MATTHEW J. KOTCHEN Curriculum Vitae February 2024

CONTACT INFORMATION

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EDUCATION

Ph.D., Economics, University of Michigan, 2003M.S., Resource Policy and Behavior, University of Michigan, 2003M.S., Resource Economics and Policy, University of Maine, 1997B.A., Environmental Studies (minors Biology, Political Science), University of Vermont, 1993

CURRENT APPOINTMENTS AND AFFILIATIONS

Professor of Economics, Yale University, School of the Environment 2013-Department of Economics (secondary), School of Management (secondary)
Research Associate, National Bureau of Economic Research (NBER), 2014-Environmental and Energy Economics Program (Steering committee member 2016-). Public Economics Program
Founding Editor and Conference Organizer, *Environmental and Energy Policy and the Economy*, 2018-Co-Editor, *Journal of the Association of Environmental and Resource Economists*, 2024-Fellow, CESifo Research Network, Munich, Germany, 2020-Faculty Affiliate, E2e Project (Berkeley, MIT, Chicago), 2016-Advisory Board, Market Shaping Accelerator, University of Chicago, 2023-

PREVIOUS APPOINTMENTS AND AFFILIATIONS

Visiting Professor, London School of Economics and Grantham Institute on Climate Change, 2019-2020.
Associate Dean for Academic Affairs, Yale University School of the Environment, 2016-2018
Member, External Economics Advisory Committee for the U.S. EPA, 2018-2021
Member, Environmental Economics Advisory Committee, U.S. EPA, 2012, 2015-2018
Visiting Scholar, Resources for the Future (RFF), 2008, 2014
Deputy Assistant Secretary of Environment and Energy, U.S. Department of the Treasury, 2013
U.S. Board Member, Green Climate Fund (GCF), U.S. Council Member, Global Environment Facility (GEF), U.S. Representative, Climate Investment Funds (CIFs)
Associate Professor of Economics, Yale University, 2009-2013
School of the Environment, Department of Economics (secondary), School of Management (secondary)

Faculty Research Fellow, National Bureau of Economic Research (NBER), 2005-2014

Programs in Environmental and Energy Economics, and Public Economics Visiting Chief Economist, Environmental Defense Fund (EDF), 2011 Visiting Assistant Professor, Department of Economics, Stanford University, 2008-2009 Visiting Researcher, University of California Energy Institute (UCEI) at UC Berkeley, 2008-2009 Associate Professor of Economics, University of California, Santa Barbara, 2009-2010 Assistant Professor of Economics, University of California, Santa Barbara, 2005-2009 Bren School of Environmental Science and Management, Department of Economics (courtesy) Assistant Professor of Economics, Williams College, 2003-2005

Department of Economics, Center for Development Economics (affiliated), Environmental Studies (affiliated), Maritime Studies (affiliated)

JOURNAL PUBLICATIONS

- "Taxing Externalities: Revenue vs. Welfare Gains with and Application to Carbon Taxes," *Review of Environmental Economics and Policy*, forthcoming.
- "The Costs of 'Costless' Climate Mitigation," *Science*, 382 (2023) 1001-1003, with G. Wagner and J. Rising.
- "Crowding In with Impure Altruism: Theory and Evidence from Volunteerism is National Parks." *Journal of Public Economics*, 222 (2023) 104879, with K R. H. Wagner.
- "When Can Benefit Cost Analyses Ignore Secondary Markets?" *Journal of Benefit-Cost Analysis*, 14 (2023) 114-140, with A. Levinson.
- "Policy Instrument Choice with Coasean Provision of Public Goods," *Journal of the Association of Environmental and Resource Economists*, 9 (2022) 947-980, with C. Costello.
- "Reply to Gagon et al.: Short-Run Estimates vs. Long-Run Conjectures," *Proceedings of the National Academy of Sciences*, 119 (2022) No. 49, with S. Holland, E. Mansur, and A Yates.
- "Busting the Myths Around Public Investment in Clean Energy," *Nature Energy*, 7 (2022) 563–565 with J. Meckling, J. Aldy, S. Carley, D. Esty, P. Raymond, B. Tonkonogy, C. Harper, G. Sawyer, and J. Sweatman.
- "Why Are Marginal CO₂ Emissions Increasing for U.S. Electricity? Estimates and Implications for Climate Policy," *Proceedings of the National Academy of Sciences*, 119 (2022) No.8, with S. Holland, E. Mansur, and A. Yates.
- "Keep Climate Policy Focused on the Social Cost of Carbon," *Science*, 373 (2021) 850-852, with J. Aldy, R. Stavins, and J. Stock.
- "The Producer Benefits of Implicit Fossil Fuel Subsidies in the United States," *Proceedings of the National Academy of Sciences*, 118 (2021) No. 14.
- "Environmental Benefit-Cost Analysis: A Comparative Analysis Between the United States and the United Kingdom," *Annual Review of Resource Economics*, 13 (2021) 267-288, with J. Aldy and G. Atkinson.
- "Funding Public Goods Through Dedicated Taxes On Private Goods," *Land Economics*, forthcoming, with N. Chan.

