

# **2019 Reliability Leadership Summit**

## March 14, 2019 | 8:30 a.m.-4:30 p.m. Eastern

The Mayflower Hotel 1127 Connecticut Ave NW Washington, D.C. 20036 District Ballroom (lower level)

## **RELIABILITY | ACCOUNTABILITY**



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## Agenda

Continental Breakfast		7:30–8:30 a.m.	
Welcoming Remarks		8:30–8:45 a.m.	
	Nelson Peeler, senior vice president, chief transmission officer, Duke Energy, and RISC	chair	
	Mark Lauby, senior vice president and chief reliability officer, NERC		
Morning Keynote Speaker		8:45–9:15 a.m.	
	Bruce Walker, assistant secretary, Office of Electricity, U.S. Department of Energy		
Panel 1: Regulatory and Policymaking during Unprecedented Change		9:15–10:30 a.m.	
	Bruce Walker, assistant secretary, Office of Electricity, U.S. Department of Energy		
	Thad LeVar, chairman, Public Service Commission of Utah		
	Matthew Schuerger, commissioner, Minnesota Public Utilities Commission		
	David Morton, chairman and chief executive officer, British Columbia Utilities Commis	sion	
	David Ortiz, deputy director of the Office of Electric Reliability, Federal Energy Regulat	ory Commission	
	Moderator		
	Chris Shepherd, principal of Information and Critical Infrastructure Security, Gannett Fleming		
Break		10:30–10:45 a.m.	
Panel 2: Identification and Mitigation of Significant Risks to Reliability— Existing and Emerging Landscape of Risks		10:45 a.m.–Noon	
	Brian Harrell, assistant director, Cybersecurity and Infrastructure Security Agency, U.S. Security	Department of Homeland	
	David Weaver, vice president, Transmission Strategy and Planning, Exelon and former chair	NERC Planning Committee	
	Rich Hydzik, senior transmission operations engineer, Avista Corp, former chair of the Resources Task Force	NERC Distributed Energy	
	Patrick Doyle, Chief Strategies and Operational Direction, Hydro-Québec		
	Bill Lawrence, chief security officer, vice president, director of E-ISAC, NERC		
	<b>Moderator</b> Brian Evans-Mongeon, <i>president and chief executive officer, Utility Services, Inc., curr</i>	ent Planning Committee chair	



4:15-4:30 p.m.

Lunch		Noon-1:00 p.m.
Afterno	oon Keynote Speaker	1:00–1:30 p.m.
	Mark P. Mills, senior fellow, Manhattan Institute	
Panel 3	8: Providing Assurance for the Availability of Adequate Fuel Delivery to Satisfy Energy Needs	1:30–2:45 p.m.
	Don Gulley, president and chief executive officer, Southern Illinois Power Cooperative	
	Gordon van Welie, chief executive officer, ISO New England	
	Woody Rickerson, vice president, Grid Planning and Operations, ERCOT	
	Gerry Yupp, senior director, Wholesale Operations, Florida Power and Light Company	
	Jeffrey Cook, vice president, Transmission Planning and Asset Management, Bonnevil	le Power Administration
	Moderator Mark Rothleder, vice president, Market Quality and Renewable Integration, CAISO	
Break		2:45–3:00 p.m.
Panel 4	: Open Discussion	3:00–4:15 p.m.
	Moderators	
	Nelson Peeler, vice president, chief transmission officer, Duke Energy	
	Charles King, vice president and chief information officer, Kansas City Power and Light	t Co.

#### **Closing Remarks**

Jim Robb, president and chief executive officer, NERC



## **Panels Summary**

#### Panel 1: Regulatory and Policymaking during Unprecedented Change

The North American bulk power system (BPS) is experiencing transformational change due to a shift in generation resources and accelerated technology deployment. Public policies, consumer preferences, technology, and market factors are contributing to evolutionary changes to the fuel mix. The integration of new technologies that augment changes in fuel type and the make-up of the resources being added to the system is affecting the visibility and management of resources. Collectively, these factors are creating a new paradigm along with new reliability risks for the BPS, and regulators and policymakers are on the front lines of these challenges. This panel includes regulators and policymakers who are managing the present and the future. Panelists will provide their views on addressing risk and the collaborative effort required to better shape the energy landscape of the future.

