

AI's Grand Energy Challenge: Forging a Sustainable Digital Future for Virginia, the U.S., and the World

APRIL 23, 2025 | 8:30AM-5PM



College of Humanities and Social Sciences
**INSTITUTE FOR PHILOSOPHY
AND PUBLIC POLICY**
George Mason University®

8:30am	Registration
9:00am	Welcome and Opening Remarks- Dr. Andre Marshall, Vice President for Research, George Mason University
9:15-10:30am	Panel 1- AI and Energy Supply
10:30-10:45am	Break
10:45-12:00pm	Panel 2- AI and Energy Demand
12:00-1:15pm	Lunch- Keynote Speaker: David Sandalow on AI, Energy and Climate Change
1:15-2:30pm	Panel 3- Listening to Local Stakeholders
2:30-2:45pm	Break
2:45-4:00pm	Panel 4- What Mason with Other Virginia Universities Can Offer
4:00-4:30pm	Wrap-Up
5:00pm	Reception

[Access Speak Bios here](#)





PANEL 1- AI AND ENERGY SUPPLY

Focuses on how AI can optimize energy generation, transmission, and distribution in Virginia, the U.S., and the world. Explores the role of AI in integrating renewable energy sources (including the potential for small modular reactors), improving grid reliability, and enhancing resiliency and energy efficiency.

Moderator:
Cy McGeady

Fellow, Energy Security and Climate Change Program CSIS

Justin Friedman

Senior Advisor for Commercial Competitiveness in Nuclear Energy,
Department of State

Aqeel Adenwala

Director, Power Market Advisory Practice, Energy Ventures
Analysis

Dr. James Jones

Senior Operations Research Analyst, NOVEC

PANEL 2- AI AND ENERGY DEMAND

Explores the energy demands of AI and data centers, particularly in Northern Virginia. Discusses strategies for managing and reducing energy and water consumption in these sectors and the impact of new AI technologies (e.g., DeepSeekAI), and of microgrids.

Moderator:
Thomas J. Pierpoint

Vice President Operations, NOVEC

Dr. Dale Medearis

Senior Regional Planner, Northern Virginia Regional Commission

Ray Fakhoury

Energy Policy Manager, Amazon Web Services (AWS)

Scott Sklar

President the Stella Group, Ltd, Adj. Professor George Mason
University and George Washington University

David Wernli

Electrical PE and Project Manager, Dewberry Engineers



KEYNOTE- AI, ENERGY, AND CLIMATE CHANGE

David Sandalow

Inaugural Fellow, Center on Global Policy, Columbia University

**Moderator:
Dr. Andrew Light**

George Mason University

PANEL 3- LISTENING TO LOCAL STAKEHOLDERS

Identifies diverse voices to discuss the impacts of AI and data centers on local communities, businesses, and the environment. Enables community leaders and industry representatives to share perspectives.

**Moderator:
Dr. Leah Nichols**

George Mason University

Victor Hoskins

President and CEO, Fairfax Economic Development Authority

Buddy Rizer

Executive Director for Economic Development, Loudoun County

Michael Sandler

Energy Program Manager, Loudoun County Department of
General Services

Dan Golding

Chief Technology Officer, Appleby Strategy Group



PANEL 4- WHAT MASON WITH OTHER UNIVERSITIES CAN OFFER

Describes Mason's research, educational programs, and AI/energy/sustainability partnerships. Highlights how Mason contributes and cooperates with other Virginia higher education institutions such as NVCC to provide solutions and workforce development in these critical areas.

**Moderator:
Ambassador (ret)
Rich Kauzlarich**

George Mason University

Dr. Liling Huang

George Mason University

Jack W. Bidlack

Director of Strategic Initiatives Information and Engineering
Technologies, Northern Virginia Community College (NVCC)

J.P. Auffret

George Mason University

Dr. Terry Clower

George Mason University

WRAP-UP

Highlights the main points from the energy forum, what we missed, and how Mason - - and other Virginia institutions of higher education - - can focus research and teaching and training activities to meet the Grand Challenges in energy and AI.

