EPRI ELECTRIC POWER RESEARCH INSTITUTE

Energy and Environment

21st Energy and Climate Research Seminar

Thursday May 17, 2018 – Washington Marriott Georgetown

Speaker Bios

Marissa Buchanan

Marisa is the Deputy Global Head of Sustainable Finance at JPMorgan Chase & Co. She plays an integral role in the firm's efforts to manage environmental and social risks, and advance environmentally sustainable solutions for clients and its operations. She has also built the firm's knowledge and leadership on climate change and carbon disclosure, and helps to lead the firm's efforts on ESG reporting and engagement. Marisa has over 15 years of experience working on environmental and energy issues. Prior to joining JPMorgan Chase, Marisa was a research analyst at Bloomberg, where she focused on assessing the impacts of U.S. policy on the energy sector. She began her career with the Surdna Foundation's environmental team, providing grants to nonprofit organizations supporting sustainable forestry, smart growth, renewable energy and market-based solutions to climate change. Marisa received a B.A. from Wellesley College and a M.P.A. from Columbia University's School of International and Public Affairs.

John Bistline

Dr. John Bistline is a Senior Technical Leader in the Energy and Environmental Analysis Group at the Electric Power Research Institute (EPRI). His research analyzes the economic and environmental effects of policy and technological development to inform energy systems planning and company strategy. Dr. Bistline's current research activities examine renewable integration, climate risk management, electrification, and the impacts of federal and state climate policies. Before joining EPRI, he worked for the Energy Modeling Forum and the Steyer-Taylor Center for Energy Policy and Finance at Stanford University. Dr. Bistline earned a Bachelor of Science degree in Mechanical Engineering and Engineering and Public Policy from Carnegie Mellon University, a Master of Science degree in Mechanical Engineering, and a doctorate in Management Science and Engineering from Stanford University.

Geoffrey J. Blanford

Dr. Geoffrey J. Blanford is a leading expert on integrated assessment and energy economy modeling. His research activities include development of analytical tools such as the MERGE model and the US-REGEN model with applications including electricity markets, end-use electrification, and international climate policy. Dr. Blanford is currently a Technical Executive and Program Manager for Energy and Climate Policy Analysis with EPRI in Palo Alto, CA. He was a lead author for the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report and serves as co-director of the International Energy Workshop (IEW). He holds a B.A. in mathematics from Yale University, a M.S. in operations research from Columbia University, and a Ph.D. in management science and engineering from Stanford University.

Rob Chapman

Rob Chapman is Vice President, Energy and Environment, at EPRI. The Energy and Environment Sector's research and analysis spans across a large segment of the energy industry. His knowledge of the cross-EPRI research synergies, his relationships with EPRI's membership, and his understanding of the industry perspectives provide him with the right combinations of skills and experience to lead this sector. Chapman joined EPRI in 1999 as the Director of North American Technical Advisory Services and transitioned to Vice-President of Member & Technical Services in 2006. Prior to joining EPRI, Chapman was Director of Western Sales for PG&E Energy Services during which he led efforts to establish premium power services for technology companies in the Silicon Valley, California. Chapman holds a Bachelor of Science degree in mechanical engineering from California Polytechnic State University, San Luis Obispo, and has completed executive business courses at The University of Chicago.

Benjamin DeAngelo

Benjamin DeAngelo has over 20 years of experience bridging science and policy for the stewardship of the global environment. DeAngelo is the Deputy Director of the Climate Program Office within NOAA's research arm, and serves as the U.S. head of delegation for the Arctic Monitoring and Assessment Program, a working group under the Arctic Council. Prior to starting at NOAA in 2017, DeAngelo was the Deputy Executive Director of the U.S. Global Change Research Program and advisor for climate change in the White House Office of Science and Technology Policy. DeAngelo was with the U.S. EPA for 18 years working on the science-policy interface for domestic and international climate and stratospheric ozone depletion issues. DeAngelo's academic background is in geography with a Master's from the University of Toronto, bachelor's from Pennsylvania State University, and a year in Germany on a Fulbright Scholarship.

