



MICROGRID & DER'S SUMMIT WEST

February 26- 27, 2019

Parma Payne Goodall Alumni Center,
SDSU, San Diego, CA

Building a Resilient, Efficient and Sustainable Future

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Working AGENDA: Sessions are **not in final starting order and not all invited sessions are listed.**

FEBRUARY 26, 2019 SUMMIT DAY 1	
7:30 – 8:30	Registration and Networking Breakfast
8:30 -8:45	Welcoming remarks: RSC
8:45 – 9:15	<p>Department of Energy Opening Remarks: Building a Resilient, Efficient and Sustainable Energy Future</p> <ul style="list-style-type: none"> -Tactics, techniques and procedures for increasing cyber support efforts to strengthen the utility sector - Current security and resilience concerns towards the increased penetration of DERS and Microgrids into the Grid - Cultivating an ecosystem of resilience and how our stakeholders can get involved (from producers, distributors, regulators, and vendors, to public partners, acting together to strengthen our ability to prepare, respond, and recover)
BUSINESS MODELS TO SUPPORT RESILIENCY, SUSTAINABILITY and EFFICENCY	
9:15 - 10:40	<p>Military Leadership Panel: Enhancing Energy Assurance and Resiliency for Military Installations</p> <ul style="list-style-type: none"> -Emerging business models and approaches towards achieving energy resilience in our DoD installations: from defining the goals to structuring the supporting guidance -Current initiatives and strategies for delivering an increased grid-independence capability: the role for microgrids and DERS on our installations -Viewpoint towards the “energy security as a service” model - drivers, challenges, and possible business models <p>Panelists:</p> <p>LTG Gwen Bingham, USA, Assistant Chief of Staff for Installation Management (invited)</p> <p>Maj. Gen. Bradley D. Spacy, USAF Commander, Air Force Installation and Mission Support Center (confirmed)</p> <p>RDML Yancy Lindsey, USN, Commander, Navy Region Southwest, Commander, Navy Installations Command (confirmed, speaker TBD)</p>
10:40 -11:10	Networking Break

11:10- 12:00	<p>Utility Panel: Evolving Strategic Business Models and Integrating DERs into the Utility of the Future</p> <ul style="list-style-type: none"> -How to frame the evolving business models for integrating distributed resources into the grid , and does that model need to adjust if the goal is necessarily to achieve resiliency, efficiency and / or sustainability -Developing a new systems configuration without reducing reliability: what needs to occur to get us there -Exploring evolving microgrids business models: microgrids -as-a -service to partial ratepayer support -What are the opportunities for utilities with large-scale storage? - Over the next 5 years, what are the most compelling paths of adaptation and innovation for the utilities to ensure their unique role in society <p>4 Panelists: 2 Representatives from: Publicly Owned Utilities</p> <p>Mr. Andy Butcher Chief Operating Officer, Platte River Power Authority (confirmed)</p> <p>Mr. Louis Ting, Director of Power Planning Development & Engineering, LADWP (confirmed)</p> <p>2 Investor Owned Utilities Representatives (coming soon)</p>
12:00 -12:45	Networking Lunch
OPERATIONAL PERSPECTIVE ON DER INTEGRATION	
12:45 – 1:15	<p>An Engineer's Perspective Towards Integrating DERs onto the Grid, While Maintaining Stability and Reliability</p> <ul style="list-style-type: none"> -The evolving technical frameworks and transformational steps needed to achieve a modernized electric grid able to integrate an ever-expanding supply of DERs. - How far can the data really take us? Current maturity, and limitations, of advanced data analytics to support the integration of DERs - Advice towards technical factors to consider when undertaking DER Integration : 3 things we got right and 3 surprises along the way <p>Dr. Thomas Bialek, Chief Engineer, SDG&E (confirmed)</p>
1:15 – 1:45	<p>Building the Utility of the Future to Improve Sustainability, Resiliency, and Efficiency</p> <ul style="list-style-type: none"> -Transformational steps needed to achieve a modernized electric grid able to integrate an ever-expanding supply of clean-energy technologies. - Perspective towards where technical innovations will make the greatest strides in the near term that will help improve the operational resilience, efficiency and sustainability of the Grid <p>Mr. Jacob Tetlow, Vice President, Transmission and Distribution Operations, Arizona Public Service Company, (tentative)</p>
1:45 – 2:15	Networking Break
CYBER RESILIENCE	
2:15 – 2:45	<p>Understanding the Threat landscape and How to Increase Cyber Resiliency for Critical Infrastructure in the Energy Sector</p> <ul style="list-style-type: none"> -Current threat landscape towards increased penetration of DERs and what energy stakeholders can begin to implement today to increase cyber resilience -What does a cyber ecosystem truly look like in a DERs environment? Who mitigates the risk? As more generation assets join the grid that utilities don't own or control where should resilience reside? <p>Mr. Tobias Whitney, Technical Executive, EPRI (confirmed)</p>
2:45 – 3:15	<p>DHS' National Risk Management Center: Developing a unified collective approach to cyber resilience and security</p> <ul style="list-style-type: none"> - Current threat landscape towards the security and resilience of the utility sector - How the NRMC is creating a cross-cutting risk management approach across the federal government and our private sector partners through three lines of effort -How stakeholders can get involved <p>Mr. Mark Kneidinger, SES, Deputy Director, The National Risk Management Center, DHS (confirmed)</p>

