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# Preparing for the power evolution

November 6, 2014 — 11 am - 6 pm EST

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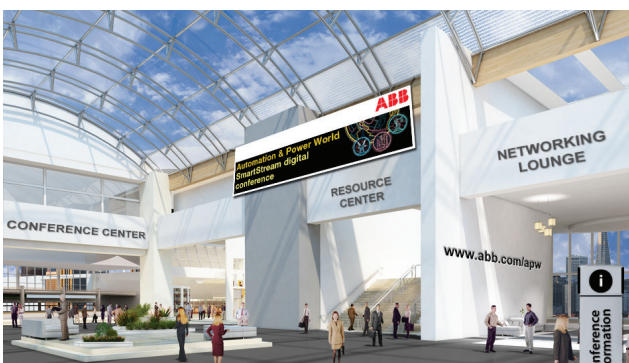
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**11:00 am KEYNOTE: Gary Bradt – Adapt & Ignite! Turning Changing into Opportunity**

	12:15 pm	1:30 pm	2:45 pm	4:00 pm
Grid Reliability	<p><b>Preparing for the worst</b> This session will focus on major storm events and how utilities can anticipate, mitigate and recover from them faster. We'll discuss strategies for grid hardening programs in light of system margins and supply chain considerations, and we'll cover outage lifecycle management with an eye toward leveraging business intelligence for pre-event planning.</p>	<p><b>Rapid recovery strategies</b> When major events happen, how can utilities recover faster? This session focuses on various approaches such as rapid deployment of spare transformers, leveraging smart technology such as Fault Detection Isolation and Restoration (FDIR) schemes and other monitoring and communications technologies.</p>	<p><b>Transmission technology for improved resiliency</b> Reliability is typically a distribution-level discussion, but it's perhaps even more important at the transmission level. In this session, we'll discuss a wide range of options from underground substations to gas-insulated switchgear and FACTS devices that can improve transmission resiliency in the face of major storm events. We'll also cover enterprise software solutions and asset management strategies for transmission equipment.</p>	<p><b>Preparing for FERC 797</b> While physical security has attracted the most attention in recent years, the potential for geomagnetic disturbances (GMDs) to disrupt grid operations should not be understated. In this session we'll explore the impact of GMDs on the grid in general and on transformers in particular. We'll also talk about what to consider in preparing contingency plans, and what technologies are available to reduce the impact of GMDs.</p>
Renewables & distributed energy	<p><b>DER changes everything</b> Ready or not, distributed energy is here, but are the technologies (e.g., energy storage) ready for prime time? What regulatory mandates are in place today, and what can we expect in the future? And what does all of this mean for utility operating procedures, engineering and system design? We'll answer all of these questions and more in this engaging session.</p>	<p><b>Navigating solar PV grid codes</b> Every jurisdiction has its own approach to integrating solar energy resources. This session will survey the PV landscape with a sampling of grid codes from different utilities. Then we'll move into a discussion about managing PV integrations and how technology can help make the process smoother. Bring your war stories—and your questions.</p>	<p><b>Planning for renewable integration</b> Looking for a roadmap to avoid common pitfalls with renewable integration? Then this session is for you. We'll take a collaborative approach to learn how utilities and renewable energy developers can work together to identify and overcome common problems to ensure a headache-free integration.</p>	<p><b>Integration OK...now what?</b> What happens to grid reliability, system stability and even safety once significant renewable and distributed energy resources are integrated to the distribution grid? In this session we'll look at what comes next, specifically with regard to balancing available generation, managing voltage levels and line flows, and preserving reliability. Technologies covered will include smart transformers and inverters, power electronics and software solutions for distribution system optimization.</p>
Grid modernization	<p><b>Converge this</b> IT/OT convergence is everywhere, but what does it mean? Find out, along with how it's changing utility operations in this informative session. We'll also offer some ideas on managing this mega-trend with regard to technology coordination, network modeling and managing disparate sources of data.</p>	<p><b>The smart grid gets local</b> Smart technologies at the feeder level and below—that's the focus for this session. From IEDs to enterprise software to communications, we'll cover what you need to know to integrate smart technologies and manage the influx of data that comes with them.</p>	<p><b>Volt/VAR in three flavors</b> Volt/VAR efficiency is something every distribution system operator needs to consider, but how do you determine if volt/VAR optimization is right for your network, and which method is best? This session explains the need for volt/VAR efficiency and compares three levels of voltage control to help you decide.</p>	<p><b>Talk to me: Automation and communication solutions</b> This session puts the focus on communications technologies and how they can make a more reliable grid. From wide area monitoring to digital substations, you'll learn what you need to consider to get the most out of your communications capital.</p>