Delavane Diaz

Dr. Delavane Diaz is a Senior Technical Leader in the Energy and Environmental Analysis Group at EPRI where her research focuses on the implications of climate and energy policy on the electric sector, resiliency and risk management strategies, and the social cost of carbon. She returned to EPRI from pursuing her doctorate at Stanford University, where she worked on climate and energy policy modeling under uncertainty as a research assistant for the Energy Modeling Forum. Her dissertation examined the representation of climate impacts, adaptation, and mitigation technology costs in integrated assessment models, with a focus on coastal vulnerability and sea level rise. Delavane joined EPRI in 2008, working on various environmental policy issues, including the impact of carbon mitigation proposals on electric sector operations and generation capacity planning. Before joining EPRI, she served as an Air Force acquisitions officer, working on a space surveillance radar program at Hanscom AFB, MA. Delavane is a distinguished graduate of the U.S. Air Force Academy with a Bachelor of Science degree in Astronautical Engineering and earned a Master of Science degree in Environmental Change and Management at the University of Oxford as a Rhodes Scholar.

Chris Forest

Chris E. Forest is Professor of climate dynamics in the Department of Meteorology and Atmospheric Science and the Department of Geosciences, an associate in the Earth and Environmental Systems Institute, and associate director for the Network for Sustainable Climate Risk Management, all at Pennsylvania State University. He served as a lead author on the report of the Intergovernmental Panel on Climate Change for the chapter on the evaluation of climate models and on a report for the U.S. Climate Change Science Program examining the estimates of temperature trends in the atmospheric and surface climate data. He was elected to serve for the Atmospheric and Hydrospheric Sciences Section of the American Association for the Advancement of Science and for the Topical Group on the Physics of Climate for the American Physical Society. He was a member of the National Academies committee that reviewed the scientific basis for estimates of the Social Cost of Carbon Dioxide. His research focuses on quantifying uncertainty in climate predictions and their implications for assessing climate risks. He has a B.S. in applied mathematics, engineering, and physics from the University of Wisconsin-Madison and a Ph.D. in meteorology from the Massachusetts Institute of Technology.

Stephanie Herring

Stephanie C. Herring is a scientist and senior advisor with NOAA's National Centers for Environmental Information, Center for Weather and Climate (formerly the National Climatic Data Center) in Boulder, Colorado. Her focus areas are extreme events and climate services. For the past four years she has been Lead Editor for the annual Bulletin of the American Meteorological Society report, *Explaining Extreme Events from a Climate Perspective.* She is also the chair of the AMS Climate Services Committee where she supports AMS interests in promoting growth across the private sector climate solution provider enterprise. Prior to her current position at the National Centers for Environmental Information, she served as the Senior Climate Advisor for NOAA's Deputy Under Secretary for Operations in Washington D.C. Before NOAA, she served as a Congressional staff member as an American Association for the Advancement of Science and American Chemical Society Congressional Policy Fellow. She worked for Congressman Edward Markey on the climate services provision of the American Clean Energy and Security Act, as well as on climate change and public health, energy, and environmental issues. She is the recipient of the NOAA Administrator's Award for her work on the National Climate Assessment, the Silver Sherman Award for her role as strategic advisor to NCEI's senior leadership, and Foreign Policy's Leading Global Thinker award for her contributions to the field of extreme event attribution. She received her doctorate from Yale University in Molecular Biophysics and Biochemistry and holds a B.A. in Biochemistry from Swarthmore College.

Eric Hittinger

Dr. Hittinger is an Associate Professor in Public Policy and Affiliated Faculty at the Golisano Institute for Sustainability at Rochester Institute of Technology, and regularly consults for energy storage manufacturers and developers. He holds a PhD is in Engineering and Public Policy from Carnegie Mellon University and a MS in Macromolecular Science from Case Western Reserve University. Professor Hittinger has a background in electricity system policy, operation, and economics, with a focus on understanding the benefits and limitations of energy storage and renewable electricity sources. Before entering the energy field, he was a Project Management Engineer for the US Army, with extensive travel to support military operations abroad.

