental Policy
2011-present	Faculty Affiliate, Mossavar-Rahmani Center for Business and Government
2011-present	Faculty Affiliate, Taubman Center for State and Local Government
2011-present	Faculty Fellow, Harvard Environmental Economics Program
2011-present	Faculty Associate, Harvard University Center for the Environment
2008-2009	Treasurer, Association of Environmental and Resource Economists
2007-2009	Co-Director, Harvard Project on International Climate Agreements
2006-2009	Co-Director, International Energy Workshop

# Awards:

2008	Nicholas School of the Environment Rising Star Alumni Award
2005	Stone Pre-Doctoral Fellowship in Environmental and Resource Policy
	(Winner of Best Paper on Environmental and Resource Policy by Harvard
	University doctoral student)
2003	Certificate of Distinction in Teaching, Harvard University
2002	Certificate of Distinction in Teaching, Harvard University

## Fellowships:

2004-2005	Morris K. Udall Scholarship and Excellence in National Environmental
	Policy Foundation Fellowship
2003-2004	Repsol YPF-Harvard Kennedy School Energy Policy Fellowship
2003-2004	Switzer Foundation Environmental Fellowship
2000-2003	STAR Fellowship, U.S. Environmental Protection Agency
1996-1998	Presidential Management Internship, Executive Office of the President
	and USDA Economic Research Service
1994	NNEMS Fellowship, U.S. Environmental Protection Agency

# **Research Grants:**

Electric Power Research Institute, "The Competitiveness Effects of Domestic Climate Policy: A State-Level Evaluation," \$98,000, Principal Investigator, 2011-2012.

- Smith Richardson Foundation Domestic Policy Fellowship, "The Competitiveness Effects of U.S. Climate Change Policy," \$60,000, Principal Investigator, 2009. [Note: fellowship resources could not be accepted as condition of appointment in the Obama Administration.]
- Doris Duke Charitable Foundation, "Beyond Kyoto: Designing the Post-2012 International Policy Architecture to Address Global Climate Change," \$750,000, Co-Principal Investigator, 2007-2009.
- Pew Center on Global Climate Change, "Competitiveness Impacts of Climate Change Mitigation Policies," \$85,000, Principal Investigator, 2007-2008.
- Electric Power Research Institute, "Efficient Mechanisms for U.S. Domestic Climate Policy," \$75,000, Principal Investigator, 2007.
- USDA Economic Research Service, "Managing Invasive Species Risks," \$180,000, Co-Principal Investigator, 2006-2008.

#### **Papers under Review:**

"Heterogeneity in the Value of Life" (with Seamus J. Smyth)

"The Labor Market Impacts of the 2010 *Deepwater Horizon* Oil Spill and Offshore Drilling Moratorium"

"The Crucial Role of Policy Surveillance in International Climate Policy"

"Policy Surveillance in the G20 Fossil Fuel Subsidies Agreement: Lessons for Climate Policy"

"Comparability of Effort in International Climate Policy" (with William A. Pizer)

"Competitiveness Impacts of Climate Change Mitigation Policies" (with William A. Pizer)

"Designing Energy and Environmental Fiscal Instruments to Improve Public Health"

#### Research Papers in Progress:

"Belt and Suspenders and More: The Incremental Impact of Energy Efficiency Subsidies in the Presence of Existing Policy Instruments" (with Sébastien Houde)

"If Fossil Fuel Subsidies Are So Bad, Why Are They So Common?"

"Temperature Shocks, Energy Prices, and U.S. Mortality: An Assessment of the Health Impacts of Climate Change" (with Dan Stone)

"Income and Environmental Quality: The Case of the People's Republic of China" (with Dick Morgenstern and Ramanan Laxminarayan)

- "Insurance against Weather and Energy Price Shocks: The Benefits of Energy Subsidies to Low-Income Households"
- "Distributional Consequences of Environmental and Safety Regulations: Insights from Labor Market Decisions" (with Seamus J. Smyth)

## **Publications – Journal Articles:**

- "Risk Regulation Lessons from Mad Cows." Foundations and Trends in Microeconomics 8(4), with W. Kip Viscusi, 2013.
- "The Case for a U.S. Carbon Tax." Oxford Energy Forum 91: 13-16, 2013.
- "A Preliminary Assessment of the American Recovery and Reinvestment Act's Clean Energy Package." Review of Environmental Economics and Policy 7(1): 136-155, 2013.
- "Review of Climate Change and Common Sense: Essays in Honour of Tom Schelling, edited by Robert W. Hahn and Alistair Ulph." Journal of Regional Science 53(1): 201-203, 2013.
- "Climate Negotiators Create an Opportunity for Scholars." *Science* 337: 1043-1044, with Robert N. Stavins, 2012.
- "Willingness to Pay and Political Support for a U.S. National Clean Energy Standard." Nature Climate Change 2: 596-599, with Matthew J. Kotchen and Anthony A. Leiserowitz, 2012.
- "The Promise and Problems of Pricing Carbon: Theory and Experience." *Journal of Environment and Development* 21(2): 152-180, with Robert N. Stavins, 2012.
- "Using the Market to Address Climate Change: Insights from Theory and Experience." Daedalus 141(2): 45-60, with Robert N. Stavins, 2012.
- "Promoting Clean Energy in the American Power Sector: A Proposal for a National Clean Energy Standard." *Environmental Law Reporter* 42: 10131-10149, 2012.
- "Real-Time Economic Analysis and Policy Development During the BP *Deepwater Horizon* Oil Spill." *Vanderbilt Law Review* 64(6): 1795-1817, 2011.
- "The Environmental Justice Dimensions of Climate Change." *Environmental Justice* 4(1): 17-25, with Marie Lynn Miranda, Douglas A. Hastings, and William H. Schlesinger, 2011.