Allison Hamilton

Director for Markets and Rates, National Rural Electric
Association (NRECA)

Dr. Andrew Light

George Mason University

DR. ANDRE MARSHALL



Andre W. Marshall is Vice President for Research, Innovation, and Economic Impact at George Mason University and President of the George Mason Research Foundation. As the university's senior research officer, Dr. Marshall provides overall leadership for the portfolio of research, innovation, and economic development activities.

Marshall joined George Mason University from the National Science Foundation, where he served as Program Director for the Industry-University Cooperative Research Center (IUCRC) and Innovation Corps (I-Corps™) programs. During his tenure at NSF, Dr. Marshall advanced NSF's university-based tech translation and commercialization programs through national initiatives strengthening industry-university engagement and collaboration, new partnerships broadening participation in innovation and tech entrepreneurship, and program virtualization increasing accessibility to the highly regarded national I-Corps Teams program.

CY MCGEADY



Cy McGeady is a fellow in the Energy Security and Climate Change Program at the Center for Strategic and International Studies (CSIS). His work covers the global electric-power sector, US power market and commercial developments, and the macroeconomic, policy, and security factors shaping global energy markets. Cy has years of experience working in the power sector across a series of roles at Genscape, Wood Mackenzie, and a boutique capital advisory group. Cy has experience in transaction advisory, project development, generation and load portfolio management in power markets, and long-term offtake and supply origination with a wide range of parties in the power sector. He is currently studying for a MA in liberal arts at St. John's College and holds a BA in economics from the University of Rochester.

JUSTIN FRIEDMAN



Mr. Friedman assumed his duties as Senior Advisor for Commercial Competitiveness in Nuclear Energy in the Bureau of International Security and Nonproliferation (ISN) at the Department of State in September 2021. Previously, he was Deputy Chief of Mission (DCM) at the U.S. Embassy in Sofia, Bulgaria. In Washington, he has served as the Director of the State Department's Office of Caucasus Affairs and Regional Conflicts and Director of the Office of Export Control Cooperation. Other overseas assignments include service as Political Counselor at the U.S. Embassy in Ankara, Türkiye, DCM in Brunei, and positions in Croatia, Canada, and Ukraine. Mr. Friedman also served in Washington as Special Assistant for Caspian Basin Energy Diplomacy and on the Russia Desk. Prior to joining the Foreign Service, Mr. Friedman was Vice President of a Washington, DC-based telecommunications market consulting firm. Mr. Friedman received an M.S. in National Security Strategy from the National War College in 2009. He also holds a B.A. in Economics from the University of California, Berkeley and an M.A. in International Affairs from Columbia University.

AQEEL ADENWALA



Mr. Adenwala currently serves as Director of EVA's Power Market Advisory Practice, responsible for providing expert advice and customized consulting services to a wide variety of clients. Aqeel offers insight into the dynamics of commodity prices and their impact on U.S. power markets through publication and consulting projects. He creates forecasts for short- and long-term electricity demand and supply, as well as power prices. Additionally, he analyzes the impact of environmental regulations on U.S. power markets, guiding clients through the increasingly complex and uncertain energy industry. With over 20 years of experience in management and technology consulting, Aqeel brings a unique skillset, expanding EVA's value proposition in energy consulting. Aqeel has also served as President of U.S. Association of Energy Economics - National Capital Area Chapter (NCAC-USAEE) for the 2022-23 term and was the chair of NCAC-USAEE's 25th Annual Energy Policy Conference in 2022. Aqeel holds an MBA from Georgetown University and a Bachelor of Engineering degree from DDU, India.

DR. JAMES JONES



James Jones is a senior operations research analyst on the forecasting team at the Northern Virginia Electric Cooperative (NOVEC). At NOVEC, James designs, implements, and maintains forecasting systems for a wide range of applications, from data centers to electric vehicles. He also provides data analytics support across the organization and regulatory support for projects at PJM and the Virginia State Corporation Commission. Prior to joining NOVEC, James worked at the Earth Institute at Columbia University and the University of Hawaii Economic Research Organization. He holds a PhD and MA in economics from the University of Hawaii - Manoa, and a BBA in finance from the Shidler College of Business at the University of Hawaii - Manoa.