- "The Role of Retrospective Analysis in an Era of Deregulation: Lessons from the U.S. Mercury and Air Toxics Standards," *Review of Environmental Economics and Policy*, 15 (2021) 163-168, with Evans, M., K. Palmer, J. Aldy, M. Fowlie, and A. Levinson.
- "Co-Benefits and Regulatory Impact Analysis: Theory and Evidence from Federal Air Quality Regulations," *Environmental and Energy Policy and the Economy*, 2 (2021) 117-156, with J. Aldy, M. Evans, M. Fowlie, A. Levinson, and K. Palmer.
- "Deep Flaws in Mercury Regulatory Analysis," *Science*, 368 (2020) 247-248, with J. Aldy, M. Evans, M. Fowlie, A. Levinson, and K. Palmer.
- "On the Scope of Climate Finance to Facilitate International Agreement on Climate Change," *Economics Letters*, 190 (2020).
- "Even the Representative Agent Must Die: Using Demographics to Inform Long-Term Social Discount Rates," *Journal of the Association of Environmental and Resource Economists*, 7 (2020) 379-415, with E. Addicott and E. Fenichel.
- "The Use of Group-Level Approaches to Environmental and Natural Resource Policy," *Review of Environmental Economics and Policy*, 14 (2020)173-193, with K. Segerson.
- "The Need for More—Not Less—External Review of Economic Analysis at the U.S. EPA," *Review of Environmental Economics and Policy*, 13 (2019) 308-316, with K. Boyle.
- "On the Use of Group Performance and Rights for Environmental Protection and Resource Management," with K. Segerson, *Proceedings of the National Academy of Sciences*, 116(2019) 5285-92.
- "Maximizing the Impact of Climate Finance: Funding Projects or Pilot Projects?" with C. Costello, Journal of Environmental Economics and Management, 92 (2018) 270-281.
- "Retreat on Economics at the EPA," with K. Boyle, Science, 361 (2018) 729,.
- "Which Social Cost of Carbon? A Theoretical Perspective," Journal of the Association of Environmental and Resource Economists, 5 (2018) 673-694
- "Deciphering Dueling Analyses of Clean Water Regulations," with K. Boyle and V.K. Smith, *Science*, 358 (2017) 49-50.
- "Public Willingness to pay for a U.S. Carbon Tax and Preferences for Spending the Revenue," with Z. Turk and A. Leiserowitz, *Environmental Research Letters*, 12 (2017) 094012.
- "Cofinancing in Environment and Development: Evidence from the Global Environment Facility," with N. K. Negi, *World Bank Economic Review*, forthcoming.
- "Longer-Run Evidence on Whether Building Energy Codes Reduce Residential Energy Consumption," *Journal of the Association of Environmental and Resource Economists*, 4 (2017) 135-153.
- "Opportunities for Advances in Climate Change Economics," with M. Burke, M. Craxton, C. Kolstad, C. Onda, H. Allcott, E. Baker, L. Barrage, R. Carson, K. Gillingham, J. Graff Zivin, M. Greenstone, S. Hallegatte, W. M. Hanemann, G. Heal, S. Hsiang, B. Jones, D. L. Kelly, R. Kopp, R. Mendelsohn, K. Meng, G. Metcalf, J. Moreno-Cruz, R. Pindyck, S. Rose, I. Rudik, J. Stock, R. Tol, *Science*, 352 (2016) 292-293.