# Panel 2: Identification and Mitigation of Significant Risks to Reliability—Existing and Emerging Landscape of Risks

The nation's critical infrastructure serves as the backbone of our nation's economy, security, and health. Maintaining the security of our nation's critical infrastructure, both physical and cyber, and addressing reliability challenges from extreme natural events will continue to be a high priority for industry, policymakers, and regulators. As the risk landscape evolves, efforts will be needed to further our understanding of the impacts from new potentially disruptive events that challenge the security and reliability of the BPS.

This panel aims to answer a number of questions. Do opportunities exist for industry to further strengthen BPS security, reliability, and resilience through careful planning so new technology integration supports reliability and organizational goals while at the same time not increasing vulnerabilities? Beyond the current NERC Reliability Standards, how can industry include security perspectives alongside reliability and resilience of the BPS in its planning and operations? This panel will also discuss existing and emerging international, national, and regional BPS reliability risks. Potential mitigation approaches and next generation modeling requirements will also be discussed.

#### Panel 3: Providing Assurance for the Availability of Adequate Fuel Delivery to Satisfy Energy Needs

As the electric system transforms to a future generation mix that includes natural gas, wind, solar, and battery at higher levels than the current levels, the ability to assure sufficient energy is available to meet the needs of consumers is being emphasized. To assure resource adequacy and operational reliability, addressing this transition is crucial. This panel's aim is to discuss how industry, policymakers, and the ERO Enterprise should work together to ensure sufficient infrastructure is in place to assure that generation and necessary fuel resources are available to support the continued reliable operation of the BPS during this transition.

#### Panel 4: Open Discussion

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, policymakers, regulators, and other stakeholders in addressing significant emerging reliability risks. Discussion items can be, but are not limited to, practical BPS operations and planning, policy development at the FERC, NERC, or Regional Entity level (e.g., standards and requirements), critical infrastructure protection, etc.



## **Reliability Leadership Summit**

### **Executive Profiles**



#### **Nelson Peeler**

Senior vice president, chief transmission officer, Duke Energy, and RISC chair

Nelson Peeler serves as senior vice president and chief transmission officer for Duke Energy. He oversees the safe, reliable, and efficient operation 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.

Prior to assuming his current position in October 2016, 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.

Peeler has more than 30 years of experience in the energy industry. He joined Duke Energy in 1988 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.

Peeler also served on the power delivery merger team leading up to the Duke Energy/Cinergy merger in 2006 and the transmission and distribution merger integration team for the Duke Energy/Progress Energy merger in 2012.

The Faith, North Carolina, native graduated from North Carolina State University with a bachelor's degree in Electrical Engineering and an master's of Business Administration from Queens University. He is a registered professional engineer in North Carolina and South Carolina.

Peeler currently serves on the boards of directors of the North American Energy Standards Board, SERC Reliability Corporation, and the Florida Reliability Coordinating Council. He is a former board chair of the North American Transmission Forum and has represented the investor-owned utility sector on the NERC Members Representatives Committee. Additionally, he is vice president of the board of directors for the North Carolina State Engineering Foundation and a member of the North Carolina State Electrical and Computer Engineering Hall of Fame.





Mark Lauby Senior vice president and chief reliability officer, NERC

Mark Lauby is senior vice president and chief reliability officer at NERC. 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, 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. Lauby has served as chair and is a life member of the International Electricity Research Exchange and served as chair of a number of Institute of Electrical and Electronics Engineers (IEEE) working groups. From 1999 to 2007, Lauby was appointed as a member of the Board of Excellent Energy International Co., 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 BPS reliability," and in 2014, Lauby was awarded the IEEE Power and Energy Society's Roy Billinton Power System Reliability Award.

Prior to joining NERC, 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. 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.