THOMAS J. PIERPOINT



Thomas Pierpoint has extensive service at electric utilities, an industry that powers our lives as well as one that openly collaborates across many companies and government agencies. Thomas is currently the Vice President of Operations at NOVEC, serving parts of Northern Virginia and the massive build-out of Data Centers. Prior to NOVEC, Thomas was the Vice President of Engineering at Austin Energy, a utility serving central Texas. Prior to that Tom was an Executive Director at Exelon and had the honor of working across all 6 of the Exelon Utility companies.

Thomas is past Chair of the IEEE USA Energy Policy Committee. Thomas holds certificates from both the MIT Sloan School of Management and the University of Virginia Darden School Foundation. Tom also completed an MBA, a Masters in Project Management, graduate work at George Mason University, a Bachelor's in Electrical Engineering Technology, an Associate in Electronics Technology, and a certificate as an Electronics Technician.

DR. DALE MEDEARIS



Since 2207, Dr. Dale Medearis has served as a senior regional planner for the Northern Virginia Regional Commission (NVRC). He helps oversee NVRC's regional climate, energy, sustainability, and global engagement programs. Prior to working for NVRC, Medearis spent approximately 20 years at the Office of International Affairs, U.S. Environmental Protection Agency, Washington, as the program manager for Western Europe, the Middle East and urban environmental programs. He helped manage EPA's science and technology agreements with the EU and Western Europe and served as the program manager for the U.S. National Park Service's Potomac American Heritage River Initiative. He served as Vice-Chair of the OECD Territorial Development Committee and chairman of the OECD Working Group on Urban Affairs. Medearis has a Ph.D. in Environmental Design and Planning from Virginia Tech University, an M.S. in Cartographic and Geographic Science from George Mason University, a M.G.A. in Government from the University of Pennsylvania, and a B.A. in International Relations from the University of Redlands.

RAY FAKHOURY



Based in Washington, D.C., Ray Fakhoury is an Energy Policy Manager for Amazon Web Services leading policy advocacy that increases access to carbon free energy resources in the East and on Capitol Hill. Prior to joining AWS, Ray worked as a Senior Manager of Legislative and Regulatory Affairs for Pattern Energy, an independent power producer developing utility scale wind, solar, and transmission facilities, and for Advanced Energy United, a national trade organization advocating for clean, secure, affordable energy resources. Ray graduated from the University of California, Santa Barbara with a Bachelor's degree in Political Science.

DAVID WERNLI



David is an Electrical PE and Project Manager at Dewberry Engineers, specializing in high-reliability power solutions, including microgrids, for critical power infrastructure. His expertise is grounded in practical experience designing and implementing complex electrical systems and advanced microgrid control systems, and actively shaped industry standards as lead technical author of the new UFGS 26 37 13 (Microgrid Control System) federal standard. David brings insights into designing future-ready microgrids for critical systems that prioritize both performance and operational efficiency.

SCOTT SKLAR



Scott Sklar, since 2000, is President of The Stella Group, Ltd. a global owner's rep firm facilitating clean distributed energy utilization and one of the very few companies that blends the entire portfolio of renewable energy, energy storage and high-value energy-efficiency as well as aggregates financing with a focus on system standardization. Sklar has taught at GMU Summer Courses: "Local Community Infrastructure Resiliency & Policy" Schar School of Government (GMU). Sklar is also an Adjunct Professor at The George Washington University teaching three unique interdisciplinary courses on sustainable energy, and an Affiliated Professor with CATIE, an international graduate university located in Costa Rica focused on sustainability for Latin America. His GWU summer course, "Renewable Energy for Critical Infrastructure", is the first such course in the United States. Sklar also serves Sustainable Energy Director of the Environment & Energy Management Institute (EEMI) and Acting Director, GWU Solar Institute of The George Washington University (GWU).