- "Designing Climate Mitigation Policy." *Journal of Economic Literature* 48(4): 903-934, with Alan J. Krupnick, Richard G. Newell, Ian W.H. Parry, and William A. Pizer, 2010. Reprinted in *Economics of the Environment: Selected Readings, Sixth Edition*, R.N. Stavins, ed., W.W. Norton, 2012.
- "Valuing the Risk of Death from Terrorist Attacks." Journal of Homeland Security and Emergency Management 7(1): Article 14, with Lisa A. Robinson, James K. Hammitt, Alan Krupnick, and Jennifer Baxter, 2010.
- "Introduction to the Frontiers of Environmental and Resource Economics." *Journal of Environmental Economics and Management* 57(1): 1-4, with Alan. J. Krupnick, 2009.
- "Issues in Designing U.S. Climate Change Policy." *The Energy Journal* 30(3): 179-210, with William A. Pizer, 2009.
- "A Tax-Based Approach to Slowing Global Climate Change." *National Tax Journal* 61: 493-517, with Eduardo Ley and Ian W.H. Parry, 2008.
- "Adjusting the Value of a Statistical Life for Age and Cohort Effects." *Review of Economics and Statistics* 90(3): 573-581, with W. Kip Viscusi, 2008.
- "Introduction to Special Symposium on Energy and Development in Africa." *Energy Policy* 36(8): 2771-2772, with Mark Howells and Leo Schrattenholzer, 2008.
- "Climate Policy Architectures for the Post-Kyoto World." *Environment* 50(3): 6-17, with Robert N. Stavins, 2008.
- "Age Differences in the Value of Statistical Life: Revealed Preference Evidence." *Review of Environmental Economics and Policy* 1(2): 241-260, with W. Kip Viscusi, 2007.
- "Labor Market Estimates of the Senior Discount for the Value of Statistical Life." *Journal of Environmental Economics and Management* 53(3): 377-392, with W. Kip Viscusi, 2007.
- "Energy and Carbon Dynamics at Advanced Stages of Development: An Analysis of the U.S. States 1960–1999." *The Energy Journal* 28(1): 91-111, 2007.
- "Divergence in State-Level Per Capita Carbon Dioxide Emissions." *Land Economics* 83(3): 353-369, 2007.
- "Per Capita Carbon Dioxide Emissions: Convergence or Divergence?" *Environmental* and Resource Economics 33(4): 533-555, 2006.

- "Review of Beyond Kyoto A New Global Climate Certificate System by Lutz Wicke."

  Bulletin of the American Meteorological Society 87: 1228-1229, 2006.
- "An Environmental Kuznets Curve Analysis of U.S. State-Level Carbon Dioxide Emissions." *Journal of Environment and Development,* U.S. EPA Special Issue 14(1): 48-72, 2005.
- "The Value of a Statistical Life: A Critical Review of Market Estimates throughout the World." *Journal of Risk and Uncertainty* 27(1): 5-76, with W. Kip Viscusi, 2003.
- "Thirteen Plus One: A Comparison of Global Climate Policy Architectures." *Climate Policy* 3(4): 373–397, with Scott Barrett and Robert N. Stavins, 2003.
- "Environmental Equity and the Conservation of Unique Ecosystems: An Analysis of the Distribution of Benefits for Protecting Southern Appalachian Spruce-Fir Forests." Society and Natural Resources 12: 93–106, with Randall A. Kramer and Thomas P. Holmes, 1999.
- "The Role of Technology in Sustaining Agriculture and the Environment." *Ecological Economics* 26: 81–96, with James Hrubovcak and Utpal Vasavada, 1998.
- "Unit Pricing of Residential Municipal Solid Waste: Lessons from Nine Case Study Communities." *Journal of Environmental Management* 52(1): 79-93, with Marie Lynn Miranda, 1998.
- "Economics of Sustainable Agriculture." *Agricultural Outlook* 238: 21-24, with Utpal Vasavada and Jim Hrubovcak, 1997.
- "Recycling Jumps When Communities Use Unit Pricing for Residential Garbage." Resource Recycling 15(8): 27-31, with Marie Lynn Miranda, 1996.

#### <u>Publications – Edited Books:</u>

- Post-Kyoto International Climate Policy: Implementing Architectures for Agreement. New York: Cambridge University Press, with Robert N. Stavins, 2010.
- Post-Kyoto International Climate Policy: Summary for Policymakers. New York: Cambridge University Press, with Robert N. Stavins, 2009.
- Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World. New York: Cambridge University Press, with Robert N. Stavins, 2007.

## <u>Publications – Book Chapters:</u>

- "Environmental Risk and Uncertainty." Handbook of the Economics of Risk and Uncertainty, Volume 1, Mark J. Machina and W. Kip Viscusi, eds., Elsevier, with W. Kip Viscusi, 601-649, 2014.
- "Foreword." Toward a New Climate Agreement: Conflict, Resolution, and Governance.