- "Reassessing the Contribution of Natural Gas to U.S. CO₂ Emission Reductions Since 2007," with E. Mansur, *Nature Communications*, 7 (2016), Article 10648.
- "An Economic Perspective on the EPA's Clean Power Plan," with M. Fowlie, L. Goulder, S. Borenstein, J. Bushnell, L. Davis, M. Greenstone, C. Kolstad, C. Knittle, R. Stavins, M. Wara, F. Wolak, and C. Wolfram, *Science*, 346 (2014) 815-816.
- "Testing Motives for Charitable Giving: A Revealed-Preference Methodology with Experimental Evidence," with R. Deb and R. Gazzale, *Journal of Public Economics*, 120 (2014) 181-192.
- "Conflicts of Interest Distort Public Evaluations: Evidence from the Top 25 Ballots of NCAA Football Coaches," with M. Potoski, *Journal of Economic Behavior and Organization*, 107 (2014) 51-63.
- "Reconsidering Donations for Nonmarket Valuation," *Environmental and Resource Economics*, 62 (2015) 481-490.
- "Temporal and Spatial Heterogeneity in Marginal Emissions: Implications for Electric Cars and Other Electricity-Shifting Policies," with J. Graff Zivin and E. Mansur, *Journal of Economic Behavior and Organization*, 107 (2014) 248-268.
- "The Identification of Causal Effects in Environmental and Energy Economics," with M. Evans and C. Vossler, *Journal of Economic Behavior and Organization*, 107 (2014) 173-175.
- "How Stringent are the U.S. EPA's Proposed Carbon Pollution Standards for New Power Plants?" with E. Mansur, *Review of Environmental Economics and Policy*, 8 (2014) 290-306.
- "A Generalized Impure Public Good and Linear Characteristics Model of Green Consumption," with N. Chan, *Resource and Energy Economics*, 37 (2014) 1-17.
- "Rebound Effect is Over-Played," with K. Gillingham, D. Rapson, and G. Wagner, *Nature*, 493 (2013) 475-476.
- "Do Building Codes Save Energy? Evidence from Residential Billing Data in Florida," with G. Jacobsen *The Review of Economics and Statistics*, 95 (2013) 34-49.
- "Voluntary- and Information-Based Approaches to Environmental Management: A Public Economics Perspective," *Review of Environmental Economics and Policy*, 7 (2013) 276-295.
- "Community-Based Incentives for Environmental Protection: The Case of Green Electricity," with G. Jacobsen and G. Clendenning, *Journal of Regulatory Economics*, 44 (2013) 30-52.
- "Willingness-to-Pay and Policy-Instrument Choice for Climate-Change Policy in the United States," with K. Boyle and A. Leiserowitz, *Energy Policy*, 55 (2013) 617-625.
- "Corporate Social Responsibility for Irresponsibility," with J. Moon, *The B.E. Journal of Economic Analysis & Policy* (Contributions), 12:1 (2012) Article 55.
- "The Behavioral Response to Voluntary Provision of an Environmental Public Good: Evidence from Residential Electricity Demand," with G Jacobsen and M. Vandenbergh, *European Economic Review*, 56 (2012) 946-960.
- "Willingness to Pay and Political Support for a U.S. National Clean Energy Standard," with J. Aldy and A. Leiserowitz, *Nature Climate Change*, 2 (2012) 596-599.

