



MIT CEEPR

Center for Energy and
Environmental Policy Research

Spring 2024 Research Workshop

May 16-17, 2024

**Royal Sonesta Boston
Cambridge, Massachusetts**

BIOGRAPHIES: Speakers and Moderators



JOSEPH E. ALDY

Teresa and John Heinz Professor of the Practice of Environmental Policy
Harvard Kennedy School
Harvard University

Joe Aldy is the Teresa and John Heinz Professor of the Practice of Environmental Policy at the Harvard Kennedy School. His research focuses on climate change policy, energy policy, and regulatory policy. He is currently a University Fellow at Resources for the Future, a Faculty Research Fellow at the National Bureau of Economic Research, and a Senior Adviser at the Center for Strategic and International Studies. He is also the Faculty Chair for the Regulatory Policy Program at the Mossavar-Rahmani Center for Business and Government.

In 2009-2010, Aldy served as the Special Assistant to the President for Energy and Environment, reporting through both the National Economic Council and the Office of Energy and Climate Change at the White House. Aldy was a Fellow at Resources for the Future from 2005 to 2008 and served on the staff of the President's Council of Economic Advisers from 1997 to 2000. He also served as the Co-Director of the Harvard Project on International Climate Agreements, Co-Director of the International Energy Workshop, and Treasurer for the Association of Environmental and Resource Economists before joining the Obama Administration.

He holds a Ph.D. in economics from Harvard University, a Master of Environmental Management degree from the Nicholas School of the Environment, and a B.A. from Duke University.



GEORGE DAVID BANKS

Senior Fellow
Atlantic Council

Dave Banks is an economist, political analyst, and policy advocate, focusing on climate change, energy and supply chain security, and trade. He is a fellow at the Bipartisan Policy Center and senior fellow at the Atlantic Council. In his different capacities, he serves as an informal adviser to House and Senate Republicans. Banks has published peer-reviewed articles, reports, and opinion editorials on a variety of energy and economic security issues, as well as geo-political competition with China.

A native southeast Missourian, Banks was most recently Chief Strategist for Republicans on the House Select Climate Committee. Previously, he was President Donald Trump's Special Assistant for International Energy and Environment at the National Economic and National Security Councils, Republican deputy staff director of the U.S. Senate Environment & Public Works Committee, Senior Advisor on International Affairs and Climate Change for President George W. Bush, a State Department foreign service officer, and CIA economic analyst.

During his government tenure, Banks received multiple meritorious awards, including the EPA Climate Protection Award for Diplomacy, a Department of State Superior Honor Award for promoting U.S. diplomatic objectives for the environment, and a Commendable Service Award from the Central Intelligence Agency. He holds a J.D. from George Mason University and a M.A. in economics and baccalaureate degrees in history, economics, and political science from the University of Missouri at St. Louis.



BRYAN BOLLINGER

Professor of Marketing & George A. Kellner Faculty Fellow
Stern School of Business
New York University

Professor Bollinger is a Professor of Marketing and Academic Director of Doctoral Studies at NYU Stern School of Business. His interdisciplinary research portfolio aims to understand the causal effects of marketing and policy decisions in sustainability domains, and the interdependent reactions by consumers and firms. Examples include drivers of solar adoption and pricing, the role of home-automation and dynamic pricing on demand response, and response to information. His research has been supported by grants from the Department of Energy, National Science Foundation, Environmental Protection Agency, and others. His work has been published in all of the leading marketing journals, as well as in journals in other fields, such as *Nature*, *PNAS*, *AEJ: Economic Policy*, and *RAND Journal of Economics*. Professor Bollinger serves on the editorial review boards at *Journal of Marketing Research* (area editor), *Journal of Marketing* (area editor), *Quantitative Marketing and Economics* (area editor), *Marketing Science*, and *Journal of Consumer Research*. His research has been highlighted in news outlets such as *The Economist*, *NPR*, *The New York Times*, and *The Harvard Business Review*. Professor Bollinger received his B.A. and B.E. in engineering at Dartmouth College and his M.A. in Economics and Ph.D. in Marketing at Stanford University.



