

January 25, 2023



Agenda – 2023 Reliability Leadership Summit

January 24, 2023 | Reception | 5:00-7:00 p.m. Eastern January 25, 2023 | Summit | 8:30 a.m.-5:00 p.m. Eastern

Renaissance Arlington Capital View Hotel 2800 South Potomac Ave. Arlington, VA 22202

Webcast Stream Link (no questions/no chat)

Welcome Remarks 8:30-8:45 a.m.

Brian Slocum, Senior Vice President and Chief Operating Officer, ITC Holdings, and RISC Chair **Mark Lauby**, Senior Vice President and Chief Engineer, NERC

Morning Keynote 8:45–9:15 a.m.

Willie Phillips, Acting FERC Chairman, Federal Energy Regulatory Commission

Panel 1 – Energy Policy 9:15–10:30 a.m.

<u>Panelists</u>

David Morton, Chairman and CEO, British Columbia Utilities Commission

Judy Jagdmann, Acting Commissioner of Virginia State Corporation Commission

Michael Desselle, Chairman, NAESB and VP & Chief Compliance & Administrative Officer, SPP

Moderator

Matt Schuerger, Chairman, NARUC Electricity Committee and Commissioner, Minnesota Public Utilities Commission and RISC Member

The rapidly changing resource mix incorporating new technologies and industry players create potentially new challenges or risks to the reliable operation of the bulk power system. The traditional rules of thumb used to identify facilities that are required to follow NERC Reliability Standards, and facility contributions to reliability are no longer sufficient in a decarbonized, decentralized, and digitized future. Maintaining the reliability, resiliency and security of the grid will require policy-makers and regulators to understand the unique impacts and mitigation costs associated with the many risks to the reliable operation of the bulk power system regardless of their capacity and voltage of interconnection. Further, new clean energy projects could span several local, state, and federal jurisdictions, for example if a capital project is located several states away from the load being served. Policy-makers and regulators will need to communicate and coordinate the myriad of issues this type of scenario will generate. This panel will identify some key areas of focus on how energy policy implementation can be coordinated to ensure reliability, resilience, and security of the bulk power system now and into the future.

Break 10:30–10:45 a.m.

Panel 2 – Security 10:45 a.m.-12:00 p.m.

<u>Panelists</u>

Puesh Kumar, Director, CESER, Department of Energy

Tabice Ward, Area Vice President – Business Security Risk and Advisory Services, Xcel Energy

Rob Lee, CEO and Co-Founder, Dragos

Manny Cancel, NERC Senior Vice President and CEO, E-ISAC

Moderator

Kamyar Ghaderi, ISMS Lead Auditor | Sr. Investigator/Auditor, MACD, IESO and RISC Member

Operational security is an essential component of a highly reliable Bulk Power System. Cyber and physical security are interdependent requiring heightened protections as exploitation of either could compromise an organization and the grid. Resulting impacts of a physical or cyber attack could cause asset damage, loss of functionality, or loss of the situational awareness needed to reliably operate or restore the Bulk Power System. Exploitations could occur directly against equipment used to monitor, protect, and control the Bulk Power System or indirectly through supporting systems, such as voice communications or interdependent critical infrastructure sectors and subsectors (e.g., water supply and natural gas used for electrical power generation). As new technologies are being integrated on the system, more vulnerabilities could be exposed, and the factors of maintaining a secure and reliable grid are becoming more complex.

This panel will focus on the evolving security risk that entities and regulators are facing and the potential mitigations that should be explored.

Lunch and Keynote: Matt Rogers, CEO, EnergyRev **12:00–1:00 p.m.**

Panel 3 – Grid Transformation and Impact on Resiliency

1:00-2:30 p.m.

<u>Panelists</u>

Tom Galloway, President and CEO, NATF
Gordon Van Welie, President and CEO, ISO New England
John Hairston, CEO, Bonneville Power Administration
Scott Aaronson, Senior Vice President, Security & Preparedness, Edison Electric Institute
Mike Wise, Senior Vice President of Regulatory and Market Strategy, Golden Spread Electric Cooperative, Inc.

Moderator

Nelson Peeler, Senior Vice President, Transmission and Fuels Strategy and Policy, Duke Energy and RISC Member

The North American electric power system is often referred to as the most complex machine in the world. Historically, the system was designed primarily for large synchronous generation—such as coal, hydro, nuclear and gas power plants—with the transmission system designed and built to deliver the energy from these large power plants to local distribution systems serving end-use customers. Today, the system is transforming toward new types of generation, including rapidly growing inverter-based variable generation and energy-limited storage, with retirement of traditional synchronous resources. These changes to the types and locations of resources and the loads they serve are altering the operational characteristics and dynamics for planning and operating the grid. Energy availability has become as important as capacity, if not more so, causing extensive reconsideration of system adequacy metrics. Further, many new resources are more sensitive to changing weather patterns, and increasing extreme weather events are impacting all resources and loads in various ways. This new paradigm will require all stakeholders to work together in developing and implementing strategies to maintain reliability and promote resilience of the transformed electric grid.

This panel will discuss the transformation of the grid and how the industry can withstand larger and ever-changing conditions and threats to reliability.

Break 2:30–2:45 p.m.

Panel 4 - New Technologies

2:45-4:15 p.m.