- "Effects of Marine Reserves on California Spiny Lobster are Robust and Modified by Fine-Scale Habitat Features and Distance From Reserve Borders," with M. Kay, H. Lenihan, and C. Miller, *Marine Ecology Progress Series*, 451 (2012) 137-150.
- "Business Cycle Effects on Concern About Climate Change: The Chilling Effect of Recession," with M. Kahn, *Climate Change Economics*, 2 (2011) 257-273.
- "Green Clubs," with K. van 't Veld, Journal of Environmental Economics and Management, 62 (2011) 309-322.
- "Does Daylight Saving Time Save Energy? Evidence from a Natural Experiment in Indiana," with L. Grant, *The Review of Economics and Statistics*, 93 (2011) 1172-1185.
- Review of *Climatopolis: How Our Cities Will Thrive in a Hotter Future*, by M. Kahn, *Journal of Economic Literature*, 49 (2011) 777-779.
- "A Free Lunch in the Commons," with S. Salant, *Journal of Environmental Economics and Management*, 61 (2011) 245-253.
- "Energy Efficiency Codes: Plan B for Climate Change?" The Milken Institute Review, (2011) 58-69.
- "Explaining the Price of Voluntary Carbon Offsets," with M. Conte, *Climate Change Economics*, 1 (2010) 93-111.
- "Voluntary Provision of Public Goods for Bads: A Theory of Environmental Offsets," *Economic Journal*, 119 (2009) 883-899.
- "A Meta-Analysis of Cost of Community Service Studies," with S. Schulte, *International Regional Science Review*, 32 (2009) 376-399.
- "Grades, Course Evaluations, and Academic Incentives," with D. Love, *Eastern Economic Journal*, 36 (2010) 151-163.
- "Pharmaceuticals in Wastewater: Behavior, Preferences, and Willingness to Pay for a Disposal Program," with J. Kallaos, K. Wheeler, C. Wong, and M. Zahller, *Journal of Environmental Management*, 90 (2009) 1476-1482.
- "Offsetting Green Guilt," Stanford Social Innovation Review, Spring 2009, 26-31.
- "The Effect of Geomorphic Channel Restoration on Streamflow and Groundwater in a Snow-Melt Dominated Watershed," with C. Tague and S. Valentine, *Water Resources Research*, 44 (2008).
- "Reef Structure Regulates Small-Scale Spatial Variation in Coral Bleaching," with H. Lenihan, M. Adjeroud, J. Hench, and T. Nakamura, *Marine Ecology Progress Series*, 270 (2008) 127-141.
- "Conservation: From Voluntary Restraint to a Voluntary Price Premium," with M. Moore, *Environmental* and Resource Economics, 40 (2008) 195-215.
- Review of "Our Precarious Habitat," by M. A. Benarde, *Journal of the American Medical Association* (*JAMA*), 299 (2008) 581-582.
- "Equilibrium Existence and Uniqueness in Impure Public Good Models," *Economics Letters*, 97 (2007) 91-96.
- "Should We Drill in the Arctic National Wildlife Refuge? An Economic Perspective," with N. Burger, *Energy Policy*, 35 (2007) 4720-29.

- "Private Provision of Environmental Public Goods: Household Participation in Green-Electricity Programs," with M. Moore, *Journal of Environmental Economics and Management*, 23 (2007) 1-16.
 - Reprinted in *Corporate Sustainability*, T. Lyon, D. Diermeier, and G. Dowell (eds.), SAGE Publications, 2014.
- "Relating Environmental Attitudes and Contingent Values: How Robust Are Methods for Identifying Preference Heterogeneity?" with G. Aldrich, G., K. Grimsrud, and J. Thacher, *Environmental and Resource Economics*, 37 (2007) 757-75.
- "Meeting the Challenges of the Anthropocene: Toward a Science of Coupled Human-Biophysical Systems," with O. Young, *Global Environmental Change*, 17 (2007) 149-51.
- "Green Markets and Private Provision of Public Goods," *Journal of Political Economy*, 114 (2006) 816-34.
 - Reprinted in *The Economics of Corporate Social Responsibility*, A. McAdams (ed.), The University of Chicago Press.
 - Reprinted in *Corporate Sustainability*, T. Lyon, D. Diermeier, and G. Dowell (eds.), SAGE Publications, 2014.
- "Explaining the Appearance and Success of Voter Referenda for Open-Space Conservation," with S. Powers, *Journal of Environmental Economics and Management*, 52 (2006) 373-90.
- "Environmental Constraints on Hydropower: An Ex-Post Benefit-Cost Analysis of Hydroelectric Relicensing in Michigan," with M. Moore, F. Lupi, and E. Rutherford, *Land Economics*, 82 (2006) 389-403.
- Review of "The Economics of Sustainable Development," edited by S. Asefa, *Journal of Regional Science*, 46 (2006) 583-86.
- "Impure Public Goods and the Comparative Statics of Environmentally Friendly Consumption," *Journal* of Environmental Economics and Management, 49 (2005) 281-300.
- "Internal and External Influences on Pro-Environmental Behavior: Participation in a Green Electricity Program," with C. Clark and M. Moore, *Journal of Environmental Psychology*, 23 (2003) 237-46.
- Review of "Principles of Environmental and Resource Economics," edited by H. Folmer and H. L. Gabel, *The Annals of Regional Science*, 36 (2002) 697-99.
- "Can Shade-Grown Coffee Help Conserve Tropical Biodiversity? A Market Perspective," with K. Messer and M. Moore, *Endangered Species Update*, 17 (2001) 125-31.
- "Environmental Attitudes, Motivations, and Contingent Valuation of Nonuse Values: A Case Study Involving Endangered Species," with S. Reiling, *Ecological Economics*, 32 (2000) 93-107.
- "Do Reminders of Budget Constraints and Substitutes Influence Contingent Valuation Estimates? Another Comment," with S. Reiling, *Land Economics*, 75 (1999) 478-82.
- "Estimating and Questioning Economic Values for Endangered Species: An Application and Discussion," with S. Reiling, *Endangered Species Update*, 15 (1998) 9-15.