  Todd Cherry, Jon Hovi, and David McEvoy, eds., Routledge, 2014.
- "Comparing Countries' Climate Mitigation Efforts in a Post-Kyoto World." *Carbon Taxes* and Fiscal Reform: Key Issues Facing U.S. Policy Makers, Ian Parry, Adele Morris, and Roberton Williams III, eds. Routledge, with William A. Pizer, forthcoming.
- "The Employment and Competitiveness Impacts of Power-Sector Regulations." *Does Regulation Kill Jobs?* Cary Coglianese, Adam Finkel, and Chris Carrigan, eds. Philadelphia: University of Pennsylvania Press, with William A. Pizer, 2014.
- "Eliminating Fossil Fuel Subsidies." 15 Ways to Rethink the Federal Budget, Michael Greenstone, Max Harris, Karen Li, Adam Looney, and Jeremy Patashnik, eds. Washington, DC: The Hamilton Project, Brookings Institution, 31-35, 2013.
- "Designing a Bretton Woods Institution to Address Global Climate Change." Handbook of Energy and Climate Change, Roger Fouquet, ed. Cheltenham, UK: Edward Elgar, 2013.
- "Designing the Post-Kyoto Climate Regime." *The Quest for Security: Protection without Protectionism and the Challenge of Global Governance*, Mary Kaldor and Joseph Stiglitz, eds. New York: Columbia University Press, with Robert N. Stavins, 2013.
- "Introduction." *Post-Kyoto International Climate Policy: Implementing Architectures for Agreement*, Joseph E. Aldy and Robert N. Stavins, eds. New York: Cambridge University Press, 1-28, with Robert N. Stavins, 2010.
- "Lessons for the International Policy Community." *Post-Kyoto International Climate Policy: Implementing Architectures for Agreement*, Joseph E. Aldy and Robert N. Stavins, eds. New York: Cambridge University Press, 899-929, with Robert N. Stavins, 2010.
- "Introduction and Overview." *Post-Kyoto International Climate Policy: Summary for Policymakers*, Joseph E. Aldy and Robert N. Stavins, eds. New York: Cambridge University Press, 1-25, with Robert N. Stavins, 2009.
- "Lessons for the International Policy Community." *Post-Kyoto International Climate Policy: Summary for Policymakers*, Joseph E. Aldy and Robert N. Stavins, eds. New York: Cambridge University Press, 27-55, with Robert N. Stavins, 2009.

- "Comment on Jeffrey A. Frankel's 'Addressing the Leakage/Competitiveness Issue in Climate Change Policy Proposals.'" *Climate Change, Trade and Competitiveness:*Is a Collision Inevitable? Lael Brainard and Isaac Sorkin, eds. Washington, DC: Brookings Institution Press, 83-88, 2009.
- "Towards a Post-Kyoto International Climate Policy Regime." *Beyond Copenhagen: A Climate Policymaker's Handbook*. Juan Delgado and Stephen Gardner, eds. Brussels: Bruegel Books, 53-59, with Robert N. Stavins, 2009.
- "Introduction: International Policy Architecture for Global Climate Change."

  Architectures for Agreement: Addressing Global Climate Change in the PostKyoto World, Joseph E. Aldy and Robert N. Stavins, eds. New York: Cambridge
  University Press, 1-27, with Robert N. Stavins, 2007.
- "Architectures for an International Global Climate Change Agreement: Lessons for the Policy Community." Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World, Joseph E. Aldy and Robert N. Stavins, eds. New York: Cambridge University Press, 350-367, with Robert N. Stavins, 2007.
- "Competitiveness Impacts of Carbon Dioxide Pricing Policies on Manufacturing."

  Assessing U.S. Climate Policy Options, Raymond J. Kopp and William A. Pizer, eds.

  Washington, DC: Resources for the Future, with Richard Morgenstern, Evan M.

  Herrnstadt, Mun Ho, and William A. Pizer, 95-105, 2007.
- "Assessing the Costs of Regulatory Proposals for Reducing U.S. Greenhouse Gas Emissions." Assessing U.S. Climate Policy Options, Raymond J. Kopp and William A. Pizer, eds. Washington, DC: Resources for the Future, 53-68, 2007.
- "Saving the Planet Cost-Effectively: The Role of Economic Analysis in Climate Change Mitigation Policy." Painting the White House Green: Rationalizing Environmental Policy Inside the Executive Office of the President, Randall Lutter and Jason F. Shogren, eds. Washington, DC: Resources for the Future Press, 89–118, 2004.
- "Addressing Cost: The Political Economy of Climate Change." *Beyond Kyoto: Advancing* the International Effort Against Climate Change. Arlington, VA: Pew Center on Global Climate Change, 85-110, with Richard Baron and Laurence Tubiana, 2003.
- "Can Annex I Countries Meet Their Emissions Targets at Modest Costs?" *The Kyoto Commitments: Can Nations Meet Them with the Help of Technology?* C.E. Walker, M.A. Bloomfield, M. Thorning, eds. Washington, DC: American Council for Capital Formation, 67-73, 2000.