Panelists

Aidan Tuohy, Senior Project Manager, EPRI
Patricia Hoffman, Principal Deputy Director of the Grid Deployment Office
Matt Crozat, Executive Director, Strategy and Policy Development, Nuclear Energy Institute
Caitlin Smith, Senior Director, Regulatory, External Affairs, Jupiter Power

Moderator

Mark Ahlstrom, Vice President, Renewable Energy Policy, NextEra Energy Resources and RISC Member

Driven by opportunities and demand for decarbonization, we appear to be entering a period of dramatic innovation in energy technologies. Recent state and federal laws support rapid emissions reductions, many types of carbon-free generation, and very high levels of decarbonization of both electricity and other energy systems. It will be crucial to understand the needs, roles, capabilities, economics, and broad impacts of the many new technologies. Additionally, with the growth in electrification in many industries (such as electric vehicles) and the composition of the interconnection queues, the industry must work together to fully appreciate the complex nature of planning and operating all the technologies as part of the power system. A clear understanding of how this future system will work—and what the roles, opportunities and expectations of the various technologies will be in a reliable, resilient and secure bulk power system—are important foundations to ensure a smooth journey to the desired future grid.

This panel will discuss emerging technologies and delve into the benefits and challenges of integrating these new technologies into our planning, interconnection, and operating practices.

Panel 5 - Open Discussion

4:15-4:45 p.m.

Moderators

Adrianne Collins, Senior Vice President, Power Delivery, Southern Company and RISC Vice Chair **Teresa Mogensen,** Senior Vice President, Energy Supply, Xcel Energy and RISC Member

In this open-format discussion, Summit attendees will share thoughts and ideas on the priority and significance of BPS reliability risks. This discussion will concentrate on distilling the observations and themes discussed in the earlier panels, identifying potential blind spots or risks not revealed during the Summit panels or from general industry experience, and outlining strategic approaches for consideration by the ERO Enterprise, industry, policy makers, regulators, and other stakeholders in addressing significant emerging reliability risks.

Closing Remarks

4:45-5:00 p.m.

Jim Robb, President and CEO, NERC

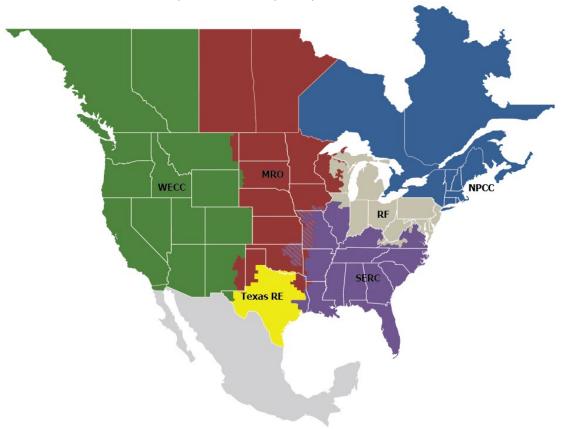
Preface

Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the six Regional Entities, is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

Reliability | Resilience | Security

Because nearly 400 million citizens in North America are counting on us

The North American BPS is made up of six Regional Entity boundaries as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Regional Entity while associated Transmission Owners (TOs)/Operators (TOPs) participate in another.



MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
Texas RE	Texas Reliability Entity
WECC	WECC



The Reliability Issues Steering Committee (RISC) is an advisory committee that reports directly to the NERC Board of Trustees and triages and provides front-end, high-level leadership and accountability for nominated issues of strategic importance to bulk power system reliability. The RISC assists the Board, NERC standing committees, NERC staff, regulators, Regional Entities, and industry stakeholders in establishing a common understanding of the scope, priority, and goals for the development of solutions to address these issues. In doing so, the RISC provides a framework for steering, developing, formalizing, and organizing recommendations to help NERC and industry effectively focus their resources on the critical issues needed to best improve the reliability of the bulk power system.

The purpose of the Reliability Leadership Summit is to gather industry leaders and keynote speakers to provide unique perspective into the key drivers of existing and emerging risks and use as a vehicle to prioritize identified risks as well as to potentially identify new and emerging risks. Panel sessions are put together to collaborate around key risks and mitigating strategies as well as to engage in meaningful debate about their relative importance and significance. The Reliability Leadership Summit serves as a key building block to the ultimate ERO Reliability Risk Priorities Report (see the 2021 Reliability Risk Priorities Report for background).

Bios

RISC and NERC Leadership



Brian SlocumSenior Vice President and Chief Operating Officer for ITC Holdings Corp. and RISC Chair

Brian Slocum is Senior Vice President and Chief Operating Officer for ITC Holdings Corp. In this role, he is responsible for system operations, planning, engineering, supply chain, field construction and maintenance, and information technology. Mr. Slocum has extensive planning and engineering experience at ITC, having previously served as Vice President of Operations and Vice President of Engineering. Prior to joining ITC in 2003, he worked at Detroit Edison in the industrial power, subtransmission planning, and distribution planning and operations areas.

Mr. Slocum serves on the board for Ascension Providence Foundation and the advisory boards for North American Transmission Forum and the Michigan Intelligence Operations Center for Homeland Security. He is Chair of the Reliability Issues Steering Committee of NERC.

Mr. Slocum earned a Bachelor of Science in electrical engineering from Wayne State University and a Master of Business Administration with distinction from University of Michigan-Dearborn. Mr. Slocum is a registered professional engineer in the state of Michigan.



Adrianne Collins

Senior Vice President of Power Delivery at Southern Company and RISC Vice Chair

Adrianne Collins is senior vice president of Power Delivery at Southern Company – one of the nation's leading energy providers, serving over 9 million customers through its subsidiaries. She leads the Transmission Planning, Bulk Power Operations, Energy Management Systems and Transmission Policy and Services organizations. Collins works with key industry bodies to advance energy policy.

Previously, Collins was Gulf Power's vice president of Power Delivery and led the Distribution, Transmission and Supply Chain Management organizations at the former Southern Company subsidiary.

She co-led the Southern Company Power Delivery coordination of restoration following Hurricane Maria for Puerto Rico's storm response. When Hurricane Michael devastated portions of northwest Florida, she was the executive lead for the unprecedented response to the unprecedented storm. As Transmission general manager, she led the largest power grid expansion program in Gulf Power's history.