BOOKS EDITED

- *Environmental and Energy Policy and the Economy, Volume 5*, edited with T. Deryugina and C. Wolfram, University of Chicago Press, 2024,
- *Environmental and Energy Policy and the Economy, Volume 4*, edited with T. Deryugina and J. Stock, University of Chicago Press, 2023,
- *Environmental and Energy Policy and the Economy, Volume 3*, edited with T. Deryugina and J. Stock, University of Chicago Press, 2022.
- *Environmental and Energy Policy and the Economy, Volume 2,* edited with J. Stock and C. Wolfram, University of Chicago Press, 2021.
- *Environmental and Energy Policy and the Economy, Volume 1,* edited with J. Stock and C. Wolfram, University of Chicago Press, 2020.
- *Technology Choices: Finding Strategies for a Sustainable Maine*, edited with S. Smith and M. Anderson, University of Maine, Maine Agricultural and Forest Experiment Station Publication, 734 (1997) 164 pages.

BOOK CHAPTERS, PROCEEDINGS, REPORTS

- "Report on the Proposed Changes to the Federal Mercury and Air Toxics Standards," Co-chair of report for the External Environmental Economics Advisory Committee to the U.S. EPA, 2019, with J. Aldy, M. Evans, M. Fowlie, A. Levinson, and K. Palmer, 2019.
- "Public Goods," *Environmental and Natural Resource Economics: An Encyclopedia*, J. Whitehead and T. Haab (eds.), ABC-CLIO/Greenwood, 2014.
- "Climate Policy and Voluntary Initiatives: An Evaluation of the Connecticut Clean Energy Communities Program," In *The Design and Implementation of U.S. Climate Policy*, D. Fullerton and C. Wolfram (eds.). University of Chicago Press, 2012.
- Discussion of "Carbon Prices and Automobile Greenhouse Gas Emissions," in *The Design and Implementation of U.S. Climate Policy*, D. Fullerton and C. Wolfram (eds.), 2012, University of Chicago Press.
- "An Economic Framework for Evaluating Climate Proofing Investments on Infrastructure," In *Paving the Way for Climate-Resilient Infrastructure: Guidance for Practitioners and Planners*, United Nations Development Program (UNDP), 2011.
- "Cost-Benefit Analysis," In *Encyclopedia of Climate and Weather, 2nd Edition*, S. Schneider, M. Mastrandrea, and T. Root (eds.), Oxford University Press, 2011.
- "Some Microeconomics of Eco-Entrepreneurship," In the Advances in the Study of Entrepreneurship, Innovation, and Economic Growth, G. Libecap (ed), Elsevier Science/JAI Press publishing, 2009.
- "An Economics Perspective on Treating Voluntary Programs as Clubs," with K. van 't Veld, In *Voluntary Programs: A Club Theory Perspective*, M. Potoski and A. Prakash (eds.), MIT Press, 2009.
- "Environmental Voluntary Contracts Between Individuals and Industry: An Analysis of Consumer Preferences for Green Electricity," with C. Clark, and M. Moore, In *Environmental Voluntary*

Contracts: Comparative Approaches to Regulation Innovation in the United States and Europe, E. Orts and K. Deketelaere (eds.), Kluwer Law International, 2001.

- "Incorporating Resistance in Pesticide Management: A Dynamic Regional Approach," In *Regional Sustainability: Applied Ecological Economics Bridging the Gap Between Natural and Social Sciences*, I. Ring, B. Klauer, F. Watzold, and B. Mansson (eds.), Springer Verlag, 1999.
- "Lessons Learned From Past Research on Recreation Fees," with S. Reiling, In *Recreation Fees in the National Park Service: Issues, Policies and Guidelines for Future Action*, A. L. Lundgren (ed.), University of Minnesota Publication, No. BU-6767 (1996) 49-69.
- *An Economic Evaluation of Snowmobiling in Maine*, with S. Reiling and A. Kezis, University of Maine, Maine Agricultural and Forest Experiment Station Publication, 2069 (1997) 123 pages.
- "The Economic Impacts of Snowmobiling in Maine," with S. Reiling and R. Bennet, In *Proceedings of the 1997 Northeastern Recreation Symposium*, USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report (1997).
- "A Modified Method for Measuring the Economic Impact of Tourism," with S. Reiling and J. Michael, In *Proceedings of the 1996 Northeastern Recreation Symposium*, USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report-NE-232 (1996) 249-51.