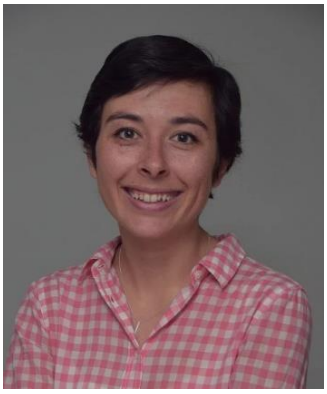
David Hunter

Dr. David Hunter is Senior Government and External Representative at EPRI. He has the principal responsibility for federal relations, where he has focused on a variety of issues including electrification, energy analytics, decarbonization, the energy-water nexus, renewable energy, resiliency, and pollinators. Dr. Hunter has more than 20 years experience in energy and environmental policy. Prior to joining EPRI, he was the founding US Director of the International Emissions Trading Association and ran IETA's state, regional, and federal programs. Dr. Hunter spent 9 years on Capitol Hill, where he was Staff Scientist for the Senate Homeland Security and Governmental Affairs Committee, the principal energy and environment advisor to Senator Susan Collins of Maine, and a Congressional Fellow. He played a significant role in crafting US Energy Policy in the mid and early 2000's, including shaping the Energy Policy Acts of 2003 and 2005. He was Executive Editor of the Journal of Environment and Development, Department of Energy Global Change Fellow at the White House Office on Environmental Policy and Council on Environmental Quality, and spent a year studying atmospheric aerosols at Brookhaven National Laboratory. He has a Ph.D. in Earth Science from the Scripps Institution of Oceanography and a B.S. in Natural Resources from Cornell University.

Katie Jereza

Catherine (Katie) Jereza is the Deputy Assistant Secretary for Transmission Permitting & Technical Assistance (TPTA) in the U.S. Department of Energy's Office of Electricity (OE). She is responsible for leading the Department's institutional efforts to promote reliable, resilient, and affordable electricity infrastructure. Ms. Jereza has more than 25 years of experience leading multiple startup, turnaround and major problem solving initiatives in the energy, water and manufacturing industries. Prior to joining OE, Ms. Jereza was the Director for Infrastructure Resilience at the Edison Electric Institute (EEI) where she helped launch the Electricity Subsector Coordinating Council's Cyber Mutual Assistance program and facilitated the "Creating Renewable Energy Opportunities" for the Utility-Corporate Buyer Collaborative Forum. She holds an MBA from Loyola University Maryland and BS in Chemical Engineering from the Virginia Polytechnic Institute and State University.

Cara Marcy



Cara Marcy is a Renewable Electricity Analyst in the Office of Energy Analysis at the U.S. Energy Information Administration (EIA), where she works on modelling and analysis of renewable technologies. Her primary focus is on electric power sector solar, wind, and storage technologies for application in U.S. markets. Cara holds a B.S. in Chemical and Environmental Engineering from Worcester Polytechnic Institute and a dual Masters in Engineering and Public Policy from the University of Maryland, College Park.

Pamela MacDougall

Pamela MacDougall is a clean energy expert with the Climate and Clean Energy Program, with a focus on grid integration of renewables and electrification of transportation. Her main emphasis is to promote proper grid integration of electric vehicles and renewables, by investigating their underlying value proposition based on modeling and real-world pilots, and by accordingly developing necessary policy changes. She has previously worked as a smart grid researcher and consultant for 8 years in the Netherlands at various research institutes. She has participated in numerous European research and large pilot projects ranging from electric vehicle and renewable energy integration, to wholesale market optimization using aggregated demand response. In 2017, Pamela completed her Ph.D. from the University of Leuven in Belgium as part of the Electrical Energy and Computer Architectures research group. Her thesis topic was value assessment for residential aggregated demand response. She is based out of the NY Office.