## <u>Publications – Policy Magazines, Non-Technical Papers, and Reports:</u>

- "Heterogeneity in the Value of Life." VOX, August 14, 2014, with Seamus J. Smyth, <a href="http://www.voxeu.org/article/heterogeneity-value-life">http://www.voxeu.org/article/heterogeneity-value-life</a>.
- "Money for Nothing: The Case for Eliminating U.S. Fossil Fuel Subsidies." *Resources* 186: 32-37, 2014.
- "OMB: Obscurity in Management and Budget?" *Regulation* 36(4): 5-6, with Art Fraas and Randall Lutter, 2014.
- "Promoting Clean Energy in the American Power Sector." The Hamilton Project Discussion paper 2011-04, The Brookings Institution, 2011.
- "An Economist's View of the Oil Spill from Inside the White House." *Resources* 177: 28-29, 2011.
- "Competitiveness Impacts of Climate Change Mitigation Policies." Arlington, VA: Pew Center on Global Climate Change, with William A. Pizer, 2009.
- "The Role of Technology Policies in an International Climate Agreement." Issue Paper prepared for the Climate Dialogue, September 2-3, Office of the Prime Minister, Copenhagen, Denmark, with Robert N. Stavins, 2008.
- "What Is the Role of Carbon Taxes in Climate Change Mitigation?" World Bank PREMnotes, Special Series on The Economics of Climate Change, Number 2, with Eduardo Ley and Ian W.H. Parry, July 2008.
- "Economic Incentives in a New Climate Agreement." Issue Paper prepared for the Climate Dialogue, May 7-8, Office of the Prime Minister, Copenhagen, Denmark, with Robert N. Stavins, 2008.
- "Using Emission Fees to Curb Greenhouse Gases: A Primer." Progressive Policy Institute Policy Memo, 2007.
- "The Strategic Petroleum Reserve: A Short-Term Response." *Resources* 163: 19-20, 2006.
- "Heating Subsidies Make a Difference in Offsetting Winter Mortality Rates Among the Poor and Elderly." *Resources* 160: 5-6, 2006.
- "Designing a Regime for Developing Countries that is Cost-Effective and Equitable."

  Paper presented at the *Leaders' Summit on Post-Kyoto Architecture: Toward an L20?* Conference, Council on Foreign Relations, New York, NY, September 21, 2004, with Jeffrey A. Frankel.

"Climate Change: An Agenda for Global Collective Action." AEI-Brookings Joint Center on Regulatory Affairs Related Publication, with Peter R. Orszag and Joseph E. Stiglitz, 2001.

Unit Pricing Programs for Residential Municipal Solid Waste: An Assessment of the Literature. Report submitted to the Climate Change Division, Office of Policy, Planning, and Evaluation, USEPA, with Miranda, Marie Lynn and Scott D. Bauer, October 1995.

A Framework for Estimating the Economic Benefits from Reduced Ambient Ozone Welfare Effects Under Alternative Secondary National Ambient Air Quality Standards. Durham, NC: Nicholas School of the Environment, Duke University. Master's Project, 1995.

#### **Invited Research Seminars:**

**Brookings Institution** 

University of California–Berkeley

University of California-Davis

University of California-Santa Barbara

University of Central Florida

Carnegie Mellon University

**Columbia University** 

**Duke University** 

Harvard Law School

Harvard University

International Monetary Fund

Johns Hopkins University

John F. Kennedy School of Government

University of Kentucky

University of Maryland

Massachusetts Institute of Technology

University of Minnesota

Paul H. Nitze School of Advanced International Studies

Public Policy Institute of California

**RAND Corporation** 

Resources for the Future

Rice University

Stanford University

University of Texas-Austin

Triangle Resource and Environmental Economics Seminar (Duke/North Carolina State University/ Research Triangle Institute)

Tsinghua University

Vanderbilt University World Bank Yale University

#### **Invited Academic Conference and Workshop Research Presentations:**

- PERC Workshop on Environmental Quality and Human Health, Bozeman, MT, 2014 World Congress of Environmental and Resource Economists, Istanbul, Turkey, 2014 Social Cost of Carbon Workshop, Duke University, Durham, NC, 2014
- Spring 2014 Workshop, Center for Energy and Environmental Policy Research, MIT, Cambridge, MA, 2014
- AERE/American Economic Association, Annual Meeting, Philadelphia, PA, 2014
  Workshop on Building Block Strategies for Global Climate Action, NYU Law School, New
  York, 2013
- BP/Harvard Kennedy School Symposium on Energy, Security, and Climate Policy, Cambridge, MA, 2013
- IZA Workshop on Labor Market Effects of Environmental Policies, Institute for the Study of Labor, Bonn, Germany, 2013
- Health and Welfare Implications of Taxation and Subsidy Policies to Alter Non-Communicable Disease Risks, Commission on Investing in Health/Harvard Global Health Institute/Disease Control Priorities Project Workshop, Cambridge, MA, 2013
- Climate Change Impacts and Integrated Assessment, Energy Modeling Forum Summer Workshop, Snowmass, CO (two talks), 2013
- AERE Summer Conference Sponsored Sessions, Banff, Canada, 2013
- Mercator Institute and Harvard Project on Climate Agreements Durban Platform Workshop, Berlin, Germany, 2013
- AERE/American Economic Association, Annual Meeting, San Diego, CA (two talks), 2013 Institute of Politics 20<sup>th</sup> Bipartisan Program for Newly Elected Members of Congress, Cambridge, MA, 2012
- Power Generation and the Environment: Choices and Economic Trade-Offs, University of Wyoming, Jackson Hole, WY, 2012
- BP/Harvard Kennedy School Symposium on Energy, Security, and Climate Policy, Cambridge, MA, 2012
- Plenary Address, International Energy Workshop hosted by the Stanford Energy Modeling Forum, Palo Alto, CA, 2011
- The Future of Climate Negotiations, Policy Session sponsored by FEEM and Tilburg Sustainability Center, European Association of Environmental and Resource Economists Conference, Rome, Italy, 2011
- BP/Harvard Kennedy School Symposium on Energy, Security, and Climate Policy, Cambridge, MA, 2011
- Keynote Address, Rigs, Risk, and Responsibility: Conference on the BP Oil Spill, Vanderbilt Law School, Nashville, TN, 2011