OTHER PUBLICATIONS

- "Climate, Inequality, and the Economics of Sustainability," *Italian Institute for International Political Studies*, 2020.
- "How the Trump Administration Distorts Analysis of Key Environmental Rules," *Yale Environment 360*, January 29, 2018.
- "When Good Intentions Backfire," Issues in Science and Technology, Forum, Vol 34, Issue 1, 2017.
- "The Impact of Demographics on Long-Term Discount Rates," *VOX Column*, August 20, 2017, with E. Fenichel and E. Addicott.
- "Memo to the President: Support for the Green Climate Fund Puts America First," *Yale Environment 360*, July 13, 2017, with L. Martinez-Diaz.
- "Trump Will Stop Paying into the Green Climate Fund. He Has No Idea What It Is," *The Washington Post*, June 2, 2017.
- "This Tax Could Win Over Donald Trump While Helping the Environment," TIME, February 21, 2017.
- "The Case for the Green Climate Fund," The Hill, June 3, 2015, with G. Metcalf and W. Pizer.
- "Lower Prices Make it Harder to Meet Emission Reduction Goals," New York Times, December 18, 2014.
- "Are Electric Cars Greener? Depends on Where You Live," *Los Angeles Times*, November 16, 2014, with J. Graff-Zivin and E. Mansur
- "Saving Daylight Wastes Energy," New York Times, March 6, 2014.

"Beware of the Rebound Effect," New York Times, March 20, 2012.

- "Coaches Game the System When Ranking College Football Teams in the US," *VOX Column*, December 24, 2011, with M. Potoski.
- "Are Americans Willing to Pay for Climate Change Mitigation?" *RFF Weekly Policy Commentary*, December 5, 2011, with K. Boyle and A. Leiserowitz.

"Cheap Gas is a Trap," New York Times, November 7, 2011.

"Building Codes and Energy Policy," Resources Magazine, Fall 2010, with G. Jacobsen.

- "Discussion of Carbon Prices and Automobile Greenhouse Gas Emissions," in *The Design and Implementation of U.S. Climate Policy*, 2012, University of Chicago Press
- "Trends in Environmental Concern as Revealed By Google Searches," VOX Column, August, 2010, with M. Kahn.

"Is it Obama's Spill Now? Seize An Opportunity," New York Times, May 26, 2010.

"What the Spill Means for Offshore Drilling? Tax, Baby, Tax," New York Times, April 29, 2010.

"Greener Pastures for Commercial Real Estate," Wall Street Journal, December 16, 2009.

"What's The Point of Daylight Time?" New York Times, November 20, 2008, with L. Grant.

"Does Daylight Saving Time Save Electricity?" VOX Column, December 5, 2008, with L. Grant.

"Oil and the Arctic National Wildlife Refuge," *RFF Weekly Policy Commentary* Oct. 5, 2008, reprinted in Issues of the Day, Resources for the Future Press, with N. E. Burger.

"What Would Environmentalists Do with ANWR?" San Diego Union-Tribune, July 18, 2008.

"Letter in Response to No Middle Way on The Environment," The Atlantic Monthly, April 1998.

GRANTS

Sloan Foundation, Environmental and Energy Policy and the Economy, 2022-2025 (\$599,844)
Sloan Foundation, Environmental and Energy Policy and the Economy, 2018-2021 (\$432,372)
Yale Center for Business and Environment, PI with J. Shapiro, 2016–2018 (\$34,480)
Yale Center for Business and Environment, PI, 2011–2011 (\$28,000)
Founding Grant for the University of California Center for Energy and Environmental Economics (UCE3), Co-PI, 2009–2012 (\$2.4 million)
University of California Energy Institute, PI, 2007–2008 (\$25,000)
U.S. Environmental Protection Agency, PI, 2000–2002 (\$68,042)
Michigan Department of Environmental Quality, PI, 2000–2002 (\$43,843)

