8th Annual Grid Modernization Forum

June 13-14, 2023 • Washington, D.C.

Technology Advances and business strategies for ensuring grid resiliency, power quality and integration of distributed energy resources



The 8th Annual Grid Modernization Forum, June 13-14, 2023 in Washington, D.C. (<u>www.grid-modernization-forum.com</u>) closely examines lessons learned to date by industry leaders pushing the frontiers of grid modernization and reliability. Key technology innovators and executives will come together to share perspectives on how best to leverage AMI investment, engage the customer, and take the smart grid to the next level. Case studies of improved network performance, resiliency, outage restoration, and distributed energy resource (DER) integration will be

examined with an eye toward determining best practices and technology advances for today's energy ecosystem. As in previous editions, this will be a unique opportunity to network with top industry professionals who are leading the way toward effective grid modernization and the integrated, interoperable, resilient energy network of tomorrow.

Topics to be Addressed Include:

- Decarbonizing the energy mix: Success • Strategies for Utilities
- Best Practices and Strategies for • **Enhancing Grid Reliability**
- Energy utility digitization and decentralization •
- Distributed energy resources: Meeting • consumers' needs
- Use cases for long-duration storage on the • future grid
- Managing grid modernization complexity: Establishing visibility and control
- Asset health monitoring and predictive maintenance using AI
- Electric vehicle charging infrastructure and its impact on the grid

- The role of microgrids in grid resiliency, reliability and modernization
- Market drivers, trends, opportunities and challenges for utilities
- Next-gen smart meters and AMI as the grid evolves •
- Emerging technologies and tools for the future grid
- New strategies for load management and demand response going forward
- Status and implications of various grid modernization programs across the U.S.
- Managing and integrating energy storage and distributed resources on the grid
- The Utility of the Future and the next-generation smart grid
- And more











Agenda

Tuesday, June 13, 2023

8:00 - 9:00 am Registration and Welcome Coffee

9:00 - 10:45 am Opening Panel: Electrifying Everything

The drive to electrify home appliances, transportation, heating systems and power for manufacturing applications is a critical trend for utilities, prompting significant changes to the grid. Physicists have estimated that if we electrify the whole world economy, we will need less than half of the primary energy we currently use. This kind of efficiency -- coupled with the transition toward greater use of wind, solar, hydro, electric vehicles, heat pumps, and a dynamic, distributed, decentralized grid -- is seen as critical in limiting the effects of climate change. But how do we do this while keeping costs under control? What actions are utilities taking for the transition toward this future grid? What has been the progress to date, and which enabling technologies have shown greatest promise? This opening panel will discuss these critical developments, with an eye toward key challenges and opportunities for electrifying the energy ecosystem in North America.



Paul A. DeCotis Senior Partner West Monroe



Laura Brannen Senior Policy Advisor, Federal Climate Policy The Nature Conservancy



Sandeep Dudhwewala Vice President Utility of the Future National Grid profile



Rita King Senior Director Smart Grid Innovations **Avangrid** profile



Susanne DesRoches Vice President Clean & Resilient Buildings NYSERDA profile



Liza Reed Engagement, Outreach, and Strategic Initiatives Grid Deployment Office U.S. Department of Energy

10:45 - 11:15 am Networking Coffee Break

11:15 - 11:45 am **Keynote Address**



Rob Gramlich

Founder and President, **Grid Strategies LLC** Executive Director, **Americans for a Clean Energy Grid** Executive Director, **WATT Coalition**

11:45 - 12:15 pm Utility Investment in Grid Modernization

An increasing number of utilities are filing grid modernization plans with their states' public utility commissions. This session will dive deep into the regulatory filings of 25 major investor-owned utilities to analyze their distribution grid modernization strategies initiatives, levels of investment, deployed technologies, drivers and cost-recovery mechanisms. Based on 43 regulatory filings covering 330 unique initiatives, we will share insights into how the United States grid is evolving and how state policies and regulations can change the direction and speed of this multi-billion dollar investment.



Fahimeh Kazempour Ph.D. Head, Grid Modernization Wood Mackenzie

12:15 - 1:15 pm Lunch Break

1:15 - 2:45 pm Emerging Technologies and Tools for the Future Grid

Technological change happens first gradually, and then suddenly. If one is not keeping an eye on the gradual change, the impact of a sudden change could be more consequential to deal with. Electric power industry is going through a similar transition. We see increasing numbers of electric vehicles on the roads; increasing number of heat pumps; distributed solar and storage at customer premises. All of these activities require utilities to have smarter technologies on their end and to have more visibility into what is happening behind the meter, so that they can plan the growth of the grid accordingly and cost effectively. In this panel, we will hear from several utility and technology companies and discuss their efforts to make this transition go more smoothly for the consumers.