Lauby is the author of numerous papers on the subjects of power system reliability, expert systems, transmission system planning, and power system numerical analysis techniques. He earned his Bachelor of Science and Master of Science degrees in Electrical Engineering from the University of Minnesota. In addition, Lauby attended the London Business School Accelerated Development Program as well as the Executive Leadership Program at Harvard Business School.





Bruce Walker Assistant secretary, Office of Electricity, U.S. Department of Energy

Bruce Walker was nominated by President Donald J. Trump and confirmed by the U.S. Senate as Assistant Secretary for the Office of Electricity at the U.S. Department of Energy in October 2017.

For the previous five years, Walker was the Deputy County Executive for Putnam County, New York; in this capacity, he was responsible for managing more than 20 diverse departments and 650 employees to ensure the health and safety of the constituents. Walker is also the founder of Modern Energy Insights, Inc., a boutique consulting firm that specializes in evaluating and identifying risk and developing mitigation and elimination strategies for critical infrastructure owned and operated by major investor owned utilities throughout the United States and Canada.

Prior to founding Modern Energy Insights, Inc. in 2011, Walker was an integral part of two investor-owned utilities in the Northeast United States. He has held leadership positions in System Operations, Emergency Management, Asset Management, and Regulatory Services. Most recently, Walker was the vice president of Asset Strategy and Policy for National Grid–U.S. In that capacity, he was responsible for the development of asset strategies and regulatory policies for a \$5 billion five-year investment plan in New York, Massachusetts, Rhode Island, and New Hampshire. Prior to that position, he was the director for Corporate Emergency Management at Consolidated Edison of New York. His responsibilities included all emergency plans, operations, and responses for the electric, natural gas, and steam systems in New York City while coordinating with the New York City Office of Emergency Management. Additionally, he was responsible for leading the development of the Con Edison Coastal Storm Plan that was successfully utilized during Hurricane Sandy in 2011.

He earned a bachelor's degree in Electrical Engineering from Manhattan College and a Juris Doctor from Pace University where he was the technical editor on the Environmental Law Review and received an Environmental Law Certificate. He has completed the Distribution Systems program from Siemens Power Technologies International. He is a distinguished graduate of the United States Air Force Academy Preparatory School and received an honorable discharge from the United States Military Academy.





Thad LeVar Chairman, Public Service Commission of Utah

Thad LeVar was appointed to the Public Service Commission of Utah by Governor Gary R. Herbert on December 20, 2012, and was appointed commission chair by Governor Herbert on June 19, 2015. He had been with the Utah Department of Commerce since 2004, and at the time of his appointment he was the agency's deputy executive director. While in that role, LeVar was appointed to be a member of the steering committee for Governor Herbert's 2011 Utah Business Regulation Review, a project that resulted in over 300 changes to Utah state government including streamlining and eliminating rules and regulations.

Previously in his career, LeVar held jobs first as an administrative law judge and then as division director with the Utah Division of Consumer Protection. He also worked as an associate general counsel to the Utah Legislature. Before law school, LeVar taught in secondary schools in Texas and Arkansas.



Matthew Schuerger Commissioner, Minnesota Public Utilities Commission

Matthew Schuerger was appointed to the Public Utilities Commission by Governor Mark Dayton, effective February 1, 2016.

Schuerger is a member of the National Association of Regulatory Utility Commissioners (NARUC) and serves on the NARUC board of directors and Committee on Electricity. He serves as vice president of the Organization of the Midcontinent Independent System Operator States (OMS) Board of Directors and Executive Committee and is a member of the MISO Advisory Committee. He is a member of the EPRI Advisory Council and Executive Committee. In addition, he has been elected to serve on the Member Representatives Committee of NERC, where he represents state government interests in maintaining reliability of the electric grid.

Schuerger has over thirty years of experience in the energy industry as a senior manager and professional engineer, including work focused on power system planning and reliability, energy markets, grid modernization, distributed energy resources, grid integration of renewable energy, strategic planning, and business development. 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.