MARTHA BROAD

Executive Director
MIT Energy Initiative
Massachusetts Institute of Technology

Martha Broad is MITEI's executive director. As part of the leadership team, she works to link science, innovation and policy to transform the world's energy systems. She has a track record of successfully partnering with business, government and nonprofit stakeholders to support the clean energy transition. At MITEI, she works closely with member companies who collaborate with MIT researchers on a spectrum of topics, including the Future Energy Systems Center.

In addition, she spearheads MITEI's collaboration with the U.S. Department of Energy to design, manage, and host the annual Clean Energy Education and Empowerment (C3E) Women in Clean Energy Symposium and serves as a C3E Ambassador.

Previously, as part of the senior management team of the Massachusetts Clean Energy Center (MassCEC), Broad led programs and studies that focused on the commercialization of clean energy technologies. By collaborating with universities and public and private partners, she helped facilitate the state's successful installation of hundreds of megawatts of wind and solar systems.



PATRICK BROWN

Researcher
Grid Planning and Analysis Center
National Renewable Energy Laboratory

Patrick Brown is a member of the Transmission Group in the Grid Planning and Analysis Center at the National Renewable Energy Laboratory. His research focuses on improving the representation of renewable energy, transmission, and energy storage in power system planning models to support rapid decarbonization. Patrick completed his B.S. in physics and chemistry at Notre Dame, his Ph.D. in physics at MIT, and his postdoctoral studies at the MIT Energy Initiative.



ELAINE BUCKBERG

Senior Fellow
Salata Institute for Climate and Sustainability
Harvard University

Elaine Buckberg, Ph.D. is a senior fellow of the Salata Institute for Climate and Sustainability at Harvard University. Previously, she was Chief Economist of General Motors (GM) from 2018 to March 2023. At GM, Elaine was responsible for assessing the impact of worldwide economic developments on the corporation, and for providing advice on various competitive and economic policy issues.

From 2013-16, Elaine served as Deputy Assistant Secretary for Policy Coordination in the Office of Economic Policy at the U.S. Treasury Department, where her portfolio included infrastructure and housing finance. She has also worked in economic consulting, at The Brattle Group and NERA Economic Consulting, and in finance at Morgan Stanley. Elaine began her career as an Economist at the International Monetary Fund. Elaine received her Ph.D. in Economics from MIT and her B.A. from Yale.



ANTJE DANIELSON

Director of Education
MIT Energy Initiative
Massachusetts Institute of Technology

Antje Danielson is the Director of Education at the MIT Energy Initiative, where she directs existing energy programs—such as the MIT Energy Studies Minor and the Energy Fellows Program—conceives and oversees the development of new programs—such as the Future of Energy Systems online MicroMasters—and engages in interdisciplinary research related to transformation systems. She co-teaches energy- and climate-related classes, and leverages her extensive international network of like-minded academic and professional colleagues to accelerate climate change related capacity building.

Prior to her position at MIT, she directed the Institute of the Environment at Tufts University, where she was also an assistant professor in the Department of Public Health. From 2005 to 2008, she was the Deputy Director for Sustainability at the Centre for Research into Earth Energy Systems at Durham University in the UK, where she initiated a carbon capture and storage working group.

Danielson's approach to finding climate solutions is systemic, interdisciplinary, collaborative, and entrepreneurial. She advances her goals through research, education, and implementation of solutions. In 1999/2000, she co-founded the car-sharing company Zipcar.

Danielson is a member of the Board of Directors of the Global Council for Science and the Environment and has also served as President of the U.S. Council for Environmental Deans and Directors. She received teaching awards from Harvard University and an Exceptional Contribution Award from Durham University.