After joining the Southern Company system in 1998 as a distribution engineer at Gulf Power, Collins went on to hold a number of key engineering and leadership roles at Gulf Power and subsidiary Georgia Power.

Collins received a bachelor's degree in Electrical Engineering from the University of Florida. She is highly engaged in the industry, serving on the boards of North American Transmission Forum (NATF), Eastern Interconnect Data Sharing Network (EIDSN) and SERC Reliability Corporation. She is chair of the Southeastern Electric Exchange Engineering and Operations executive committee, chair of the NATF Human Resources and Governance Committee (HRGC) and vice-chair of the NERC Reliability Issues Steering Committee (RISC).

In the community, Adrianne has served in several impactful roles that include board trustee for the University of West Florida and chair of the Academic Affairs Committee; board president for Ronald McDonald House Charities; and board member of the Fayette Care Clinic. She is an executive mentor for Momentum in the Birmingham, Alabama, area.



Jim Robb *President and Chief Executive Officer, NERC*

James (Jim) B. Robb assumed the role of NERC's president and CEO in April 2018. Robb oversees NERC's mission of assuring the reliability and security of the North American bulk power system. As president and CEO, Robb leads the Electric Reliability Organization (ERO) responsible for key programs, including those programs focused on development of mandatory NERC Reliability Standards, the Compliance Monitoring and Enforcement Program, situational awareness, event and risk analysis, reliability assessments and forecasting, and cyber and physical security, affecting approximately 1,400 bulk power system users, owners, and operators. He is also responsible for the performance of the Electricity Information Sharing and Analysis Center (E-ISAC) and key government partnerships.

As CEO, he is the chair of the ERO Enterprise Executive Committee, which oversees the operations of the six Regional Entities that support the reliability mission across North America. Robb joined the ERO Enterprise in 2013 when he was appointed the president and CEO of the Western Electricity Coordinating Council (WECC), the Regional Entity serving the Western Interconnection.

Robb has more than 35 years of experience in the energy sector as an engineer, consultant, and senior executive. Prior to becoming WECC's CEO, he held three major leadership roles in the industry as senior vice president at Northeast Utilities (now Eversource Energy); senior vice president at Reliant Energy (now part of NRG Energy); and partner at McKinsey & Company. During his 15-year career at McKinsey, he worked closely with prominent electric power companies in California, western Canada, the Pacific Northwest, and the Rocky Mountain states and served clients in Western Europe, South America, and New Zealand. He has been a frequent speaker at industry events on the evolution of the electric power system, cyber security, integration of variable generation, and the increasing interdependency of electric and natural gas reliability.

Robb is a member of the Electricity Subsector Coordinating Council (ESCC) and serves on the United States Energy Association Board as well as a NERC trustee. In 2020, he was appointed chair of the Group of Experts on Cleaner Energy Systems for the United Nations Economic Commission for Europe. He has served on the boards of the Wadsworth Atheneum Museum of Art in Hartford, Connecticut, the Houston Symphony, the Woodland Park Zoo in Seattle, and as a policy advisor to the Bay Area Economic Forum in San Francisco.

Robb earned a bachelor's degree in Chemical Engineering from Purdue University in Indiana and a master's degree in Business Administration from the Wharton School of Business at the University of Pennsylvania in Philadelphia.



Mark Lauby
Senior Vice President and Chief Engineer, NERC

Mark G. Lauby is senior vice president and chief engineer at NERC. Mr. Lauby joined NERC in January 2007 and has held a number of positions, including vice president and director of Standards and vice president and director of Reliability Assessments and Performance Analysis.

In 2012, Mr. Lauby was elected to the North American Energy Standards Board and was appointed to the Department of Energy's Electric Advisory Committee by the Secretary of Energy in 2014. Mr. Lauby has served as chair and is a life member of the International Electricity Research Exchange and served as chair

of a number of IEEE working groups. From 1999 to 2007, Mr. Lauby was an appointed member of the Board of Excellent Energy International Co., LTD, an energy service company based in Thailand. He has been recognized for his technical achievements in many technical associations, including the 1992 IEEE Walter Fee Young Engineer of the Year Award. He was named a Fellow by IEEE in November 2011 for "leadership in the development and application of techniques for bulk power system reliability." In 2014, Mr. Lauby was awarded the IEEE Power and Energy Society's Roy Billinton Power System Reliability Award. In 2020, the National Academy of Engineering (NAE) elected Mr. Lauby as a member, citing his development and application of techniques for electric grid reliability analysis. He is also a member of the IEEE Power & Energy Society (PES) Executive Advisory Committee, focused on providing strategic support to the PES Board of Directors.

Prior to joining NERC, Mr. Lauby worked for the Electric Power Research Institute (EPRI) for 20 years, holding a number of senior positions, including: director, Power Delivery and Markets; managing director, Asia, EPRI International; and manager, Power System Engineering in the Power System Planning and Operations Program. Mr. Lauby began his electric industry career in 1979 at the Mid-Continent Area Power Pool in Minneapolis, Minnesota. His responsibilities included transmission planning, power system reliability assessment, and probabilistic evaluation.

Mr. Lauby is the author of more than 100 technical papers on the subjects of power system reliability, expert systems, transmission system planning, and power system numerical analysis techniques. He earned his bachelor's and master's degrees in Electrical Engineering from the University of Minnesota. In addition, Mr. Lauby attended the London Business School Accelerated Development Program as well as the Executive Leadership Program at Harvard Business School.

Keynote Speakers



Willie L. Phillips
Acting Chairman, Federal Energy Regulatory Commission

Willie L. Phillips was named by President Biden to be Acting Chairman of the Federal Energy Regulatory Commission on January 3, 2023 and is serving a Commission term that ends June 30, 2026.