#### David Morton

Chairman and chief executive officer, British Columbia Utilities Commission

David Morton is the appointed chair and chief executive officer of the British Columbia Utilities Commission, effective December 31, 2015. Prior to appointment as chair, Morton served as commissioner from November 2010–December 30, 2015. He holds a Bachelor of Applied Science, University of Toronto; he is a professional engineer (British Columbia); a Licentiate in Accounting, Society of Management Accountants Canada; and he is certified with the ICD.D designation in 2013 by the Institute of Corporate Directors. Morton is a consultant with over 25 years of experience in the information technology sector, specializing in project management, business, and technical analyst services.



#### David Ortiz

Deputy director, Office of Electric Reliability, Federal Energy Regulatory Commission

David Ortiz is the deputy director of the Office of Electric Reliability. Prior to joining the Commission, Ortiz was deputy assistant secretary for Energy Infrastructure Modeling and Analysis at the U.S. Department of Energy, where he directed a wide range of research and development on electricity transmission systems and energy system risk. Key research areas included:transmission system models, advanced control systems, computation, mathematics and algorithms, synchrophasors, and geomagnetic disturbances, among others. He represented the Department as the federal nonvoting member of the NERC's Member Representatives Committee and led interagency outreach efforts. From 1998 through 2013, Ortiz worked at the RAND Corporation, where he built a program of energy policy research and analysis.

Ortiz earned his doctorate in Electrical Engineering from the University of Michigan. He graduated from Princeton University.



#### Chris Shepherd

Principal of Information and Critical Infrastructure Security, Gannett Fleming

Chris Shepherd is the principal of Information and Critical Infrastructure Security for Gannett Fleming. He is responsible for providing information security, cyber security, and compliance consulting services to electric utility, transit, and water management clients in government, municipalities, and private sectors. He is directly involved in security engineering and design, cyber/physical security testing and evaluations as well as risk and vulnerability assessments for both enterpriselevel IT systems and supervisory control and data acquisition/industrial control systems. Over the last 30 years, Shepard has managed client projects in the Energy and Banking Industries for federal compliance related projects (e.g., NERC CIP, FERC Hydroproject Cybersecurity, FCC Narrow Banding, Sarbanes-Oxley, State of Wyoming Public Utility Vulnerability Assessment), operational upgrades, and physical/ cyber security retrofits. He has conducted cyber, physical, and information security audits to ensure compliance with best practice and regulatory security standards.





#### Brian Harrell

Assistant director, Cybersecurity and Infrastructure Security Agency, U.S. Department of Homeland Security

Brian Harrell was appointed by the president of the United States in December 2018 to serve as the Department of Homeland Security's Assistant Secretary for Infrastructure Protection. Harrell now serves as the first assistant director for Infrastructure Security within the newly renamed U.S. Cybersecurity and Infrastructure Security Agency. Recently recognized as one of Security Magazine's Most Influential People in Security, Harrell is the former managing director of enterprise security at the Duke Energy Corporation. He is also the former director of the Electricity ISAC (E-ISAC) and director of Critical Infrastructure Protection Programs at NERC, where he was charged with helping protect North America's electric grid from physical and cyber attack. Harrell has spent time during his career in the U.S. Marine Corps and various private sector agencies with the goal of protecting the United States from security threats.



#### David Weaver

Vice president, Transmission Strategy and Planning, Exelon and former NERC Planning Committee chair

David Weaver oversees the company's transmission strategy organization with responsibility for transmission investment, policy, and strategy across all the Exelon Operating Companies. Weaver began his career with Exelon in January 1996. He has served in various roles in engineering, investment strategy, transmission operations, transmission planning, substation design, project management, and business planning. Before joining Exelon, he worked at Delmarva Power as an engineer in Substation Design and Transmission Planning. With more than 28 years of experience in the utility industry, Weaver also served as chair of NERC's Planning Committee. Weaver received his bachelor's degree in Electrical Engineering from Drexel University and is a licensed professional engineer.