BRIAN DEESE

Institute Innovation Fellow
MIT Center for Energy and Environmental Policy Research
Massachusetts Institute of Technology

Brian Deese is the current Institute Innovation Fellow at MIT and the Center for Energy and Environmental Policy Research, where he is focused on researching and developing strategies to address climate change and promote sustainable economic growth. As the former Director of the White House National Economic Council, Deese advised President Biden on domestic and international economic policy and coordinated the economic agenda of the Biden-Harris Administration. A former senior advisor to President Obama, Deese was instrumental in engineering the rescue of the U.S. auto industry and negotiating the landmark Paris Climate Agreement. Deese is a crisis-tested advisor with broad experience in accelerating economic prosperity, empowering working Americans, and harnessing the economic opportunities that come from building a clean energy economy and combating the climate crisis.

Previously, Deese also served as the global head of sustainable investing at BlackRock, where he worked to drive greater focus on climate and sustainability risk in investment portfolios and create investment strategies to help accelerate the low-carbon transition. During the Obama-Biden Administration, Deese served as acting director of the Office of Management and Budget and deputy director of the National Economic Council. Deese received his B.A. from Middlebury College and his JD from Yale Law School.



KAILIN GRAHAM

Energy and Climate Policy Specialist, The Brattle Group
Graduate Research Assistant, MIT CEEPR
Massachusetts Institute of Technology

Kailin Graham is an energy and climate policy specialist at The Brattle Group in Boston, MA, working on issues of market design, policy and regulatory reform across the power sector. His experience ranges from consulting on distributed energy resources and grid modernization to research on energy justice and the just transition. He was recently a Fulbright Scholar and Graduate Researcher at MIT's Center for Energy & Environmental Policy, where his research focused on the employment impacts of the energy transition and has been featured by several news media outlets. Prior to MIT, Kailin led the energy flexibility policy workstream at the Association for Decentralised Energy in London, UK, a trade association advocating for the integration of distributed energy resources into electricity markets. He holds an S.M. in Technology & Policy and an S.M. in Electrical Engineering & Computer Science from MIT, and a Bachelor of Chemical & Environmental Engineering as a Hawken Scholar from the University of Queensland, Australia.



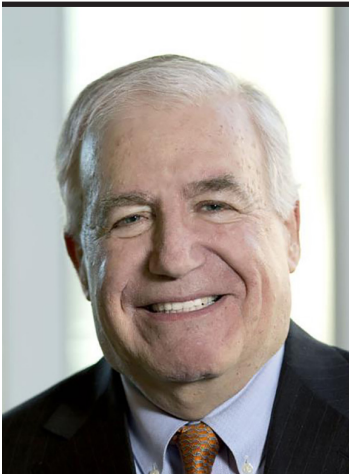
JOSHUA HODGE

Executive Director, MIT Center for Energy and Environmental Policy Research
Lecturer, Sloan School of Management
Massachusetts Institute of Technology

Joshua Hodge is the Executive Director at the MIT Center for Energy and Environmental Policy Research and a Lecturer at the MIT Sloan School of Management. His areas of expertise include domestic and international climate and energy policy, with a focus on energy transition and renewable energy policies in the United States. Joshua's recent work has included assisting rural electric cooperatives in the U.S. with decarbonization strategy. He is also a member of the MIT Net-Zero by 2026 Faculty Review Committee.

Prior to his appointment as Executive Director at CEEPR, Mr. Hodge served for three years as Deputy Executive Director at both CEEPR and the MIT Joint Program on the Science and Policy of Global Change. Before joining MIT, Joshua ran the Commodities Research and Forecasts business, Americas, at Thomson Reuters, where he managed the launch of the firm's North American power and gas forecast modeling services. Previously, Mr. Hodge was Managing Director, North America, at Point Carbon where he was the firm's first hire in the region and oversaw the launch of Point Carbon's North American products. Joshua holds an MBA from the Darden Graduate School of Business at the University of Virginia.

Mr. Hodge has served as a Commissioner on the Commission for Energy Use and Climate Change of the City of Somerville (MA), assisted the Museum of Science, Boston with climate change programming and mentored students at the MIT Policy Hackathon.