Dr. Sanem Sergici Principal The Brattle Group profile



Pearl Donohoo-Vallett Senior Manager - Strategy (Utility of the Future) Pepco Holdings



Michael Phillips Co-founder, CEO Sense profile



Rachel Robinson Director, Utility Client Solutions WeaveGrid profile



Alexander Buell Director, Portfolio Planning and Analysis Con Edison

2:45 - 3:15 pm Networking Coffee Break

3:15 - 4:00 pm

Transforming Transmission: How System Operators and Utilities Use Grid Enhancing Technologies

Grid Enhancing Technologies (GETs) are hardware and software that increase the capacity, efficiency, and reliability of the transmission grid. Deployment of these technologies will be key to reducing congestion, lowering costs, reducing renewable curtailment, and achieving decarbonization goals. GETs are seeing growing adoption across the United States, increasing visibility and flexibility across transmission systems. Examples of deployments in New York, MISO, and the southeast show how these technologies are already delivering on their promises. This session will also cover how utilities and states can leverage federal funding to get more out of their transmission system.



Rob Gramlich

Founder and President, **Grid Strategies LLC** Executive Director, **Americans for a Clean Energy Grid** Executive Director, **WATT Coalition** profile



Joey Alexander Vice President, North America Ampacimon

4:00 - 5:15 pr What Consumers Think and Know About Their Monthly Bills and Different Rate Plans

In this session, panelists will dive into residential consumers' awareness, understanding and interest around today's electric rate plan options, such as time-of-use, prepay plans, subscriptions rates and more. Based on findings from SECC's consumer research, this session will provide a detailed look at what today's consumers know, think and feel about their monthly electric bills and their electric rate plan options. Expert panelists will also share lessons learned from innovative rate pilot programs and new rate rollouts for residential customers.



Jason McGrade Deputy Director Smart Energy Consumer Collaborative (SECC) profile



Laurence Daniels, Esq. Assistant People's Counsel Office of the People's Counsel, Washington, DC profile



Chris Gallo Senior Planning Analyst Con Edison profile



Angelika Hoelger Research Analyst Touchstone Energy Cooperatives



Brian Doherty Managing Director, Regulatory Affairs and Compliance Rappahannock Electric Cooperative

<u>profile</u>

5:15 - 6:30 pm Drink Reception

Wednesday, June 14, 2023

8:00 - 9:00 am Morning Coffee

9:00 - 10:00 am The Role of Microgrids in Grid Modernization

Growing electrical demand and efforts to decarbonize are making it difficult for utilities to manage the grid. Vertically integrated utilities can make dispatchable microgrids a part of their grid modernization strategy to provide power resiliency, reduce costs, and improve customer service. As they seek to expand their supply portfolio, Entergy has found that allocating a portion of needed peaking capacity to clean microgrids sited at the customer load can deliver increased community resiliency benefits for critical infrastructure and disadvantaged communities. In this session, Enchanted Rock's Allan Schurr, Chief Commercial Officer, and Entergy's Cory Ramsel, VP of Portfolio Marketing, Sales and Customer Insights, will share their perspectives. Attendees will learn:

- Microgrid advantages over traditional low capacity factor peaker solutions
- How dual-purpose microgrids can effectively scale to meet supply needs
- Performance from microgrid technologies that ensure 99.999% combined reliability for communities in need



Cory Ramsel Vice President of Portfolio Marketing,Sales and Customer Insights **Entergy**





Allan Schurr Chief Commercial Officer Enchanted Rock

<u>profile</u>

10:00 - 10:30 am

Remote Grids: A Safe and Cost-Effective Alternative to Rural Distribution Lines

As of June 2021, California utilities reported that nearly 40,000 miles of bare powerlines exist in high fire-threat areas. The increasing number of fires due to climate change pose a threat to energy security because they destroy powerlines and force energy providers to perform Public Safety Power Shutoffs. Since mitigating this risk through traditional practices such as hardening or undergrounding costs \$3-5 million per mile, there is a need for rapidly deployable microgrid systems that can provide utilities with a cost effective, clean, and resilient alternative.

This session will discuss two case studies, namely the Sagehen Field Station Remote Grid contracted by Liberty Utilities and the Briceburg Remote Grid contracted by PG&E, to show how standalone power systems helped these IOUs reduce cost and wildfire risk. We will look at how Liberty, PG&E, SCE and other utilities are using the same approach at a portfolio level for aging infrastructure in need of upgrade or replacement. These projects serve as just two examples as to how energy providers can leverage solar microgrids in remote regions to save money, modernize the grid, and meet their net-zero targets.