Rachel Nealer

Dr. Rachael Nealer is a program manager at the Department of Energy in the Vehicle Technologies Office. Her current portfolio spans research and development in transportation systems modeling as well as produces publicly available transportation data as a foundation for modeling and analysis done at DOE, the national labs, and beyond. Previously, Dr. Nealer worked at the Union of Concerned Scientists researching the environmental impacts of electric vehicles compared to gasoline vehicles over their life. Prior to UCS she worked at the Environmental Protection Agency in the Renewable Fuels Standard office and she received her joint PhD in Civil and Environmental Engineering and Engineering and Public Policy from Carnegie Mellon University where she specialized in lifecycle environmental impacts of transportation.

Steve Rose

Steven Rose is a Senior Research Economist in the Energy and Environmental Analysis Research Group at EPRI. His research focuses on long-term modeling of energy systems and climate change drivers, mitigation, and potential risks. Dr. Rose was a member of the U.S. National Academy of Sciences' committee on modeling the social cost of carbon, and is an expert on the U.S. Carbon Cycle Science Program Carbon Cycle Scientific Steering Group and U.S. Environmental Protection Agency's Science Advisory Board panel on Carbon Dioxide Emissions from Biogenic Sources. He also co-chairs the bioenergy modeling subgroup of Stanford University's Energy Modeling Forum. Dr. Rose is a lead author for the Intergovernmental Panel on Climate Change's Sixth Assessment Report, and was a lead author for the Fourth and Fifth Assessment Reports, as well as the U.S. National Climate Assessment. His research and publications include long-run climate management strategy and policy design, climate change risks and responses, the marginal costs of climate change (social cost of greenhouse gases), mitigation institutions, investment risks and incentives, and the role of bioenergy and land use in long-term climate management, including the economics of REDD+ and agricultural productivity. Dr. Rose earned a Bachelor of Arts degree in Economics from the University of Wisconsin-Madison and a doctorate in Economics from Cornell University.

Morgan Scott

Morgan M. Scott is a Senior Sustainability Technical Lead at the Electric Power Research Institute (EPRI). Ms. Scott leads EPRI's growing portfolio of sustainability research, focused on developing tools and resources electric power companies can use to establish and enhance their sustainability programs as well as embed a triple bottom line mindset into their long-range planning. Ms. Scott manages EPRI's Strategic Sustainability Science program, Energy Sustainability Interest Group, and Sustainability Benchmarking for Utilities project. Prior to joining EPRI, Ms. Scott was the Sustainability Manager at Consolidated Edison Company of New York. In this role, she managed the company's sustainability strategy and associated initiatives, including the redesign of their sustainability strategy to better align with the triple bottom line concept and the company's priority issues. Additionally, she managed the production of the company's annual sustainability report and voluntary disclosure activities. Ms. Scott received a Bachelor of Science in Business Administration from Wagner College and a Master of Science in Sustainability Management from Columbia University. She received her PMP Certification in 2015

Mary Wierzbicki

Mary Wierzbicki manages a group in the Division of Economic and Technical Analysis, Office of Energy Policy and Innovation, at the Federal Energy Regulatory Commission (FERC). She oversees staff analysis for FERC orders and rulemakings related to electricity markets, as well as staff research projects on changes to RTO/ISO market rules and trends in RTO/ISO markets. Prior to joining the Office of Energy Policy and Innovation, Mary was a technical advisor to FERC Commissioner Cheryl LaFleur, and advised the Commissioner on orders and rulemakings. Mary also served as a legislative fellow in the office of U.S. Senate Majority Leader Harry Reid, where she drafted legislation on transmission planning, siting, and cost allocation. Mary has a master's degree from the University of Wisconsin-Madison, and a bachelor's degree from the University of Illinois, Urbana-Champaign, in electrical engineering with a specialization in power systems.