PAUL L. JOSKOW

Elizabeth and James Killian Professor of Economics, Emeritus
Department of Economics
Massachusetts Institute of Technology

Paul L. Joskow is the Elizabeth and James Killian Professor of Economics, Emeritus at MIT and President emeritus of the Alfred P. Sloan Foundation. Joskow has been on the MIT faculty since 1972, where he was the head of the MIT Department of Economics from 1994 to 1998 and director of the MIT Center for Energy and Environmental Policy Research from 1999 to 2007. Joskow became president of the Sloan Foundation in 2008 and returned to MIT in 2018. At MIT his teaching and research areas include industrial organization, energy and environmental economics, competition policy, and government regulation of industry. He is a past-president of the International Society for New Institutional Economics, a distinguished fellow of the Industrial Organization Society, a distinguished fellow of the American Economic Association, a fellow of the Econometric Society, a fellow of the American Academy of Arts and Sciences, a fellow of the Econometric Society, and a member of the Council on Foreign Relations. He has served on the boards of the New England Electric System, National Grid PLC, TC Energy, State Farm Indemnity, Putnam Mutual Funds, Exelon Corporation, and the Whitehead Institute for Biomedical Research (current).



CHRISTOPHER R. KNITTEL

George P. Shultz Professor of Applied Economics, Sloan School of Management
Director, MIT Center for Energy and Environmental Policy Research
Deputy Director for Policy, MIT Energy Initiative
Massachusetts Institute of Technology

Christopher Knittel is the George P. Shultz Professor of Energy Economics and a Professor of Applied Economics in the Sloan School of Management at MIT. He directs the Center for Energy and Environmental Policy Research. CEEPR, established in 1977, is the hub for social science work related to energy and the environment at MIT. Knittel is also the Deputy Director for Policy of MITEI, the hub for energy research at MIT. He is also the director of MIT's new Climate Policy Center. Finally, along with Meredith Fowlie at UC Berkeley, he co-directs the Environmental and Energy Economics Program at the National Bureau of Economic Research. He is the former co-editor of the *Journal of Public Economics*, and an associate editor of the *Journal of Transportation Economics and Policy* and *Journal of Energy Markets*.

Knittel's research studies consumer and firm decision-making and what this means for the benefits and costs of environmental and energy policy. He often interacts with policy-makers to discuss his research findings and the current research needs of policy. His current work involves studying how the costs of climate change policy vary across households and firms and how this differs across policy choices. Knittel uses a variety of empirical methods for his research, including large-scale randomized control trials and machine learning techniques. Professor Knittel received his B.A. in economics and political science from the California State University, Stanislaus in 1994, an M.A. in economics from UC Davis in 1996, and a Ph.D. in economics from UC Berkeley in 1999.



BENJAMIN KREBS

Postdoctoral Associate
MIT Center for Energy and Environmental Policy Research
Massachusetts Institute of Technology

Benjamin Krebs is an applied economist who focuses on environmental and energy topics. His research explores human-related outcomes of air pollution, pollution monitoring, and the consequences of public policies regarding the distribution of environmental benefits.

Before joining CEEPR, Benjamin Krebs completed his Ph.D. at the University of Lucerne, Switzerland, part of which he spent at Columbia University as a visiting Ph.D. student.



GILBERT E. METCALF

Visiting Professor
Sloan School of Management
Massachusetts Institute of Technology

Gilbert Metcalf is a Visiting Professor at the Center for Energy and Environmental Policy Research and the Sloan School of Management at MIT. He is also the John DiBiaggio Professor of Citizenship and Public Service, Emeritus at Tufts University. In addition, he is a Research Associate at the National Bureau of Economic Research and a University Fellow at Resources For The Future. Metcalf's primary research area is applied public finance with particular interests in taxation, energy, and environmental economics. His current research focuses on policy evaluation and design in the area of energy and climate change. He has frequently testified before Congress, served on expert panels for the National Academies of Sciences and the U.S. Environmental Protection Agency, and served as a consultant to numerous other organizations. During 2011 and 2012, he served as the Deputy Assistant Secretary for Environment and Energy at the U.S. Department of Treasury where he was the founding U.S. Board Member for the UN based Green Climate Fund. He has published extensively in academic journals and books on various topics including energy and tax policy. Metcalf received a B.A. in Mathematics from Amherst College, an M.S. in Agricultural and Resource Economics from the University of Massachusetts Amherst, and a Ph.D. in Economics from Harvard University.