#### **Rich Hydzik**

Senior Transmission Operations Engineer, Avista Corp, former chair of the NERC Distributed Energy Resources Task Force

Rich Hydzik is a senior transmission operations engineer at Avista. He has worked in System Operations since 2004 with responsibilities for operational powerflow studies, coordination of regional contingency reserve programs, system operating procedures, and organizational compliance with various NERC BAL, INT, PRC, TOP, and VAR standards. Prior to working in system operations, he was a system protection engineer for 10 years on generation, distribution, and transmission (69 kV through 500 kV) applications. He worked for three years as a transmission system planning engineer. Hydzik was a member of the Essential Reliability Services Task Force from 2014–2018. He led the Distributed Energy Resources Task Force from 2015–2018. He is currently the chair of the NERC Event Analysis Subcommittee and the Western Electricity Coordinating Council (WECC) regional representative at the NERC Operating Committee. Hydzik earned his bachelor's degree from Gonzaga University and is a Professional Engineer in the state of Washington.





Patrick Doyle Chief Strategies and Operational Direction, Hydro-Québec

Patrick Doyle manages a group (composed of 130 technician and engineering employees) supporting all the satellites in the seven Regions all over the province of Quebec. Prior experience includes being the manager of Operations Planning for three years. His career includes work in real-time operations (satellite manager) and support. Doyle has worked for Hydro-Québec for the past 28 years.



#### Bill Lawrence

Chief security officer, vice president, director of E-ISAC, NERC

Bill Lawrence leads the department in its mission to reduce cyber and physical security risk to the grid in North America. Prior to joining NERC, he flew F-14 Tomcats and F/A-18F Super Hornets for the Navy, and most recently he was the deputy director, Character Development and Training Division, at the United States Naval Academy, where he also taught courses in Ethics and Cyber Security. Lawrence has a bachelor's degree in Computer Science from the U.S. Naval Academy, a Master in International Relations from Auburn Montgomery, and a Master of Military Operational Art and Science from the Air Command and Staff College. He holds a Project Management Professional certification and several cyber security certifications.



#### Brian Evans-Mongeon

President and chief executive officer, Utility Services, Inc., current Planning Committee chair

Brian Evans-Mongeon has served in a number of groups regionally and nationally, including the NERC Planning Committee (presently serving as chair). He has also co-chaired the NERC Essential Reliability Services Task Force, national and regional standards for disturbance monitoring, dispersed power resources, under-frequency load shedding, disturbance and sabotage reporting, defining the Bulk Electric System, and has worked on the NERC CIPC Compliance and Enforcement Input Working Group, Risk-Based Registration, and served on the quality review team for the 2015 EOP Standards Project. Evans-Mongeon has an associate degree in Electric/Electronic Technology from Vermont Technical College and a Bachelor of Science in Business Administration from the University of Vermont.





Mark P. Mills Senior Fellow, Manhattan Institute

Mark P. Mills is a senior fellow at the Manhattan Institute and a faculty fellow at Northwestern University's McCormick School of Engineering and Applied Science, where he co-directs an Institute on Manufacturing Science and Innovation. He is also a strategic partner with Cottonwood Venture Partners (an energy-tech venture fund), and an advisory board member of Notre Dame University's Reilly Center for Science, Technology, and Values. Previously, he cofounded Digital Power Capital, a boutique venture fund, and was chairman and chief technology officer of ICx Technologies, helping to take it public in a 2007 initial public offering. Mills is a regular contributor to Forbes.com and coauthor of The Bottomless Well: The Twilight of Fuel, the Virtue of Waste, and Why We Will Never Run Out of Energy, which was number one on Amazon's science and math rankings in 2005. His articles have been published in the Wall Street Journal, USA Today, and Real Clear. Mills has appeared as a guest on CNN, Fox, NBC, PBS, and on The Daily Show with Jon Stewart. In 2016, Mills was named "Energy Writer of the Year" by the American Energy Society.