Regulatory compliance	<p><b>Distribution regs a-changing': safety and efficiency</b> OSHA has issued new requirements for arc flash and other hazards. We'll go beyond the nuts and bolts of compliance to discuss how utilities can encourage a culture of safety. What technologies and specifications will reduce risk and protect utility employees? We'll also spend some time on the Department of Energy's new efficiency standards for dry-type transformers set to take effect in 2016.</p>	<p><b>After Metcalf: Physical substation security</b> Two years after the headlines, what are the takeaways from PG&amp;E's experience? Join us for an update direct from the source. We'll broaden the security conversation with a look at how London fortified its electrical system, and we'll examine how technology can protect critical substation assets from terrorists.</p>	<p><b>NERC CIP: Enterprise software edition</b> Enterprise software systems are increasingly vital, so how should utilities go about securing them from hackers and cyber terrorists? This session will provide attendees with an overview of the current state of cyber security within the context of NERC CIP requirements. We'll also drill down to explore one solution for improving the substation's digital infrastructure with mesh communications.</p>	<p><b>Fines aren't fine: Improving outage management</b> Dig into the details in this informative session. We'll start with a review of reporting metrics (SAIDI, SAIFI, etc.) and move quickly into avoiding penalties with faster restoration. Find out how technologies can enhance situational awareness, provide automated reporting and streamline mobile workforce management. The goal: a comprehensive outage lifecycle management capability.</p>
Asset management	<p><b>Making data: Sources and strategies</b> Analytics—and all its attendant benefits—starts with data, but where to begin? We'll start this session with a review of the "Five Vs of data:" volume, velocity, veracity, variety and value. Next we'll consider different sources and types of data, and we'll talk about the various devices that generate it. Attendees will leave with a better understanding of what's available so they can craft a data acquisition strategy that works for them.</p>	<p><b>The doctor is in: Asset health management</b> Comprehensive asset management has arrived, and this session will show you why. We'll cover strategies for generation, transmission and distribution assets, and we'll introduce the Asset Health Center concept.</p>	<p><b>Making the case for asset health</b> The tools are available, but how do you make a compelling business case for end-to-end asset health management? In this session, we'll hear from utilities that have put comprehensive asset health into practice—and how they justified the investment. With real-world examples, we'll discuss asset health in the context of generation, transmission and distribution operations.</p>	<p><b>The changing face of service</b> Shrinking O&amp;M budgets, a retiring workforce and an aging asset base are just some of the elements driving big changes in the service landscape. Wrenches and screwdrivers are being replaced by sensors and analytics—and that's a good thing. In this session, we'll talk about leveraging technology to lower O&amp;M costs while improving reliability. We'll also discuss changing maintenance practices, and we'll make the case for condition-based maintenance.</p>
Power generation	<p><b>After coal: Grid stability amid plant shutdowns</b> Coal plant retirements are a fact of life in the utility industry of the 21st century, but what happens when they disappear faster than they can be replaced? In this session we'll put the focus squarely on grid stability and how a lack of planning—and even just bad timing—can create headaches for utilities. We'll also talk solutions including some new options for preserving reliability in the post-coal era.</p>	<p><b>Taking control: The case for system upgrades</b> Control systems form the central nervous system of any power plant. Today's systems offer significant advantages, but making the case for an upgrade can still be challenging. We'll look to real-life examples for guidance, and we'll talk about some of the big drivers behind the business case like future regulatory issues and cybersecurity.</p>	<p><b>OpEx in the control room</b> Research and a growing body of real-world experience have shown how advances in control system interfaces can make a big impact on operator effectiveness. We'll look at how things like alarm management can boost productivity and reduce human error. We'll also examine the use of simulations to improve overall plant reliability.</p>	<p><b>Generating the future</b> The lines separating generation and load are blurring thanks to advances in energy storage, and demand response. The grid of the future will also need to accommodate electric vehicles, micro grids and distributed energy resources. This session will address these trends within the context of regulatory factors like FERC Rule 745, EPA rules and state-level regulations impacting generation.</p>