He most recently served as the Chairman of the Public Service Commission of the District of Columbia, named to that role in 2018. He served on the Commission since 2014. He is an experienced regulatory attorney combining nearly 20 years of legal expertise in public and private practice. He has an extensive

background in the areas of public utility regulation, bulk power system reliability, and corporate governance.

Prior to being appointed to the DCPSC, Mr. Phillips served as Assistant General Counsel for the North American Electric Reliability Corporation (NERC), in Washington, D.C. Before joining NERC, he also worked for two law firms, where he advised clients on energy regulatory compliance and policy matters.

Mr. Phillips has also served on the boards of several organizations, including the board of directors for the National Association of Regulatory Utility Commissioners (NARUC) and the Organization of PJM States (OPSI). He also has served as president of the Mid-Atlantic Conference of Regulatory Utility Commissioners (MACRUC), and he has held leadership roles on several advisory councils, including the Electric Power Research Institute (EPRI) Advisory Council.

Mr. Phillips has a *Juris Doctor* from Howard University School of Law, and a Bachelor of Science from the University of Montevallo. He lives in Washington, D.C., with his wife and two children.



Matt Rogers CEO, EnergyRev

Matt Rogers is a global energy and sustainability leader, focusing on the role technology and innovation play in restructuring markets. For 30+ years, Matt served oil, gas, power, renewables, and energy technology clients around the world, driving end to end operational performance improvements, defining regulatory/policy approaches, and crafting strategic priorities to win in restructuring markets.

Matt has written and spoken extensively on oil, gas, power, sustainability, and energy transitions issues. Over the last decade he has focused his public voice on energy transition and climate risks and opportunities, especially for energy companies. His book Resource Revolution: Capturing the Biggest Business Opportunity in 100 years was published in April 2014, arguing that the combination of information technology with industrial technology is changing the way we produce and use natural resources, restructuring energy, industrial, agricultural, and transportation markets globally.

During his tenure with McKinsey, he led and grew McKinsey's Electric Power, Oil and Gas, and Sustainability practices. From 2009 to 2010, Matt served as the Senior Advisor to the US Secretary of Energy, leading the Recovery Act Implementation. He had operational responsibility for the Department of Energy's \$35B in Recovery Act appropriations: reviewing more than 30,000 applications and funding more than 5,000 projects to accelerate US energy clean energy innovation.

He graduated magna cum laude from Princeton University. He earned an M.B.A. from Yale University's School of Management. He teaches annually at UC Berkeley's Haas School of Business and the Stanford Graduate School of Business. He is married with three adult children.

Panel 1 – Energy Policy



David MortonChair and CEO of the British Columbia Utilities Commission

David was appointed Chair and CEO of the BCUC in December 2015. His responsibility is to deliver on the Vision of the BCUC – to be a trusted and respected regulator that contributes to the well-being and long-term interests of British Columbians. He is also a Commissioner, a role he has had since 2010, and he continues to participate in many proceedings. David also has over 25 years of experience as a

consultant in the information technology sector. He is a Professional Engineer in BC, has a Licentiate in Accounting from the Society of Management Accountants Canada, was certified with the ICD.D designation in 2013 by the Institute of Corporate Directors, and holds a Bachelor of Applied Science from the University of Toronto. David also serves as director for the Arts Club Theatre Company, and as President of the West Vancouver Community Arts Council.



Judy JagdmannActing Commissioner of Virginia State Corporation Commission

Judy Jagdmann is the immediate past-President of the National Association of Regulatory Utility Commissioners (NARUC). Elected by the Virginia General Assembly to three terms, she served as Chair and Commissioner of the Virginia State Corporation Commission (VSCC) until January 1, 2023. The VSCC is an independent department of government regulating the utilities, insurance, banking and securities industries. Recently, the Virginia Healthcare Exchange was added to the VSCC's jurisdiction. In 2005, the Virginia General Assembly unanimously elected her Attorney General. Previously, she served as Virginia's

Deputy Attorney General for Civil Litigation, a position that included the Anti-trust and Utility Consumer Counsel Divisions.

Jagdmann's leadership experience in national and regional organizations includes NARUC (President, Chairman of the Electricity Committee, Member of the Executive Committee and Board, Lead of the Resource Adequacy Project, and Lead of the Task Force on Military Workforce Development), the Mid-Atlantic Conference of Regulatory Utilities Commissioners (President), Organization of PJM States, Inc. (State Member), and the Electric Power Research Institute (Advisory Council and Advisory Council Executive Committee).

Admitted to practice in the U.S. Supreme Court and 4th Circuit Court of Appeals, Jagdmann also is a member of the National Association of Attorneys General and the Fourth Circuit Judicial Conference. She has taught energy policy and regulation at Virginia law schools, including the University of Virginia School of Law, as an adjunct faculty member.

A native of Virginia, Jagdmann is a graduate of the University of Virginia and the University of Richmond School of Law.



Michael D. Desselle
Vice President of Process Integrity and Chief Compliance and Administrative Officer
Southwest Power Pool (SPP)

Michael D. Desselle is Vice-President of process integrity and Chief Compliance and Administrative Officer for the Southwest Power Pool (SPP). In his various roles with the company, he has been responsible for facilitating the growth of the company from 225 employees to over 600, managing 50 professionals, and creating three successful strategic plans that have resulted in significant offerings for growth and expansion. He has also proved instrumental in company process and procedure development, leading the creation and

implementation of corporate strategic plans.