- Keynote Address, Association of Environmental and Resource Economists (AERE) Summer Workshop, Washington, DC, 2009
- PERC Lone Mountain Forum on Markets for Land and Pollution: Implications for Environmental Justice, Big Sky, Montana, 2008
- 3<sup>rd</sup> Atlantic Workshop on Energy and Environmental Economics, A Toxa, Spain, 2008
- American Economic Association, Annual Meeting, New Orleans, LA, 2008
- PREISM Workshop, Economic Research Service, Washington, DC, 2007
- Plenary Address, International Energy Workshop hosted by the Stanford Energy Modeling Forum, Palo Alto, CA, 2007
- Global Climate Change Research Seminar, Electric Power Research Institute, Washington, DC, 2007
- Forum on Global Climate Strategies Beyond 2012: The Route Ahead, Florence School of Regulation, Madrid, Spain, 2007
- Climate Policy Network, Fifth Meeting, ZEW, Mannheim, Germany (two talks), 2007
- Great Decisions Lecture Series, University of North Carolina–Wilmington, Wilmington, NC, 2007
- Ecological Society of America, Annual Meeting, Memphis, TN, 2006
- Third World Congress of Environmental and Resource Economists, Kyoto, Japan (two talks), 2006
- Plenary Address, International Energy Workshop, hosted by the University of Cape Town Energy Research Centre, Cape Town, South Africa (two talks), 2006
- Economics of Population Health Conference, American Society of Health Economists, Madison, WI, 2006
- Morbidity and Mortality: How Do We Value the Risk of Illness and Death? U.S. Environmental Protection Agency, Washington, DC, 2006
- Colloquium on Socioeconomic Drivers of Greenhouse Gas Emissions, U.S. Environmental Protection Agency and World Resources Institute, Washington, DC, 2005
- Heartland Environmental and Resource Economics Workshop, Iowa State University, Ames, IA, 2005
- International Energy Workshop, hosted by the International Energy Agency, Paris, France, 2004
- Association of Environmental and Resource Economists (AERE) Summer Workshop, Estes Park, CO, 2004
- AERE/American Economic Association Meeting, San Diego, CA (two talks), 2004
- Roundtable Discussion on Benefit-Cost Analysis, Harvard Law School and Harvard Center for Risk Analysis, Cambridge, MA, 2004

## **Academic Conference Paper Discussant:**

- National Bureau of Economic Research Summer Institute, Urban Economics Workshop, Cambridge, MA, 2014
- National Bureau of Economic Research Summer Institute, Environmental and Energy Economics Workshop, Cambridge, MA, 2014
- World Congress of Environmental and Resource Economists, Istanbul, Turkey, 2014

- Human Adaptation to Climate Change, Lone Mountain Forum, Bozeman, MT, 2011 Climate Change, Trade, and Competitiveness Conference, Brookings Institution, Washington, DC, 2008
- American Economic Association, Annual Meeting, New Orleans, LA, 2008
- AERE/American Economic Association, Annual Meeting, New Orleans, LA 2008
- National Bureau of Economic Research Summer Institute, Environment and Public Policy Session, Cambridge, MA, 2007
- POWER Conference on Electricity Industry Restructuring, UC-Berkeley, Berkeley, CA, 2007
- Strategic Options for Bush Administration Climate Policy Book Forum, American Enterprise Institute, Washington, DC 2006
- Invasive Species Management: 2006 PREISM Workshop, USDA Economic Research Service, Washington, DC, 2006
- Economics of Climate Change: Understanding Trans-Atlantic Differences Workshop,
  Resources for the Future and the British Embassy, Washington, DC, 2006
  Climate Policy Network Workshop, Cambridge, MA, 2006
- Workshop on Voluntary Programs, Resources for the Future, Washington, DC, 2005

## **Conference, Workshop, and Invited Policy Presentations:**

- Energy Policy: Looking Back, Looking Forward, Center for Strategic International Studies, Washington, DC, 2014
- Accelerating the Transition to a Clean Energy Economy, hosted by Environmental Entrepreneurs, Boston, MA, 2014
- Pricing Carbon, Babson College, Wellesley, MA, 2013
- Energy: From the Last to the Next 150 Years, Sesquicentennial Symposium, Boston College, Boston, 2013
- Expanded Natural Gas Production: Impacts on New Pathways for Climate Change Mitigation, Bipartisan Policy Center Series on the New Geopolitics of Petroleum and Natural Gas, Washington, DC, 2013
- The Green Agenda: Electricity and the Environment, Harvard Electricity Policy Group 72<sup>nd</sup> Plenary Session, Cambridge, 2013
- Understanding Regulation's Impact on Employment, Workshop Hosted by the Penn Program on Regulation, Washington, DC, 2013
- Briefing on the Results of the New Stanford Energy Modeling Forum Studies on U.S. and International Climate Policies, Architectures, and Technological Change, Washington, DC, 2013
- Keynote Address, Innovation in Electricity: Challenges and Opportunities, HBS Business and Environment Conference, Cambridge, MA, 2013
- 15 Ways to Rethink the Federal Budget: Addressing Entitlements, Taxation, and Revenues, The Hamilton Project, The Brookings Institution, Washington, DC, 2013
- Comprehensive Tax Reform and Climate Policy, Resources for the Future, Washington, DC, 2013