Anderson Barkow Co-Founder and CFO BoxPower profile

10:30 - 11:00 am Networking Coffee Break

11:00 - 12:15 pm Integrating EV Charging into Utility Operations

S&P Global Mobility forecasts electric vehicle sales in the United States could reach 40 percent of total passenger car sales by 2030, and more optimistic projections foresee electric vehicle sales surpassing 50 percent by 2030. This growth in EVs will present critical challenges for public and private charging infrastructure across the U.S. and the electric utilities that enable them. This panel of experts will discuss the nature of the EV charging challenge, impacts on utility operations, and strategies for evolving the electric grid accordingly. We will look at case studies to date as well as investments that need to be made now in order to enable continued EV adoption in the U.S. Join us as we examine this critical component of grid modernization and how best to position the grid for success going forward.



David W. South Principal South Ventures, LLC profile



Claire Broido Johnson Chief Operating Officer Fermata Energy profile



Mary Jo Nye Director of Utility Solutions Smarter Grid Solutions



Raymond Kaiser Chief Innovation Officer Evoke Systems profile



Sujata Sullivan eMobility Segment Leader, Transportation Electrification ABB profile

12:15 - 1:15 pm Lunch Break

1:15 - 2:00 pm Voltage Management Associated with DER Hosting Capacity

One of the issues that arise as a distribution feeder, circuit, or lateral approaches hosting capacity is more dynamic voltage fluctuations. Therefore, monitoring and managing voltage is becoming more important with the proliferation of distributed generation and electrification including electric vehicle adoption. EnerNex and Portland General Electric (PGE) recently completed a voltage survey of two different substations as a first step in pursuing Integrated Volt-VAR Control (IVVC). This session will discuss insights gained and how an Advanced Distribution Management System (ADMS) with voltage controls deployed on the distribution system can enable IVVC.



Jeremy Laundergan Vice President of Consulting Services Enernex profile



Muhammad Humayun, Ph.D. Senior Consultant Enernex profile

2:10 - 3:30 pm

Hydrogen Fuel Cells / Storage and Its Role in Grid Modernization and Building Decarbonization

The need to decarbonize the grid and the built environment is a critical driver in grid modernization efforts. Among the strategies for achieving this long-term are hydrogen fuel cells and storage. The U.S. Department of Energy recently announced major funding to help drive the cost of clean hydrogen to 1 dollar per 1 kilogram in 1 decade, making it a key enabling technology for achieving the grid of the future. This panel of senior industry executives will examine the potential and progress to date for hydrogen fuel cells and storage in transforming the electric grid. We will look business models, pilots, challenges and opportunities -- and how stakeholders can best move forward in this promising sector. Don't miss this opportunity to learn from the leaders and position your company for success.



Paul A. DeCotis Senior Partner West Monroe



Mark Shaver Vice President, Strategy Execution Washington Gas Light Company



Monica Kabel US Strategy Director National Grid profile



Kevin Knobloch President, **Knobloch Energy, LLC** and Senior Advisor, **West Monroe** <u>profile</u>



John Lochner Vice President, Innovation NYSERDA

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Feedback on Previous Editions



"The virtual experience was good and the content was well delivered; topics were timely and well curated in terms of who and what was presented. A good mix of speakers and topics."

- Gary Brinkworth, Senior Advisor - Innovation & Research, TVA (Tennessee Valley Authority)

"The subjects and the subject matter experts were all highly informative. Very well organized and presented by SGO" - Eric McDonald, Director - Infrastructure Development,

NextEnergy

"Excellent conference, great presentations and Q&A. Great job holding a virtual conference in these difficult times!"

- Matt Haakenstad, Sr Director, Electric Services, World Kinect Energy Services

"Great new topics and new information from presentations. Well done!"

- Steffen Ziegler, Director - Signal Analysis and AI, IMCORP

Event Venue



Executive Conference Center

Suite 200, 2345 Crystal Drive, Arlington VA 22202

>> Directions in Google Maps >> Nearby Hotels

Organizations That Have Participated Previously in the GMF include:

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Equipment and Software Vendors, Consultants, Service Providers	\$895.00
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To arrange your sponsorship or exhibition participation in the 2023 program, contact: Daniel Coran, program manager, at +1-815-310-3343 or <u>dcoran@smartgridobserver.com</u>