Mr. Desselle has more than 40 years of experience in the energy industry, having served in a variety of analytical and advocacy positions with utility companies and consulting firms throughout his career. He began his career as a planning analyst for Cajun Electric Power Cooperative. From 1985 to 1992, while at Price Waterhouse, Mr. Desselle managed and performed utility regulatory, financial, and general consulting engagements for clients in the gas, electric, water, and wastewater industries. He joined Central and South West Services, Inc. (CSW) in 1992 and rose to positions responsible for supporting corporate initiatives, strategies, and positions. Following the CSW and American Electric Power (AEP) merger in 2000, he was responsible for the development and advocacy of AEP's corporate policies and positions. In his leadership roles with energy organizations, he has worked at an executive level with state and federal agencies in the promulgation and implementation of energy policy in the markets. His broad areas of expertise include corporate governance, management and financial analysis.

Michael has served on several energy-related non-profit boards, where he has assisted in shaping the direction of the organizations, while also identifying issues defining energy policy from both a market and an operational perspective. Mr. Desselle serves as the chair of the North American Energy Standards Board (NAESB), having chaired the organization on three previous occasions. He has served in an executive capacity on various North American Electric Reliability Corporation (NERC) committees. He is the former chair of the Arkansas Prostate Cancer Foundation Board and currently serves on the Board of Easterseals Arkansas.

Mr. Desselle holds a bachelor's degree in Quantitative Business Analysis and Operations Research from Louisiana State University. He has completed the Strategic Leadership Program from The Ohio State University, the Driving Corporate Performance Program from Harvard Business School, as well as, the Preparing to Be a Corporate Director program from Harvard Business School.

Moderator



Matt Schuerger Chairman, NARUC Electricity Committee and Commissioner, Minnesota Public Utilities Commission and RISC Member

Commissioner Schuerger serves on the Board of Directors of the National Association of Regulatory Commissioners (NARUC) and is the Chair of the NARUC Committee on Electricity. He has been elected to the Member Representatives Committee of the North American Electric Reliability Corporation (NERC) and he serves on the NERC Reliability Issues Steering Committee. Schuerger is a member of the Electric

Power Research Institute (EPRI) Advisory Council and Executive Committee. In addition, Commissioner Schuerger represented Minnesota on the Organization of MISO States Board of Directors (OMS BOD) from 2016 through 2021; he was elected and served as President of the OMS BOD in 2020; and during his tenure he served as the liaison to the OMS BOD on Resource Adequacy and Energy Markets (2021), Distributed Energy Resources (2020), and Transmission Planning (2018-2019).

Commissioner Schuerger has thirty-five years of experience in the energy industry as a regulator, senior manager, and professional engineer, including work focused on power system planning and reliability, energy markets, distributed energy resources, and grid integration of renewable energy. From 2001 until he was named to the Commission, Schuerger was the President of an engineering and management consulting firm. Prior to that, he was the Executive Vice President of District Energy St. Paul Inc., a privately held provider of district heating, district cooling, and cogenerated electricity.

Schuerger earned a Master of Science in Electrical Engineering from the University of Minnesota, a Master of Business Administration from the University of St. Thomas, and a Bachelor of Science in Mechanical Engineering from Purdue University.

Panel 2 - Security



Puesh Kumar *Director, CESER, Department of Energy*

Kumar leads DOE's mission to address cyber, physical, and natural hazards and threats to the U.S. energy infrastructure. Kumar has over 15 years of experience in grid modernization, cybersecurity, and emergency response within the energy sector.

Most recently, Kumar was the principal manager for cybersecurity engineering and risk management at Southern California Edison. There, he led a team that addressed cyber threats to critical infrastructure at one of the largest electric utilities in the United States.

Kumar previously served as director of preparedness and exercises for CESER's Infrastructure Security and Energy Restoration division and as senior advisor for policy and strategy at CESER. In those capacities, he led the development of national-level policies, strategies, and programs related to energy sector hazards and threats.

Kumar has also held industry positions at the American Public Power Association as director of engineering and operations and at Memphis Light, Gas, and Water as a power systems engineer.



Tabice WardArea Vice President – Business Security Risk and Advisory Services, Xcel Energy

Tabice A. Ward, Area Vice President, Business Security Risk Advisory & Support Services, oversees the security risk management, identity & access management, and testing and vulnerability management functions within Xcel Energy's Enterprise Security and Emergency Management organization.

a certified cybersecurity executive, she has over 30 years in the utility industry working in information technology leading technical teams that span across business relationship management, software delivery, operations and support, project management, cybersecurity strategy, security engineering, security operations, security risk management, privacy risk, regulatory compliance, business continuity, disaster planning and recovery, state and federal policy advisory; as well as fostering partnerships that drive security initiatives within the energy industry and trade associations, national laboratories, and federal agencies.

She earned a master's degree in Information Assurance from the University of Detroit Mercy, a post-graduate certificate from Carnegie Mellon CISO program, and a bachelor's degree in Management Information Systems from Wayne State University. She has also completed University of Michigan Executive Development and Cornell University Executive Leadership programs, as well as professional education courses on cybersecurity at Massachusetts Institute of Technology. She holds the credentials of CISM, PMP, and CISSO.

She's a recipient of distinguished awards from Women of Color in STEM, Who's Who in Black Detroit, and the Richard HL Marshall Security Excellence Award. She believes in volunteerism through her nonprofit board service and participation on advisory committees to advance Cybersecurity in post-secondary and K-12 education.



Rob Lee *CEO and Co-Founder, Dragos*

Robert is a recognized authority in the industrial cybersecurity community. He is CEO and co-founder of Dragos, a global technology leader in cybersecurity for industrial controls systems (ICS)/operational technology (OT) environments.

In addition, Robert serves on the Department of Energy's Electricity Advisory Committee as the Vice Chair of the Department of Energy's Grid Resilience for National Security Subcommittee, and is a member of the World Economic Forum's subcommittees on Cyber Resilience for the Oil & Gas and Electricity communities.