- The Economics of Carbon Taxes Conference, American Enterprise Institute, Washington, DC, 2012
- Presidential Energy Debate (Obama Campaign Surrogate), MIT Energy Initiative, Cambridge, 2012
- Track 1.5 Meeting of U.S. and Chinese Experts on International Climate Policy, Hosted by the Department of State and the National Development and Reform Commission, Chicago, 2012
- Harvard Thinks Green 2, Harvard University, Cambridge, 2012
- Keynote Address, The Canada We Want in 2020 Squaring the Carbon Circle, Canada2020, Ottawa, Canada, 2012
- Evaluating Progress on the Climate Front, XXXIII MIT Global Change Forum, Arlington, VA, 2012
- Fiscal Reform and Climate Protection: Considering a U.S. Carbon Tax, Peterson Institute for International Economics and Resources for the Future, Washington, DC, 2011
- Energy in a Carbon-Constrained World, Expogestion, Bogota, Colombia, 2011
- A Federal Clean Energy Standard: Understanding Important Policy Elements, Resources for the Future, Washington, DC, 2011
- Alternative Approaches to Climate Change, Aspen Energy Policy Forum, Aspen Institute, Aspen, CO, 2011
- A Cleaner Way to Power? Briefing hosted by the Subcommittee on Energy and Power, Energy and Commerce Committee, U.S. House of Representatives, Washington, DC, 2011
- U.S. and International Climate Change Policy Outlook, EPRI Global Climate Change Research Seminar, Washington, DC, 2011
- U.S. Climate Change Policy Outlook, GTSP Annual Meeting: The Role of Technology in Addressing Climate Change, Washington, DC, 2011
- State-Level Climate Policies: Lessons for National Efforts, Georgetown University Conference on Environmental Federalism: Current Issues and opportunities, Washington, DC, 2011
- Promoting Clean Energy in the American Power Sector, America's Energy Future: New Solutions to Fuel Economic Growth and Prosperity, The Hamilton Project, Washington, DC, 2011
- Keynote Address, Estimating Employment Impacts of Energy and Environmental Policies and Programs: Lessons Learned and Future Directions, Nicholas Institute for Environmental Policy Solutions Workshop, Washington, DC, 2010
- Keynote Address, The Unconventional Gas Revolution Policy, Strategic, and Market Implications, Washington Energy Policy Conference, National Capital Area Chapter, U.S. Association for Energy Economics, Washington, DC, 2010
- Keynote Address, U.S. Climate Policy and Its Role in Financing REDD+. Forest Carbon Finance Summit 2010, Harvard Law School/Nicholas Institute/World Wildlife Fund, Washington, DC, 2010
- Keynote Address, Board of Directors Dinner, Resources for the Future, Washington, DC, 2009

- The Right Climate for Agreement: Designing the Post-2012 World, Bruegel, Brussels, Belgium, 2008
- An Environmental Agenda for the Next Administration, Environmental Law and Policy Program Conference, University of Michigan, Ann Arbor, MI, 2008
- From Kyoto to Copenhagen: How Can the U.S. Lead on Climate Change, Progressive Policy Institute, Washington, DC, 2008
- Potential for a Global Carbon Market, Carbon Markets USA Conference, Washington, DC, 2008
- The Climate Dialogue hosted by Prime Minister Rasmussen, Copenhagen, Denmark, 2008
- Business Environmental Leaders Council Annual Meeting, Pew Center on Global Climate Change, Washington, DC, 2008
- ZEW Wirtschaftsforum, Mannheim, Germany, 2008
- Addressing Climate Change: A Discussion of Policy Options Workshop, Georgetown Center for Business and Public Policy and the U.S. Climate Task Force, Washington, DC, 2008
- Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World, Briefing for United Nations Secretary-General Ban Ki-moon, United Nations, New York, NY, 2008
- Post-2012 International Climate Policy Architecture for Global Climate Change Workshop, Fondazione Eni Enrico Mattei, Venice, Italy, 2008
- Climate Change, Growth, and Poverty Session, PREM Conference: Inclusive and Sustainable Growth, The World Bank, Washington, DC, 2008
- Architectures for Agreement: Issues and Options for Post-2012 International Climate Policy, The Future of Climate Change: A Policy Preview Workshop hosted by Resources for the Future, San Francisco, CA, 2008
- International Climate Policy Seminar, Chinese Academy of Social Sciences, Beijing, China, 2008
- International Climate Policy Seminar, Energy Research Institute, National Development and Reform Commission, Beijing, China, 2008
- International Climate Policy Seminar, Foreign Correspondents' Club of Japan, Tokyo, Japan, 2008
- International Climate Policy Seminar, 21st Century Public Policy Institute/Keidenran Workshop, Tokyo, Japan, 2008
- Value of a Statistical Life Workshop, Department of Homeland Security, Washington, DC, 2008
- Global Roundtable on Climate Change, Earth Institute, Columbia University, New York, 2008
- What Price Energy Transformation: The Economics of Energy and Climate Change Seminar, hosted by the German Marshall Fund and EcoLogic, Washington, DC, 2008
- Domestic Climate Change Policy, Energy Policy Standing Committee, U.S. Conference of Mayors Winter Meeting, Washington, DC, 2008