JOHN E. PARSONS

Deputy Director for Research
MIT Center for Energy and Environmental Policy Research
Massachusetts Institute of Technology

John Parsons is the Deputy Director for Research at the MIT Center for Energy and Environmental Policy Research (CEEPR). His research focuses on the valuation and financing of investments in energy markets, as well as the problems of risk in energy and environment markets. Recent publications have touched on the value of changing the utilization of transmission to maximize the value of hydro assets and expanded penetration of renewables, the value of investments in life extensions of nuclear power plants, the economics of new microreactors, and the impact of decarbonization on generation assets in the U.S. midcontinent.

Dr. Parsons serves as an Associate Member of the U.S. Commodity Futures Trading Commission's Energy and Environmental Markets Advisory Committee. He has been a Visiting Scholar at the Federal Energy Regulatory Commission. Dr. Parsons served as the Executive Director at both CEEPR and the MIT Joint Program on the Science and Policy of Global Change, and also as Head of Sloan's MBA Finance Track. Before returning to MIT, Dr. Parsons spent ten years as a business consultant at Charles River Associates. He holds a Ph.D. in Economics from Northwestern University and an A.B. from Princeton University.



BETHANY PATTEN

Executive Director, MIT Climate Policy Center
Senior Lecturer, Sloan School of Management
Massachusetts Institute of Technology

Bethany Patten is the Executive Director of the MIT Climate Policy Center and a Senior Lecturer at the MIT Sloan School of Management. Her interests intersect at the crossroads of corporate and public policy, with a focus on environmental and social issues. She focuses on applying business practice theory to solve real-world challenges.

As an experienced operational leader, Bethany develops relationships with public and private sector organizations, identifying the sustainability-related challenges they face. Through those engagements, she develops learning curriculum for master's-levels students, and teaches course sessions focused on problem formulation, continuous improvement, and change management for sustainability.

She is responsible for the growth and quality of MIT Sloan's Sustainability Certificate and other programming for students pursuing careers of environmental and social impact. She leads the Climate Policy Center's efforts to accelerate the move toward evidence-based climate policy. Bethany has been an active contributor across MIT, where she served on the Climate Policy Working Group, the Faculty DEI committee, and Advisory Board for the MIT Sloan Sustainability Initiative. She has a B.A. from Boston College, MBA from MIT Sloan School of Management and MPA from Harvard University, John F. Kennedy School of Government.



JACQUELYN PLESS

Fred Kayne (1960) Career Development Assistant Professor of Entrepreneurship
Sloan School of Management
Massachusetts Institute of Technology

Jacquelyn Pless is the Fred Kayne (1960) Career Development Assistant Professor of Entrepreneurship and an Assistant Professor at the MIT Sloan School of Management. Her research interests are in the economics of innovation, energy and environmental economics, and public economics. In particular, her research explores the drivers of innovation for social progress with a focus on energy and environmental innovation. Her current projects are examining the effects of policies, their interactions, and management on firms' and scientists' innovations and decision-making.

Before joining academia, Jacquelyn held various positions in the public and private sectors. She started in policy, working in the Pennsylvania House of Representatives and then at the National Conference of State Legislators supporting state and tribal governments on energy policy and project finance issues. She was also a research economist at the National Renewable Energy Laboratory and the head of analytics for a boutique consulting firm helping companies in their reorganizations.

Jacquelyn is also an Honorary Research Associate with the University of Oxford, a Research Affiliate of CESifo, and a Kenan Institute Distinguished Fellow on stakeholder capitalism. She holds M.S. and Ph.D. degrees in mineral and energy economics from the Colorado School of Mines and a B.A. in economics and political science from the University of Vermont (Honors College).