Robert is routinely sought after for advice and input on cybersecurity for industrial infrastructure and is regularly asked to brief national leaders. He testified to the U.S. House of Representatives Committee on Energy and Commerce—Subcommittee on Oversight and Investigations, and to the U.S. Senate Energy and Natural Resources Committee, to advise on policy issues related to critical infrastructure cyber threats. He has also presented at the World Economic Forum Annual Meeting in Davos, and industry leading conferences such as RSA, SANS, BlackHat, and DefCon on the topic of industrial cybersecurity and threats. He serves on the board of the National Cryptologic Foundation.

Robert began his pioneering work in ICS/OT cybersecurity as a U.S. Air Force Cyber Warfare Operations Officer tasked to the National Security Agency, where he built a first-of-its-kind mission identifying and analyzing national threats to industrial infrastructure. He went on to build the industrial community's first dedicated monitoring and incident response class at the SANS Institute (ICS515) and the industry recognized cyber threat intelligence course (FOR578).

SC Media named Robert the Security Executive of the Year for 2022. A business leader but also technical practitioner, he helped lead the investigation into the 2015 attack on Ukraine's power grid, the first time an electric system was taken down due to a cyberattack. With his team at Dragos he has been involved in the most significant cyberattacks on industrial infrastructure, including the investigation and analysis of the 2016 attack on Ukraine's electric system, the 2017 TRISIS attack on a Saudi Arabian petrochemical facility in the first attempt to try to kill people through malicious software, and the 2021 Colonial Pipeline ransomware attack. In 2022, his team at Dragos uncovered PIPEDREAM, a highly flexible framework to attack industrial infrastructure globally. Robert's work has been featured in the book Sandworm and on 60 Minutes.



Manny Cancel
NERC Senior Vice President and CEO, E-ISAC

Manny Cancel assumed the role as NERC senior vice president and chief executive officer of the Electricity Information Sharing and Analysis Center (E-ISAC) in January 2020. He is responsible for the management and oversight of the E-ISAC and leading security operations and information sharing, threat intelligence and analysis, and stakeholder engagement initiatives designed to protect critical electricity infrastructure in North America. Mr. Cancel also serves as the E-ISAC's key representative to important constituencies, such as the Electricity Subsector Coordinating Council (ESCC), government partners, and key industry groups and leads the E-ISAC's strategic planning initiatives.

Prior to joining NERC, Mr. Cancel served as Con Edison's chief information officer (CIO) leading all aspects of information technology, including cyber security initiatives. In this capacity, he also supported various industry initiatives, serving as chair of the sector's Cyber Mutual Assistance Program and supporting the Member Executive Committee (MEC), an advisory group formed out of the ESCC that provides guidance to the E-ISAC.

Prior to assuming the role of CIO at Con Edison, Mr. Cancel held various roles over his 39-year career, including leadership roles in operations, customer service, audit, and information technology.

Mr. Cancel earned a bachelor's degree in Business Administration from Baruch College and a master's degree in Business Administration from the Johnson School at Cornell University.

Moderator



Kamyar Ghaderi
ISMS Lead Auditor | Sr. Investigator/Auditor, MACD, IESO and RISC Member

Kamyar (Kam) is a CIP Audit Team Lead and auditor with 20 years of experience in providing information security auditing, consulting and technical services to various critical infrastructures in energy, government, financial, legal and healthcare industries. He has been instrumental in developing transformational cybersecurity strategic plans, and successful accomplishment of modern cybersecurity programs and initiatives. He holds a Master degree in IT Security, Bachelor's degree in electrical

engineering, and is a Certified Information Systems Security Professional (CISSP) and Information Security Management System (ISMS) Lead Auditor. Kam is a member of The Reliability Issues Steering Committee (RISC) and dedicates his professional life to ensure the reliability of the North American bulk power system.

Panel 3 – Grid Transformation and Impact on Resiliency



Tom Galloway *President and CEO, North American Transmission Forum*

Thomas J. Galloway, Sr. serves as the president, CEO, and a board member director for the North American Transmission Forum (NATF). As CEO, Mr. Galloway formulates strategy, leads staff, and facilitates member activities to advance NATF's mission: to promote excellence in the reliable, secure, resilient, and safe operation of the electric transmission system. Under Mr. Galloway's direction, NATF operates rigorous programs used to confidentially share superior practices among members and promote continuous

improvement. These program areas include peer reviews, assistance, training, practices, initiatives, operating experience, surveys, metrics, and RESTORE. Mr. Galloway has promoted NATF's increasing leadership role on key industry topics including grid transformation, methods to quantify and advance system resilience, supply chain cyber security, and risk-informed approaches to reliability and compliance.

Mr. Galloway began his professional career in 1981 with Northeast Utilities, holding a variety of engineering and managerial roles. Mr. Galloway continued his career with the Institute of Nuclear Power Operations (INPO) for the next 10 years, gaining valuable experience and skills related to human performance, organizational effectiveness, operational excellence, and performance improvement. Mr. Galloway subsequently served as SERC Reliability Corporation's vice president and director of compliance. In this role, Mr. Galloway implemented the mandatory NERC Compliance Monitoring and Enforcement Program (CMEP) within the SERC region. Immediately prior to joining NATF, Mr. Galloway was NERC's chief reliability officer and the senior vice president for the Reliability Performance organization. During Mr. Galloway's 11 plus years as NATF's CEO, the membership has grown significantly and has made increasingly positive impacts on transmission reliability, security, resilience, and safety. Mr. Galloway continues to be driven by his passion for electric system reliability and the recognition of the critical role electricity plays in everyday life.