- A Global Response to Climate Change, Presentation and Panel Discussion hosted by the Asia Society and the UN Foundation, New York, 2008
- Official Side Event, UN Framework Convention on Climate Change Conference of the Parties, Nusa Dua, Bali, Indonesia, 2007
- Climate Change Policy and Employment, Rockefeller Foundation Policy Impact Forum, presentations and briefings of representatives of six presidential campaigns, 2007
- The Road From Bali: Strategies for Post-Kyoto Global Climate Policy, Staff Briefing on UN Climate Change Conference in Bali hosted by the Select Committee on Energy Independence and Global Warming, Washington, DC, 2007
- Rethinking Climate Policy Workshop, AEI-Brookings Joint Center on Regulatory Studies, Washington, DC, 2007
- Strategies for Post-2012 Global Climate Policy, Roundtable Conversation at The Centre, Brussels, Belgium, 2007
- Federal Climate Policy Design Principles and Remaining Needs Workshop, American Meteorological Society, Washington, DC, 2007
- Carbon Tax vs. Cap-and-Trade, Energy Tax Workshop, McDermott, Will, and Emery LLP, Washington, DC, 2007
- The Road from Bali to Copenhagen, Brookings Institution Energy Security Roundtable, Washington, DC, 2007
- New Directions in Regulatory Policy, Mossavar-Rahmani Center for Business and Government, John F. Kennedy School of Government, Cambridge, MA, 2007
- Kyoto at 10: What's Next for International Climate Change Policy, Breakfast Briefing for Business Community hosted by Harvard University and Resources for the Future, New York, NY 2007
- Strategies for Post-Kyoto Global Climate Policy Briefing, Resources for the Future, Washington, DC 2007
- Laboratory Energy R&D Working Group Meeting, Department of Energy, Washington, DC, 2007
- Economics of Climate Change Briefing for Democratic Budget Group, U.S. House of Representatives, 2007
- U.S. Climate Policy Forum, Resources for the Future, Washington, DC, 2007
- Council of Industrial Boiler Owners Environmental Committee Meeting, Washington, DC, 2007
- The Stern Review and the Economic Analysis of Climate Change, Resources for the Future, Washington, DC, 2007
- Global Energy and Climate Change Policy and Research Symposium, UCLA Institute of Transportation Studies and UCLA Public Policy School, Lake Arrowhead, CA, 2006
- Global Dialogue on Natural Resources, Center for Strategic and International Studies and The Dialogue–UAE, Washington, DC, 2006
- Taking Measure of U.S. Energy Policy: A Review of the Energy Policy Act of 2005, Resources for the Future, Washington, DC, 2005
- NCEP Climate Workshop Series: Design-Issues in Market-Based GHG Reduction Strategies, National Commission on Energy Policy, Washington, DC, 2005

- Leaders' Summit on Post-Kyoto Architecture: Toward an L20?, Council on Foreign Relations, New York, NY, 2004
- Beyond Kyoto: Advancing the International Effort Against Climate Change Workshop, Pew Center on Global Climate Change, Cocoyoc, Mexico, 2003

#### **Conference and Workshop Panelist:**

MIT Energy Conference, Cambridge, MA, 2013

American Economic Association, Annual Meeting, Chicago, IL, 2012

Innovative International REDD+ Partnerships Panel, High-Level Forest Climate Side Event, Avoided Deforestation Partners, COP-16, Cancun, Mexico, 2010

Strategies for Low-Carbon Growth: Challenges and Opportunities in International Finance, Resources for the Future Side Event, COP-16, Cancun, Mexico, 2010

The Road to and from Cancun, XXXI MIT Global Change Forum, Brussels, Belgium, 2010

White, Blue, and Green Jobs Report Session, *National Journal* Workforce of the Future Conference, Washington, DC, 2010

- Design and Implementation of U.S. Climate Policy Conference, National Bureau of Economic Research, Washington, DC, 2010
- U.S. Climate Change Policy: What's Next After Copenhagen? 2010 Energy Conference: Short-Term Stresses, Long-Term Change. U.S. Energy Information Administration Annual Conference, Washington, DC, 2010
- Environmental and Energy Economics Workshop, National Bureau of Economic Research Summer Institute, Cambridge, MA, 2009
- Greenhouse Gas Emissions: What's Next? 2009 Energy Conference: A New Climate for Energy? U.S. Energy Information Administration Annual Conference, Washington, DC, 2009
- Containing Climate Change: Beyond Kyoto, Milken Institute Global Conference, Beverly Hills, CA, 2008
- Science & Society: Grand Challenges Climate Change, AAAS Symposium, Washington, DC, 2007

## **Conference Session Moderator:**

European Conference at Harvard University, Boston, MA, 2013

MIT Energy Conference, Boston, MA, 2012

GreenGov Symposium, Council on Environmental Quality, Washington, DC, 2010

International Energy Workshop hosted by the International Energy Agency, Paris, France, 2008

Post-2012 International Climate Policy Architecture for Global Climate Change Workshop, Fondazione Eni Enrico Mattei, Venice, Italy, 2008

International Energy Workshop hosted by the Stanford Energy Modeling Forum, Palo Alto, CA, 2007

Third World Congress of Environmental and Resource Economists, Kyoto, Japan, 2006

International Energy Workshop hosted by the University of Cape Town Energy Research Centre, Cape Town, South Africa, 2006

## **Testimonies:**

China's Energy Policies and Environmental Impacts, Hearing before the U.S.-China Economic and Security Review Commission, Washington, DC, 2008