CONFERENCES AND WORKSHOPS ORGANIZED

Co-Organizer, Yale Conference on Public Investment for Decarbonization, 2021

- Co-Organizer, NBER Environmental and Energy Policy & the Economy, May 2019, 2020, 2021, 2022, 2023, 2024
- Co-Organizer, NBER Summer Institute Program on Environmental and Energy Economics, 2009, 2021, 2023
- Co-Organizer, NBER Spring Program on Environmental and Energy Economics, 2018
- Co-Organizer, Conference on Identifying Causal Effects in Environmental and Energy Economics, University of Tennessee, 2013
- Co-Organizer, AERE Sessions at the annual Allied Social Science Association (ASSA) Meetings, 2009–2011, Chair 2012
- Co-Organizer, Yale Environmental Economics Seminar, 2009-present
- Co-Organizer, EDF Workshop on the Rebound Effect, 2011
- Co-Organizer, Voluntary Approaches to Environmental Protection, UCSB, 2009
- Co-Organizer, 9th Occasional Workshop on Environmental Economics, UCSB, 2006

AWARDS AND RECOGNITIONS

Keynote Speaker, Venice Summer Institute, Understanding and Support for Economic Policies, 2023 Keynote Speaker, 16th Conference on Economic Growth & Development, Indian Statistical Institute, 2020 Keynote Speaker, CESinfo Energy and Climate Economics Workshop, Munich, Germany, 2020. Keynote Speaker, Envt. & Natural Resource Conservation Workshop, Montpelier, France, 2019. Keynote speaker, 7th International Symposium on Environment & Energy Finance, Paris, 2019 Keynote speaker, Maine Economics Conference, 2018 Bicentennial Distinguished Alumni Award, University of Michigan, 2017 Vatter Memorial Lecture at Portland State University, 2017 AERE Nomination Committee, 2017 Fellow Silliman College, Yale University, 2016-Distinguished Visiting Scholar, Vanderbilt University School of Law, Sept 2007 Ayers Brinser Award, University of Michigan, 2003 Mans-Spector Fellowship, University of Michigan, 2003-2004 Science to Achieve Results (STAR) Graduate Fellowship, U.S. EPA, 1999-2002 Outstanding Graduate Student Teaching Award, SNRE, University of Michigan, 2000

SELECTED INVITED SEMINARS AND LECTURES

<u>2022–:</u> Harvard University; Technical University of Berlin; University of Maryland; Resources for the Future; Claremont McKenna College; University of Wyoming; University of Illinois; University of British Columbia; University of California, San Diego. North Carolina State University, Duke University.

<u>2016–2021</u>: Georgia State University; London School of Economics, Cambridge University, ETH Zurich, Università Bocconi, University of California, Santa Barbara, Carnegie Mellon University/University of Pittsburg, Duke-NC State-UNC joint, Harvard University, Cornell University, Toulouse School of Economics, London School of Economics, University of Connecticut.

<u>2012–2015</u>: The National Academy of Sciences, Washington, DC; Global Environment Facility; Basque Center for Climate Change (BC3), Bilbao, Spain; Columbia University; Center for European Economic

Research, Manheim, Germany; Fordham University; University of California, Santa Barbara; Resources for the Future; Stanford University; Williams College; University of Illinois, Urbana-Champaign; University of Rhode Island; Environmental Defense Fund.

<u>2010–2011</u>: Amherst College; Columbia University; Connecticut College; Harvard University; Massachusetts Institute of Technology; New York University; Oregon State University; Tulane University; University of Colorado; University of Tennessee; INRA Economie, Rennes, France; University of Michigan; University of Montpelier, France; Environmental Defense Fund; Yale Law School.

<u>2007–2009</u>: Brown University; Cal Poly; Columbia University; Duke University; Harvard University; North Carolina State University; Princeton University; University of Washington; Resources for the Future; Stanford University; University of Calgary; University of California Energy Institute; University of California, Los Angeles; University of California, San Diego; University of California, Santa Barbara; University of Maryland; Vanderbilt University; Yale University.

<u>PRIOR TO 2007:</u> Mystic Seaport, Mystic, CT; Rensselaer Polytechnic Institute; Tufts University; University of California, Berkeley; University of California, Davis; University of California, Energy Institute; University of California, Los Angeles; University of California, Santa Barbara; University of British Columbia; University of Illinois, Urbana-Champaign; University of Maine; University of Michigan; University of Minnesota; University of New Hampshire; University of Vermont; University of Victoria; Williams College; Yale University.