Earlier, Mills was a technology advisor for Bank of America Securities and coauthor of the Huber-Mills Digital Power Report, a tech investment newsletter. He has testified before Congress and briefed numerous state public-service commissions and legislators. Mills served in the White House Science Office under President Reagan and subsequently provided science and technology policy counsel to numerous private-sector firms, the Department of Energy, and U.S. research laboratories.

Early in his career, Mills was an experimental physicist and development engineer at Bell Northern Research (Canada's Bell Labs) and at the RCA David Sarnoff Research Center on microprocessors, fiber optics, missile guidance, earning several patents for his work. He holds a degree in physics from Queen's University in Ontario, Canada.



#### Don Gulley

President and chief executive officer, Southern Illinois Power Cooperative

Don Gulley has served as the vice president of Regulatory and Market Affairs at Sunflower Electric Power Cooperative in Hays, Kansas, since 2010. He has over 25 years of diverse utility management and business operations experience. Prior to Sunflower, Gulley served as the director of Business Operations with Ameren Energy Marketing, reporting directly to the chief executive officer. He spent the last 16 years at an executive level, working with and for cooperatives, which positions him well to lead the Southern Illinois Power Cooperative in meeting the challenges that face the industry. He is committed to the electric cooperative principles and has excelled at managing member owner and board relationships for the benefit of the people and the communities they serve.

Gulley's experience and strong educational background have prepared him well. He earned a master's degree in Business Administration, bachelor's degree in Electrical Engineering, and bachelor's of science degree from Southern Illinois University in Carbondale and Edwardsville, Illinois.





Gordon van Welie

President and chief executive officer, ISO New England Inc.

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 and 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, Van Welie held several positions at ESKOM, South Africa's electric utility based in Johannesburg. Van Welie is a member of the Executive Committee of the U.S. National Committee of CIGRE and the NERC Member Representatives Committee. In 2016, he was awarded the Leadership in Power Award from the IEEE Power and Energy Society.



#### Woody Rickerson

Vice president, Grid Planning and Operations, ERCOT

Woody Rickerson became ERCOT's vice president of Grid Planning and Operations in October 2015. In this role, he oversees planning activities and electric grid operations.

Rickerson brings more than 25 years of electric industry experience, including 15 years at ERCOT, to this role. Most recently, he served as the director of Grid Coordination, overseeing seven departments including Outage Coordination, Model Administration, Model Maintenance, Resource Integration, Engineering Development, Operations Training, and Advanced Network Applications. He also was involved in developing the tools used to operate the ERCOT grid, beginning with development of the ERCOT zonal market system in 2000 and has served in a number of increasingly responsible roles prior to his current role.





Gerry Yupp Senior director, Wholesale Operations, Florida Power and Light

Gerry Yupp is senior director, wholesale operations, in the Energy Marketing and Trading (EMT) division at Florida Power and Light, a subsidiary of NextEra Energy, Inc. and one of the largest investor-owned electric utilities in the nation. EMT is the organization responsible for fuel procurement and operations as well as wholesale power trading on behalf of the utility.

Yupp joined Florida Power and Light in 1989 and has been with EMT since 1996, where he has served in several roles. He assumed his current position in 2008. Yupp is responsible for the procurement and management of all natural gas and fuel oil for Florida Power and Light, fuel optimization activities, short-term power trading, and supporting long-term planning for fuel transportation and infrastructure requirements. Yupp also represents Florida Power and Light at the Florida Public Service Commission on fuel, power, and generation-related matters and has testified at the Florida Public Service Commission in support of Florida Power and Light's annual fuel filings and on the topic of fuel planning in several need determination hearings related to new power plants.

Yupp received a Bachelor of Science in Electrical Engineering from Drexel University and a Master of Business Administration from Florida Atlantic University.



#### Jeffrey Cook

Vice president, Transmission Planning and Asset Management, Bonneville Power Administration (BPA)

Jeffrey Cook came to BPA in March of 2004 as an electrical engineer for its control and communication systems. He later managed the Customer Service Engineering group and Transmission's Communication and Grid Modeling group. Last spring, Cook became the acting vice president of Engineering and Technical Services and then moved to the acting vice president of Planning and Asset Management, the position he now assumes in a permanent role.