Scott Sklar lives in a self-powered home and also has a self-powered two-story office building in Arlington, Virginia. In 2023, he added higher output photovoltaics to his residential roof to completely power his new Nissan Leaf SL. On June 19, 2014, Scott Sklar was awarded the prestigious The Charles Greeley Abbot Award by the American Solar Energy Society (ASES) and on April 26, 2014 was awarded the Green Patriot Award by George Mason University in Virginia.

DAVID SANDALOW



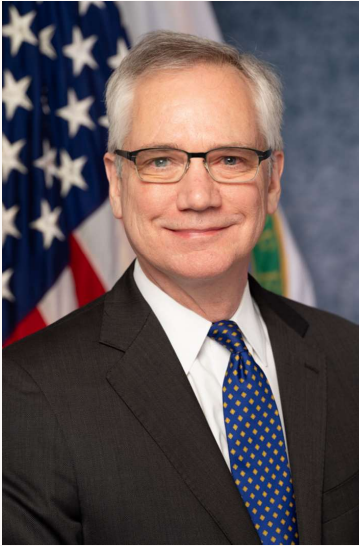
David Sandalow is the Inaugural Fellow at the Center on Global Energy Policy (CGEP) and Co-Director of the Energy and Environment Concentration at the School of International and Public Affairs at Columbia University. Mr. Sandalow founded and directs CGEP's US-China Program. He teaches a short course on the energy transition each year as a Distinguished Visiting Professor in the Schwarzman Scholars Program at Tsinghua University.

Mr. Sandalow came to Columbia from the U.S. Department of Energy, where he served as Under Secretary of Energy (Acting) and Assistant Secretary for Policy & International Affairs. Prior to serving at DOE, Mr. Sandalow was a Senior Fellow at the Brookings Institution. He has served as Assistant Secretary of State for Oceans, Environment & Science and a Senior Director on the National Security Council staff.

He is the lead author of the [Artificial Intelligence for Climate Change Mitigation Roadmap \(Second Edition\)](#) (November 2024) and [Guide to Chinese Climate Policy](#) (October 2022).

Mr. Sandalow chairs the [ICEF Innovation Roadmap Project](#). In that capacity, he has led development of roadmaps on artificial intelligence for climate change mitigation, low-carbon ammonia, biomass carbon removal and storage, industrial decarbonization, direct air capture and carbon dioxide utilization, among other topics.

DR. ANDREW LIGHT



Andrew Light is Distinguished University Professor of Philosophy, Public Policy, and Atmospheric Sciences, and Director of the Institute for Philosophy and Public Policy, at George Mason University. He has served in a variety of senior positions in government and NGOs, most recently as U.S. Assistant Secretary of Energy for International Affairs in the Biden-Harris administration from 2021-2025, leading a mission of putting the U.S. back in a leadership position on the global clean energy transition while ensuring energy security. From 2013-2016 he served as Senior Adviser and India Counselor to the U.S. Special Envoy on Climate Change in the Department of State, working on the U.S. team that negotiated the Paris Agreement. In the NGO community, he has been Distinguished Senior Fellow at the World Resources Institute, and Senior Fellow and Director of International Climate Policy at the Center for American Progress. In his academic work he is the author of over 100 articles and book chapters on climate change, restoration ecology, and urban sustainability, and has authored and edited 19 books, and co-authored over 20 major policy reports.

DR. LEAH NICHOLS



Dr. Leah Nichols is the Executive Director of George Mason University's Institute for a Sustainable Earth, where she works to create connections - locally, globally, and across disciplines - to put Mason's research and scholarship into action in support of a sustainable world. Dr. Nichols previously worked at the National Science Foundation where she served in integrative roles and contributed to the design and management of agency-wide programs that support transdisciplinary socio-environmental systems science.

MICHAEL SANDLER



Mike Sandler is the Energy Program Manager for Loudoun County, where his job is to help implement the 2023 County Energy Strategy. Prior to joining the County, Mike worked in the Federal Government for 10 years, where he implemented energy efficiency and solar energy projects. He grew up in Northern California, where he was the co-founder of The Climate Center (formerly the Climate Protection Campaign), and worked for nonprofits and local government in Sonoma County. He was Program Manager at Community Clean Water Institute and later at the Sonoma County Regional Climate Protection Authority. He has a BA in Political Economy from UC Berkeley and a MA in Urban Planning from UCLA.