Gordon Van Welie *President and CEO, ISO New England*

Gordon van Welie is President and Chief Executive Officer of ISO New England Inc., having previously served as the company's Executive Vice President and Chief Operating Officer. He joined ISO New England from Siemens Power Transmission & Distribution LLC, where he served as Vice President and

General Manager of the Power Systems Control Division and was responsible for managing information technology solutions for electric companies. Before coming to Siemens, Mr. van Welie held several positions at ESKOM, South Africa's electric utility based in Johannesburg. He has been a member of the National Academy of Engineering since 2017, and currently serves on the Board on Energy and Environmental Systems. In addition, Mr. van Welie belongs to the Executive Committee of the U. S. National Committee of CIGRE, the Member Representatives Committee of the North American Electric Reliability Corporation (NERC), the

ISO/RTO Council, and the IEEE Power & Engineering Society. He is a recipient of the 2017 Utility Variable-Generation Integration (UVIG) Achievement Award and, in 2016, was awarded the IEEE Power & Energy Society Leadership in Power Award.

John Hairston *Administrator and CEO, Bonneville Power Administration*

John Hairston was named administrator and CEO in January 2021. He is responsible for managing the nonprofit federal agency that markets carbon-free power from Columbia River hydroelectric dams and the region's one nuclear plant. BPA also operates most of the high-voltage power grid across the Pacific Northwest, distributing renewable energy to the region.

Hairston, who joined BPA in 1991, previously, served as chief operating officer where he oversaw Power Services; Transmission Services; Environment, Fish and Wildlife; Customer Support Services; and the Business Transformation Office.

Hairston also served as BPA's chief administrative officer. In this role he provided policy and strategic guidance concerning BPA's internal operations and oversaw Safety; Human Capital Management; Security and Continuity of Operations; Supply Chain; Workplace Services and Information Technology.

Hairston began his career at BPA as an economist in the Rates Forecasting and Rate Design organizations and served in various positions in Energy Efficiency until 2006 when he was named BPA's chief compliance officer, leading the development and implementation of the Agency Compliance and Governance Organization, providing overall coordination and management of systems and processes established to assure agency compliance with regulatory rules and standards.

Hairston holds a bachelor's degree in economics from The Southern University, a master's degree in Urban Studies from Portland State University and a Juris Doctorate from the Lewis & Clark Northwestern School of Law.



Scott Aaronson *Senior Vice President, Security & Preparedness, Edison Electric Institute*

Scott leads EEI's security and preparedness team where he focuses on industry security and resilience initiatives, establishing collaborative partnerships between government and electric companies—and across critical infrastructure sectors—that enhance security for the energy sector. In addition to his role at EEI, Scott also serves as the Secretary for the Electricity Subsector Coordinating Council (ESCC). The ESCC is the primary liaison between senior government officials and industry leaders representing all segments of the sector. This partnership is held up as a model for how critical infrastructure operators can work with government, yielding dramatic improvements in security and preparedness for the electric

power sector and the nation.

In these roles, Scott has provided testimony before several state legislative and regulatory bodies, both houses of the U.S. Congress, and to the United Nations Security Council. He speaks frequently with national media and has been a trusted source for policymakers on issues of critical infrastructure security, including both the Pentagon's Defense Science Board and the President's National Infrastructure Advisory Council.

Prior to joining EEI, Scott was a senior adviser to Members of Congress serving the 12th Congressional District of California, including former House Foreign Affairs Committee Chairman Tom Lantos. From 2001 to 2007, he served as an economic policy adviser to U.S. Senator Bill Nelson. Scott received a Bachelor's Degree in journalism from the University of Colorado at Boulder for his undergraduate studies, and a Master's Degree from The George Washington University Graduate School of Political Management. He also has received continuing education in executive leadership from the University of Pennsylvania's Wharton School of Business. He lives on Capitol Hill in Washington, DC with his wife, two daughters, and a not-so-Great Dane.



Mike Wise

Senior Vice President of Regulatory and Market Strategy, Golden Spread Electric Cooperative, Inc.

Michael Wise is currently the Senior Vice President of Regulatory & Market Strategy at Golden Spread Electric Cooperative, Inc. located in the Amarillo, Texas. His significant utility experience includes 18 years with Golden Spread, one year with ERCOT, and 17 years with Xcel Energy and its affiliate,

Southwestern Public Service Company. He currently holds positions on three major committees at the Southwest Power Pool, and he represents Golden Spread on the ERCOT Technical Advisory Committee. Wise is a graduate of the US Air Force Academy and served in the US Air Force as an instructor pilot. He earned his MBA degree from West Texas A&M University and taught an undergraduate Business Statistics class in the evenings at the University for 15 years. He is a current Amarillo resident and an active member of the community.

Moderator



Nelson Peeler

Senior Vice President and Chief Transmission Officer, Duke Energy and RISC Member

Mr. Nelson Peeler is the senior vice president and chief transmission officer for Duke Energy. In this role, he has overall responsibility for planning, design, construction, maintenance and operations of Duke Energy's electric transmission system, which includes over 32,000 miles of high-voltage power lines and more than 3,000 substations in six states.

Following graduation from NC State in 1988, he joined Duke Energy and has held a variety of leadership positions in power delivery, system planning and operations, performance support, engineering, construction, business planning, contract management, process improvement and training. Prior to assuming his current position, Mr. Peeler served as vice president of transmission system planning and operations, where he had responsibility for real-time monitoring and control of the company's bulk electric transmission system.

The Faith, N.C., native graduated from North Carolina State University with a bachelor's degree in electrical engineering and earned an MBA from Queens University. He is a registered professional engineer in North Carolina and South Carolina. Mr. Peeler has chaired or served on the boards of a number of industry organizations. He currently serves on the boards of directors of the North American Energy Standards Board, SERC Reliability Corporation, Florida Reliability Coordinating Council and the North American Transmission Forum, where he is a past chair. Additionally, he is a member of the board of directors for the North Carolina State Engineering Foundation and has served as chair of the strategic advisory committee of the Electrical and Computer Engineering department.