Prior to BPA, Cook worked for several utility and communication companies, including CenturyTel and Pacific Power & Light. Cook earned his bachelor's degree in Electrical Engineering from Colorado State University in 1990. He holds a professional engineering license in Oregon.





Mark Rothleder Vice president, Market Quality and Renewable Integration, CAISO

Mark Rothleder is vice president, Market Quality and Renewable Integration at the California Independent System Operator Corporation and is leading the ISO's renewable integration work. Rothleder has held several critical positions at the ISO after joining the grid operator as one of its first employees in 1997. He is now the longest serving ISO employee. Before being named vice president, he was executive director of Market Analysis and Development. His previous positions included principal market developer and director of Market Operations.

In spring 2009, Rothleder led a multifunctional team in designing and implementing market rules and software modifications related to the ISO's Market Redesign and Technology Upgrade. Since joining the ISO 21 years ago, Rothleder has worked extensively on implementing and integrating the approved market rules for California's competitive wholesale energy and reserves markets.

Rothleder is a registered Professional Electrical Engineer in the state of California and earned a bachelor's degree in Electrical Engineering from the California State University, Sacramento. He has taken post-graduate coursework in Power System Engineering from Santa Clara University and earned a Master of Science in Information Systems from the University of Phoenix. Prior to joining the ISO, Rothleder worked for eight years in the electric transmission department of Pacific Gas and Electric Company, where his responsibilities included operations engineering and transmission planning and substation design.



#### Charles King

Vice president, Information technology and chief information officer, Kansas City Power and Light and Westar, Evergy Companies

Charles King has more than 30 years of experience leading large-scale IT functions. King joined Kansas City Power and Light in 2011 as director of IT Applications. He was promoted to senior director of Applications and Delivery in 2012 and to vice president of Information Technology in 2013. In 2015, he was promoted to vice president and chief information officer, where he leads all IT functions, including corporate applications, transformational roadmap projects, cyber and physical security, corporate infrastructure (e.g., network data centers, telephony, and field radio services), and centralized support functions (e.g., business alignment, enterprise architecture, project management, testing/QA, help desk, and desktop support). King is currently co-chair of the Edison Electric Institute Security and Technology Executive Advisory Committee and an advisory board member of the Utility Analytics Institute.

King earned bachelor's and master's degrees of science in Industrial Engineering from the University of Arkansas, and a bachelor's of science degree in Mathematics from Harding University. He began his career with Andersen Consulting (Accenture) and later held multiple IT leadership and director roles at Sprint, Embarq, and CenturyLink. Immediately before joining Kansas City Power and Light, he was director of IT Shared Services for Dish Network.





Jim Robb President and chief executive officer, NERC

James Robb assumed the role of president and chief executive officer of NERC in April 2018.

Robb oversees NERC's mission of assuring the reliability and security of the North American BPS. As president and chief executive officer, Robb directs key programs that affect more than 1,400 BPS owners, operators, and users. These programs include mandatory NERC Reliability Standards, compliance monitoring, enforcement, situational awareness, event and risk analysis, reliability assessments and forecasting, cyber and physical security, and government relations. Robb also oversees the operations of the Regional Entities who support the reliability mission across North America.

From 2014 to 2018, Robb served as president and chief executive officer of WECC, where he was responsible for the strategic direction and leadership of all of WECC's activities. Robb has more than 30 years of experience in the energy sector as an engineer, a consultant, and a senior executive. Prior to becoming WECC's chief executive officer in 2014, he held three major leadership roles in the industry at Northeast Utilities (now Eversource Energy) as senior vice president of Enterprise Planning and Development; at Reliant Energy (now part of NRG Energy), where he served as senior vice president of Retail Marketing for the competitive retail business in Texas and the Northeast; and at McKinsey and Company, where he was a partner and the leader of the West Coast's Energy and Natural Resource Practice. 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 as well as with some of the Region's largest energy consumers.

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, Philadelphia.