ABIGAIL RANDALL

Graduate Research Assistant

MIT Center for Energy and Environmental Policy Research

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Abigail Randall is a second year Technology and Policy Program master's student at MIT. She works as a Research Assistant between the Olivetti Group, the Material Systems Laboratory, and CEEPR to analyze the supply chains of critical minerals for the energy transition. She is passionate about the policy implications of the renewable energy transition, and how this impacts demand for critical mineral mining. For her undergraduate studies, she attended the University of Michigan with Highest Honors, where she conducted research on energy policy in the Great Lakes region as well as research on local government attitudes towards wind and solar development in Michigan. Before coming to MIT, she managed federally funded research projects on solar energy soft cost reductions as a Science and Technology Policy Fellow at the U.S. Department of Energy.



JUAN RAMON L. SENGA

Postdoctoral Associate

MIT Center for Energy and Environmental Policy Research

Massachusetts Institute of Technology

Juan Senga is a Postdoctoral Associate in the MIT Center for Energy and Environmental Policy Research. His work focuses on quantitative modeling and economic analysis of projects related to the energy transition.

Before joining CEEPR, Juan was a supply chain and sustainability postdoctoral fellow at Nanyang Technological University, Singapore. He obtained a Ph.D. in Operations Management from Nanyang Business School and a B.S. from Ateneo de Manila University.



DREW STORY

Managing Director
MIT Policy Lab
Massachusetts Institute of Technology

Drew Story, Ph.D., is Managing Director of MIT's Policy Lab. In this role he guides MIT faculty through strategic policy engagement to increase the impact of their work. As a result, MIT researchers establish themselves as resources and advisors to policymakers, and they develop insight into improved research design for producing scholarship with greater potential for societal impact.

Prior to joining MIT, Drew served as a policy advisor for two U.S. Senators on energy, environment, and scientific research policy issues, including a year as an AAAS/ACS Congressional Science and Engineering Fellow. Over a dozen legislative provisions Drew led or supported were signed into law as part of the Energy Act of 2020, the Infrastructure Investment and Jobs Act, the Inflation Reduction Act, the CHIPS and Science Act, and other legislative vehicles. Following his tenure in Congress, Drew was the Global Change Science Lead at the U.S. Global Change Research Program and the staff lead for two chapters of the Fifth National Climate Assessment.

Drew received his Ph.D. in Chemical and Environmental Engineering with a Designated Emphasis in Public Policy from the University of California, Riverside and his B.S. in Physical Sciences Education from LeTourneau University.



JINHUA ZHAO

Professor of Cities and Transportation
Department of Urban Studies and Planning
Massachusetts Institute of Technology

Jinhua Zhao is the Professor of Cities and Transportation at the Massachusetts Institute of Technology (MIT). Prof. Zhao integrates behavioral and computational thinking to decarbonize the world's mobility system.

He founded the MIT Mobility Initiative, coalescing the Institute's efforts on transportation research, education, entrepreneurship, and engagement. He hosts the MIT Mobility Forum, highlighting transportation innovation from MIT and across the globe. Professor Zhao also directs the JTL Urban Mobility Lab and Transit Lab, leading long-term collaborations with transportation authorities and operators worldwide and enabling cross-culture learning between cities in North America, Asia and Europe. He leads the program "Mens, Manus and Machina (M3S): How AI Impacts the Future of Work and Future of Learning" at the Singapore MIT Alliance for Research and Technology (SMART).

Jinhua brings behavioral science and transportation technology together to shape travel behavior, design mobility system, and reform urban policies. He develops computational methods to sense, predict, nudge, and regulate travel behavior and designs multimodal mobility systems that integrate automated and shared mobility with public transport. Professor Zhao sees transportation as a language to describe a person, characterize a city, and understand an institution and establishes the behavioral foundation for transportation systems and policies.