Panel 4 - New Technologies



Dr. Aidan TuohySenior Project Manager, EPRI

Dr. Aidan Tuohy is a Senior Program Manager at the Electric Power Research Institute (EPRI). He joined EPRI in October 2010 and works in the Grid Operations and Planning group. He is the program manager for the EPRI research program on Bulk System Integration of Variable and Distributed Energy Resources. He currently leads EPRI's Resource Adequacy Initiative and has worked on topics related to renewable integration and decarbonization for 15 years. Prior to joining EPRI, Dr. Tuohy worked as a consultant to

the Irish electricity industry on projects related to wind integration. He also worked with the International Energy Agency on the Grid Integration of Variable Renewables project. Dr. Tuohy received a Bachelor of Engineering degree in electrical/electronic engineering from University College Cork, Ireland, and PhD at the University College Dublin. He has published numerous journal papers and frequently presents at industry conferences, and is engaged in various ESIG, IEEE, IEC and NERC activities.



Patricia Hoffman *Principal Deputy Director of the Grid Deployment Office*

Serving as the Principal Deputy Director for the Grid Deployment Office at the U.S. Department of Energy (DOE), Patricia A. Hoffman is supporting the execution of the Bipartisan Infrastructure Law and the development of the Grid Deployment Office.

From January 2017 until November 2017, she served as DOE's Acting Under Secretary for Science and Energy and was also a Senate-confirmed Assistant Secretary for the Office of Electricity from June 2010 to January 2017, after serving as Principal Deputy Assistant Secretary since November 2007. The focus of her responsibility was to provide leadership on a national level to modernize the electric grid and enhance the security and reliability of the energy infrastructure.

Patricia holds a Bachelor of Science and a Master of Science in Ceramic Science and Engineering from Pennsylvania State University.



Matt Crozat, Executive Director, Strategy and Policy Development, Nuclear Energy Institute

Matt Crozat the Executive Director for Strategy and Policy Development and the Nuclear Energy Institute. He is responsible for directing NEI efforts to identify policy initiatives that will improve economic viability of operating plants and enhance prospects for new plant construction. Mr. Crozat examines market operations and proposed policies to assess their impact on nuclear energy. He also oversees analyses of nuclear industry cost performance and trends. Before joining NEI in 2015, Mr. Crozat was a Senior Policy Advisor in

the Office of Nuclear Energy at the U.S. Department of Energy. Mr. Crozat is recognized as an international expert on nuclear energy economic issues. He served co-chair of the Working Party on Nuclear Energy Economics at the Nuclear Energy Agency of the OECD for over ten years. He holds an M.A. from Cornell University and a B.A. from Tulane University.



Caitlin Smith

Senior Director, Regulatory, External Affairs, Jupiter Power

Caitlin has almost ten years of experience in regulatory policy of electricity markets. Caitlin has worked to successfully advance policies to enhance electricity markets. Caitlin also has experience advising on commercial and financial impacts of energy market design and policies. She has experience in government and regulatory affairs, as well in public affairs campaigns and managing external and media communications.

Previously, Caitlin advised clients on the ERCOT markets with AB Power Advisors. She has also managed government and regulatory affairs and has been responsible for creating and implementing policy positions for a number of wind energy, solar energy and demand response interests, including with Invenergy. Prior to that, Caitlin was the first in-house attorney for Potomac Economics, ERCOT's Independent Market Monitor.

Moderator



Mark Ahlstrom

Vice President, Renewable Energy Policy, NextEra Energy Resources and RISC Member

Mark Ahlstrom is Vice President of Renewable Energy Policy for NextEra Energy Resources. He is also President of the Board of Directors of the Energy Systems Integration Group, the non-profit technical collaboration association for engineers, system operators, researchers and policymakers working on our rapidly transforming energy systems. He serves on NERC's Reliability Issues Steering Committee, chairs the SPP Future Grid Strategy Advisory Group, and has worked for two decades on the reliable integration

of variable generation into power systems and markets. Earlier, he was founder of two software companies, CEO of WindLogics, and served on the NERC Essential Reliability Services Working Group and the NERC Integrating Variable Generation Task Force. Today, Mark is focusing on grid transformation pathways that are accelerated by the Inflation Reduction Act of 2022 with emphasis on reliability, economics, and innovation.

Open Discussions Moderators

Adrianne Collins

Senior Vice President, Power Delivery, Southern Company and RISC Vice Chair



Teresa Mogensen

Senior Vice President, Energy Supply, Xcel Energy and RISC Member

Teresa Mogensen is senior vice president, Energy Supply at Xcel Energy, headquartered in Minneapolis, Minnesota, responsible for a 72-plant generation fleet that produces 18,195 megawatts (owned capacity) of electric power for 3.5 million customers in eight states.

She previously served as senior vice president, Transmission at Xcel Energy, responsible for all aspects of Xcel Energy's current and future electric transmission system and T&D substations across 10 states, and

president of the Xcel Energy Transco, several transmission-only subsidiary companies engaged in competitive transmission growth opportunities.

Prior to Xcel Energy, Mogensen served in various leadership roles with American Transmission Company, in Waukesha, Wisconsin, where she helped launch the first for-profit, transmission-only utility company. She began her career as an engineer with Wisconsin Electric, now We Energies, of Milwaukee, Wisconsin.

Mogensen earned both a master's degree in business administration and a bachelor's degree in electrical engineering from Marquette University. She serves on the board of directors for a number of industry and community organizations, including the American Wind Energy Association (AWEA) and Minnesota Private Colleges Council (MPCC).