Scott Weaver

Scott Weaver is Director - Air Quality Services for American Electric Power (AEP). In his role, Weaver is responsible for managing air-related environmental compliance activities across AEP's 11 state service territory. His organization provides air emission modeling, permitting, testing, monitoring, reporting and regulatory support for AEP's generation facilities as well as other operations. Weaver also guides AEP in establishing environmental goals, defining corporate environmental policy positions and communicating environmental progress in conjunction with corporate sustainability efforts. Previously, Weaver served as Manager - Strategic Policy Analysis in which he developed quantitative and qualitative analysis supporting strategic planning and public policy development related to environmental compliance, generation diversity and risk management. Weaver currently serves as a Program Advisor for EPRI and previously served on the Board of Directors for the International Emissions Trading Association (IETA). Mr. Weaver earned a Bachelor of Science Degree in Environmental and Plant Biology, magna cum laude, from Ohio University and a Master of Environmental Management Degree from Duke University, with a concentration in Environmental Economics and Policy.

Tom Wilson

Dr. Thomas Wilson is a Senior Technical Executive in Strategic Analysis, Safety, and Sustainability at EPRI. His research activities focus on a variety of climate-related issues: costs of alternative policies and the role of technology R&D in potentially reducing these costs, exploring mechanisms for allowing flexibility in domestic and international climate policies and their interactions with regulatory approaches, and providing information and methods to help electric utilities make decisions in the face of climate policy uncertainty. Dr. Wilson joined EPRI as a Project Manager in the Risk Analysis program in the Environment Sector, where his activities focused on risk management for a variety of environmental issues and decision support methodologies. Prior to EPRI, Dr. Wilson worked at ICF Incorporated, Stanford's Energy Modeling Forum and International Energy Program, and Brookhaven National Laboratory. He earned a bachelor's degree in Statistics from the University of North Carolina, Chapel Hill and master's and doctoral degrees in Operations Research from Stanford University.

Malcolm Woolf

Malcolm leads AEE's public policy efforts to promote the advanced energy industry, including federal, state legislative, and state regulatory initiatives. These efforts include campaigns to expand corporate access to advanced energy, remove regulatory barriers in retail and wholesale markets, and inform policy makers about innovative, new technologies transforming the energy system. Prior to AEE, Malcolm served as a Cabinet-level official with Governor Martin O'Malley. As head of the Maryland Energy Administration, he helped design, enact and implement an ambitious package of state laws to promote affordable, reliable, and clean energy that has resulted in lifetime energy savings in excess of $4 billion through 2014. Woolf was chair of the National Association of State Energy Officials (NASEO), has testified before Congress on multiple occasions, and has been appointed to serve on several US DOE and EPA Advisory Committees. He previously served as the director of the National Governors Association's Natural Resources Committee and counsel to the U.S. Senate Environment and Public Works Committee. He also was a senior attorney with the U.S. Environmental Protection Agency, and an associate with the law firms of Winston & Strawn and Piper & Marbury. Malcolm received his B.A. magna cum laude from Tufts University. He earned his law degree, as well as a Masters of Public Administration and Public Policy, from the University of Virginia.

Ethan Zindler

Ethan Zindler is Head of Americas at Bloomberg New Energy Finance (BNEF), the definitive source of insight, data and news on the transformation of the energy sector. In this capacity, Zindler manages the company's analyst and commercial teams in New York, Washington, San Francisco, and Sao Paulo. Ethan also oversees Climatescope (www.global-climatescope.org), a project to profile clean energy investment conditions in emerging market countries underwritten by the UK and US governments. Zindler serves as BNEF's primary spokesperson in North America and testified before two US Senate committees. He is a Senior Associate (non-resident), Energy and National Security Program, at the Center for Strategic and International Studies. Previously, Zindler oversaw BNEF's coverage of clean energy policy developments globally and served as BNEF's Head of North American Research. He holds an MBA from Columbia Business School and a BA from Georgetown University.