Economic Implications of Climate Policy, North Carolina Legislative Commission on Global Climate Change, Raleigh, NC, 2006

#### **Commencement Addresses:**

Nicholas School of the Environment, Duke University, Durham, NC, 2010 The Lexington School, Lexington, KY, 2010

## **Teaching Experience:**

#### **Assistant Professor of Public Policy**

API-102, Economic Analysis of Public Policy, Harvard Kennedy School, 2011–2014 API-164, Energy Policy Analysis, Harvard Kennedy School, 2012–2014

### **Adjunct Assistant Professor/Lecturer**

ECON 275, Environmental Economics, Georgetown University, 2007, 2008

PPOL 727, Economics of Climate Change, Georgetown Public Policy Institute, 2008

440-632, Benefit-Cost Analysis, Johns Hopkins University, 2007

Short Course on International Economics of Climate Change, Sherman Kent School for Intelligence Analysis, 2008

#### **Guest Lecturer**

Harvard Kennedy School (2013), Harvard Business School (2011, 2012), Columbia University (2011), Massachusetts Institute of Technology (2011), Carnegie Mellon University (2009, 2010, 2011) Yale University (2007), ALI-ABA Climate Change and the Law Short Course (2007, 2008), Johns Hopkins University (2006), Howard University (2005), Harvard Law School (2004), Princeton University (1999), Duke University (1998)

#### Teaching Fellow/Teaching Assistant

EC 970, Economics of Climate Change, Sophomore Tutorial, Harvard University, 2002, 2003

EC 1410, Public Economics, Harvard University, 2003

EC 1010a, Intermediate Microeconomics, Harvard University, 2001

ENV 270, Resource and Environmental Economics, Nicholas School of the Environment, 1994

ENV 101, Introduction to Environmental Science and Policy, Duke University, 1994, 1995 (Head TA)

## Journal Referee:

B.E. Journals in Economic Analysis & Policy, Climate Policy, Climatic Change, Ecological Economics, Economics, Economics of Energy and Environmental Policy, Economics Letters, Energy Economics, Energy Policy, Environment and Development Economics, Environmental and Resource Economics, European Journal of Health Economics, International Economic Review, International Environmental Agreements, Journal of the Association of Environmental and Resource Economics, Journal of Environment and Development, Journal of Environmental Economics and Management, Journal of Environmental Management, Journal of Health Economics, Journal of Policy Analysis and Management, Journal of Political Economy, Journal of Public Administration Research and Theory, Journal of Public Economics, Journal of Risk and Uncertainty, Nature Climate Change, Proceedings of the National Academy of Sciences, Quarterly Journal of Economics, Resource and Energy Economics, Review of Economic Studies, Science, Southern Economic Journal, The Energy Journal, Water Resources Research

## **Reviewer:**

Academic Press:
Cambridge University Press
Oxford University Press

Government:

Department of Energy
Department of Transportation
Environmental Protection Agency
National Science Foundation
Office of Management and Budget
U.S. Carbon Cycle Science Steering Group
U.S. Climate Change Science Program

Intergovernmental Organization: Intergovernmental Panel on Climate Change International Monetary Fund World Bank

NGO/Foundation:
Brookings Institution
Environmental Defense Fund
Pew Center on Global Climate Change
Smith Richardson Foundation
World Resources Institute

Conferences and Workshops:
World Congress of Environmental and Resource Economists, 2014
International Energy Workshop, 2006-2008
Frontiers of Environmental Economics Conference, 2007

#### Member:

American Economic Association
Association of Environmental and Resource Economists
International Association for Energy Economics

## **Other Professional Activities:**

Co-Organizer and Program Committee Member, *Frontiers of Environmental Economics* Conference, Resources for the Future, Washington, DC, 2007

Organizer, RFF Academic Seminar Series, 2006-2008

Member, Government Accountability Office Expert Panel on Greenhouse Gas Emissions Trading, organized by National Academy of Sciences, 2008

Member, Government Accountability Office Expert Panel on Climate Change Economics, organized by National Academy of Sciences, 2007

Member, Government Accountability Office Expert Panel on the Strategic Petroleum Reserve, organized by National Academy of Sciences, 2006

Advisor, Progressive Policy Institute Energy and Environment Project, 2006-2008 Contributor, *ClimatePolicy* blog, <u>www.climatepolicy.org</u>, sponsored by AMS, 2007 Reviewer, Morris K. Udall Foundation Dissertation Fellowship Competition, 2007, 2008

#### **Consulting Experience:**

Administrative Conference of the United States, Canada2020, Center for American Progress, Center for Disease Dynamics, Economics, and Policy, Chevron, Electric Power Research Institute, ExpoGestion 2011, Health Canada, Hewlett Foundation, International Monetary Fund, Moore Foundation, NERA, Office of the Prime Minister of Denmark, Government of Qatar, Pew Center on Global Climate Change, Rockefeller Foundation, SAIC, Smith Richardson Foundation, The Hamilton Project, U.S. Department of Energy, U.S. Department of Homeland Security, U.S. Environmental Protection Agency, World Bank, World Wildlife Fund—United States

#### **Graduate School Advisors:**

David Cutler (Harvard University)
Caroline Hoxby (Stanford University, formerly Harvard University)
Robert N. Stavins (Harvard Kennedy School)
W. Kip Viscusi (Vanderbilt University; formerly Harvard Law School)