SELECTED CONFERENCE AND WORSHOP PRESENTATIONS

Conference on Additionality, University of California, Santa Barbara, 2024. Environmental Economics Theory Workshop, University of California, Santa Barbara, 2023. 14th International Workshop on Empirical Methods in Energy Economics, New Haven, 2023. Annual Meeting of the Society of Benefit-Cost Analysis, 2022. 13th International Workshop on Empirical Methods in Energy Economics, Zurich, 2020. Northeast Environmental and Energy Economics Workshop, 2017, 2018 Energy Efficiency Workshop, Council of Economic Advisors, Washington, DC, 2016 Benefits Transfer Workshop, US EPA, 2016 New Directions in Climate Change Economics, Stanford University, 2015 Children and Climate Change, Princeton University, 2015 Energy Efficiency and Climate Policy, European University Institute, Florence, Italy, 2014 Climate Change, Raising Ambition, Delivering Results, Chatham House, London, UK, 2014 Conference on Transportation, Energy, Economics and Environment, University of Michigan, 2014 International Environmental Agreements, Columbia University, 2014 The Future of the World Bank and IMF, Williams College, 2012 EDF-Alliance Program, The Italian Institute at Columbia University, 2011 The Next Round of Climate Economics and Policy Research, RFF, Washington DC, 2011 Energy Policy Symposium, RFF, Washington DC, 2011 **UBC** Environmental Economics Workshop, 2010 UNDEP Climate Change Adaptation, San Salvador, El Salvador, 2010.

Yale Clean Energy Innovation Conference, 2010 NBER Environmental & Energy Economics Spring Meeting, 2010. AEA session at the ASSA annual meetings, 2009, 2016, 2017 Environmental Federalism, The Newseum, Washington, DC, 2009 The Promise of Socially Responsible Investing, Princeton University, 2008 UC Energy Institute Working Group, Berkeley, 2008, 2007 Frontiers in Eco-Entrepreneurship, panelist, UC Santa Barbara, 2008 Conference in Honor of Roger Bolton, Williams College, 2008 Strategy and the Business Environment, Duke University, Fuqua School of Business, 2008 NBER Environmental and Energy Economics Program Meeting, Stanford, 2008 Carbon Offsets and Renewable Energy Certificates, Federal Trade Commission, 2008 Conference on Voluntary Programs and Club Theory, University of Washington, 2007 Industry Self-Regulation Conference, Harvard Business School, 2007 Power Conference, UC Energy Institute, Berkeley, 2007, 2009, 2011 NBER Working Group on Public Policy and the Environment, Cambridge, 2007, 2004, 2002 Round Table on Environmental Voluntary Contracts, Vanderbilt University School of Law, 2006 Occasional Workshop on Environmental Economics, UC Santa Barbara, 2005 International Institute of Public Finance, Helsinki, Finland, 2002 AERE session at ASSA annual meetings, 2006, 2002, 2011, 2013, 2015 AERE session at AAEA annual meetings, 2004, 2001 Wharton Impact Conference, University of Pennsylvania, 1999 HERE Workshop, Iowa State University, 2001, 2000, 1999 UFZ-Center for Environmental Research, Leipzig Halle, Germany, 1998

REVIEWING ACTIVITY

American Economic Journal: Applied Economics; American Economic Journal: Economic Policy; American Economic Journal: Microeconomics; American Economic Review; American Journal of Agricultural Economics; The BE Journals in Economic Analysis & Policy; Bulletin of Economic Research; Climate Change Economics; Ecological Economics; Economica; Economics Letters; Energy Economics; Energy Policy; Environmental and Resource Economics; Environmental Management; European Journal of Political Economy; Journal of Economic Education; Journal of Economics and Management Strategy; Journal of Environmental Economics and Management; Journal of Environmental Psychology; Journal of Public Economic Theory; Journal of Public Economics; Land Economics; Nature; Nature Climate Change; Proceedings of the National Academy of Sciences; Resource & Energy Economics; Rand Journal of Economics; Regulation and Governance; Review of Economics and Statistics; Review of Economic Studies; Science; Social Science Quarterly; Quarterly Journal of Economics; National Science Foundation; U.S. Environmental Protection Agency.

SELECTED MEDIA

<u>RESEARCH FREQUENTLY FEATURED AND PERIODIC COMMENTARY</u>: New York Times, Wall Street Journal, The Economist, National Public Radio (Marketplace, All Things Considered), Washington Post, National Geographic, CBS Sunday Morning, The Today Show, Forbes, Scientific American, Boston Globe, USA Today, U.S. News and World Report, Christian Science Monitor, ABC News 20/20, etc.