VICTOR HOSKINS



Victor Hoskins is President and CEO of the Fairfax County (Va.) Economic Development Authority (FCEDA), currently overseeing the growth of the largest economy in Virginia (GDP \$167 billion). At FCEDA, Mr. Hoskins has led a team that has secured more than \$3 billion in capital investment across 669 deals creating more than 1.3 million square feet of data centers.

Prior, Mr. Hoskins spearheaded economic development for Arlington (Va.) and brought Amazon HQ2 to Northern Virginia attracting \$4 billion in private capital investment and 37,500 new jobs.

Mr. Hoskins holds an Honors undergraduate degree from Dartmouth and is an MIT trained urban planner and real estate executive. He has held executive leadership positions in real estate in the public and private sectors. He currently serves on multiple boards including Northern Virginia Economic Development Alliance, Connected DMV, Northern Virginia Chamber of Commerce and Virginia Chamber of Commerce. He received the Presidential Lifetime Achievement Award in 2023.

BUDDY RIZER



Buddy Rizer serves as the Executive Director for economic development in Loudoun County, Virginia, which was named the 2021 Economic Development Organization of the Year by the International Economic Development Council. He leads the agency responsible for encouraging growth and developing relationships with Loudoun's business community in both the commercial and agricultural-based business sectors. During his tenure, Rizer and his team have attracted more than \$65 billion in new commercial investment and more than 55 thousand new jobs. During this time, the growth in the commercial based has helped lower the tax rate in Loudoun by more than 42 cents on the dollar, saving residents thousands of dollars annually on their tax bill.

Mr. Rizer has been named a Tech Titan eight times by Washingtonian Magazine (2017 - 2024). In 2024, he was named as one of the 50 most influential people in Northern Virginia by Northern Virginia Magazine.

Mr. Rizer is a Certified Economic Developer (CEcD), a certified Entrepreneurship Development Professional (EDP), has a master's in business administration/economics from Longwood University and is a graduate of Virginia Tech's Local Government Management Graduate Program.

DAN GOLDING



Dan Golding is one of the world's leading experts at data center and network engineering, business development, and operations. Dan recently left a long career at Google where he was the only Google Engineering Director to be a part of both the Google Global Networking and Google Data Centers Advanced Technology Innovation teams.

Prior to joining Google, Dan was the Vice President of Operations and Engineering at Iron Mountain Data Centers, and before that, RagingWire Data Centers (now NTT Data Centers). Dan is the former Chairman of NANOG and former vice-Chairman and co-founder of Open-IX. He is frequently credited as the co-founder of Northern Virginia's Data Center Alley in Ashburn.

Dan has a Bachelor of Engineering Degree from Auburn University, and a Master of Science Degree in Telecommunications Engineering from George Mason University. He is a graduate of the US Navy's Nuclear Power School.

AMBASSADOR (RET) RICH KAUZLARICH



Ambassador (ret) Kauzlarich is Co-Director of the Center for Energy Science and Policy (CESP) and Distinguished Visiting Professor at George Mason's Schar School. From 2003 until 2011, he was National Intelligence Officer for Europe at the National Intelligence Council. He was Director of the Special Initiative on the Muslim World at the United States Institute of Peace following a 32-year career in the Foreign Service. He served as United States Ambassador to Bosnia and Herzegovina, and to Azerbaijan. He also was Senior Deputy to the Secretary of State's and the President's Special Representative to the Newly Independent States. Ambassador Kauzlarich received his A.A. from Black Hawk College, B.A. from Valparaiso University, and M.A.s from Indiana University and the University of Michigan.

JACK W. BIDLACK



Jack Bidlack currently serves as the Director of Strategic Initiatives for the IET Division at NVCC. He was honorably discharged from the U.S. Army after achieving the rank of sergeant in 1990. He completed his Masters in 2011 at Eastern Michigan University in Human Resources and Organizational Development. Currently he is tasked with developing and managing grant and contract funding initiatives, as well as pipeline development that can directly benefit IET program graduates.

DR. LILING HUANG



Liling Huang is an Associate Professor in the Department of Electrical and Computer Engineering at George Mason University (GM) and the Dominion Energy Faculty Fellow in Power and Energy Systems. She earned her Ph.D. in Electrical Engineering from Virginia Polytechnic Institute and State University and is a Senior Member of IEEE, as well as a certified Professional Electrical Engineer in Taiwan.

Before transitioning to academia, Huang worked for the Taiwan Government, where she was responsible for designing and procuring electrical, mechanical, and HVAC systems for large-scale commercial, industrial, residential, and high-rise buildings. She also conducted research on Smart Buildings and Energy Management Systems.

Huang is actively engaged in industry collaborations, serving as a Consulting Principal Engineer at Dominion Energy, where she provides expertise in electric transmission protection engineering, workforce training, and research initiatives. As a subject matter expert, she also actively supports renewable energy-related projects at GM.

In recognition of her contributions to power engineering education and program development, she received the 2024 College of Engineering and Computing Dean's Faculty Award for Excellence in Teaching. She initiated the Mason Power Community and established the Power Engineering Program Advisory Board, demonstrating her commitment to workforce development and fostering student engagement through real-world projects, online learning innovations, and industry research collaborations.

Her research interests include power systems protection and stability, microgrids, energy management, and smart building technology.

J.P. AUFFRET



J.P. Auffret is co-director of the Energy Science & Policy and is also director, Center for Assurance Research and Engineering and Computing, and director, Research Partnerships in the School of Business at George Mason University, USA. He is co-founder and current president of the International Academy of CIO (IAC), an NGO headquartered in Tokyo. Auffret's work spans applied technology fields including ICT leadership and governance; cybersecurity; and innovation of emerging technologies including for medicine and healthcare. Auffret earned a B.S. from Duke University where he was an A.B. Duke Scholar, M.B.A. from the University of Virginia in Physics from American University.

TERRY CLOWER



Terry L. Clower is Northern Virginia Chair and Professor of Public Policy at George Mason University. He is director of GMU's Center for Regional Analysis. The Center provides economic and public policy research services to sponsors in the private, non-profit and public sectors. He also leads the Stephen S. Fuller Institute for Research on the Washington Region's Economic Future. Prior to joining GMU, he was director of the Center for Economic Development and Research at the University of North Texas. Dr. Clower also has almost ten years of private sector experience in transportation, logistics, and site location management.

Dr. Clower has authored or co-authored over 300 articles, book chapters, and research reports reflecting experience in economic and community development, land use planning, labor market analysis, real estate market analysis, economic and fiscal impact analysis, transportation, and economic and market forecasting. His scholarly articles have appeared in *Economic Development Quarterly*; *Urban Studies*; *Economic Development Review*; *Regional Studies*; *Regional Science*; the *Australasian Journal of Regional Studies*; *Sustaining Regions*; and *Applied Research in Economic Development*. He co-authored the textbook *Globalization, Planning and Local Economic Development* with Prof. Andrew Beer of the University of South Australia (Taylor-Francis, London, 2020).

Dr. Clower received a B.S. in Marine Transportation from Texas A&M University in 1982, a M.S. in Applied Economics from the University of North Texas in 1992 and a Ph.D. in Information Sciences from the University of North Texas in 1997 specializing in information infrastructure policy and the use of information resources.

ALLISON HAMILTON



Allison Hamilton is the Director, Markets and Rates in the Business and Technology Strategies group at the National Rural Electric Cooperative Association (NRECA). Ms. Hamilton serves as the technical expert for NRECA staff and membership with respect to retail and wholesale rate structures and evolving energy services business models.

Prior to her position at NRECA, Ms. Hamilton worked for Pepco Holdings based in Washington D.C. for more than 13 years in energy trading and business strategy. Before crossing over into the energy industry she spent several years as an equity analyst for an investment bank in Portland, Oregon. Ms. Hamilton holds a liberal arts degree from Valparaiso University and an M.B.A. from Johns Hopkins University.