3:15- 3:45	<p>Implementing a Cyber Resilient Microgrid Control Systems</p> <ul style="list-style-type: none"> - Best practices towards designing, implementing, testing, and installing cyber resilient microgrid control systems - Brief review on increasing performance through edge optimization intelligence and consolidating data formats and exchange protocols used for system optimization <p>Mr. Bob Morris, Chief Engineering Services Officer, Schweitzer Engineering Laboratories (confirmed)</p>
CAMPUS FOCUS & TOUR	
3:15 – 3:30	<p>Remarks: Strategic Planning to Develop and Advance Sustainable Energy Initiatives for San Diego State University</p> <p>Mr. Tom Abram, Energy and Sustainability Officer, San Diego State University (confirmed)</p>
3:30pm	End of sessions for Day 1
3:30 – 6:00 SITE TOUR	<p>University of California, San Diego SITE TOUR FOR ALL ATTENDEES /SPEAKERS</p> <p>3:30pm – depart for UC San Diego Site Tour</p> <p>4:00pm – 5:45pm guided tour</p> <p>5:45pm - depart and return to downtown San Diego and venue</p>
FEBRUARY 27, 2019 DAY 2	
7:30 – 8:30	Networking Breakfast and welcome back
REGULATORY & MARKETS LANDSCAPE	
9:00 – 9:45	<p>Panel Discussion: The Regulatory Landscape Towards Microgrid and DERS Integration into the Grid</p> <p>What are the roles of DER Aggregators and Providers? How do we protect safe delivery of electricity to meet customer demand in an increasingly fragmented market? Who’s going to be allowed to own microgrids, who’s going to be allowed to dispatch them, and how are they going to be compensated?” Should utilities be allowed to socialize the costs?</p> <p>How will new renewable laws and standard translate into new operational rules and programs? This panel will address these questions while providing attendees insight and perspective towards their current focus, respective approach and what they foresee for the near future</p> <p>Moderator: Mr. Chris Schroeder, Vice President, SEPA (Smart Electric Power Alliance) confirmed</p> <p>Panelists:</p> <p>Mr. Elijah Abinah, Director, Utilities, Arizona Corporation Commission (confirmed)</p> <p>Mr. Simon Baker, Deputy Director, Energy Division, California Public Utilities Commission (confirmed)</p> <p>Mr. Drew Bohan, Executive Director, California Energy Commission (confirmed)</p> <p>Mr. Branden Sudduth, Vice President of Reliability Planning and Performance Analysis, Western Electricity Coordinating Council (confirmed)</p>
9:45 – 10:10	<p>CAISO: Building a Resilient, Sustainable and Efficient Energy Future: Markets and the Integration of DERS</p> <ul style="list-style-type: none"> -CAISO’s vision for the future: innovating to include a fair valuation of resources that contribute to resilience, fewer grid dependencies, fully integrated distributed resources and tightly coordinated transmission and distribution system -Understanding the market’s current challenges with DERS and what our partners need to know : including the topics of interconnection and aggregation, operations and coordination <p>Dr. Keith Casey, Vice President, Market and Infrastructure Development, CAISO (confirmed)</p>
10:15 -10:45	Networking Break
PROJECT EXECUTION / CASE STUDIES	
10:45 -11:15	<p>USACE Case Study: Kwajalein Atoll Project</p> <p>About The Huntsville Center : executes more than 6,000 contracts valued at \$2.1 billion annually in engineering, construction and technical services in support of strategic national programs such as the design and construction of worldwide chemical weapons demilitarization facilities, Army and Air Force installation facility repair and renewal construction, national energy savings programs, nationwide environmental and ordnance remediation programs, Army medical facilities design oversight, and overseas contingency operations.</p> <p>COL John Hurley, USA, Commander, U.S. Army Engineering and Support Center, Huntsville (confirmed)</p>
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11:15-11:45	<p>USMC's Approach to Energy Resilience at the Facilities Level</p> <ul style="list-style-type: none"> -Understanding the USMC's ethos towards energy resilience and how that translates to operational needs and requirements -Working with our private and public partners: what they need to know to help improve the energy resilience of the Marine Corps' facilities <p>LtCol Tony Mitchell, USMC, Regional Facilities Officer, Marine Corps Installations West (confirmed)</p>
11:45 -12:10	<p>Demonstrating Technical Innovation and Viable Business Cases for Microgrid Projects and Renewable Integration</p> <ul style="list-style-type: none"> - Overview and status update on Humboldt County Airport planning: a case study for demonstrating the ability for CCAs to work with utilities to maintain reliability, offsetting electricity costs, integrating microgrids into CAISO operations, generating data and producing ancillary benefits at the remote location. - Blue Lake Rancheria microgrid project and Solar+ distributed energy project: 3 things we got right and 3 surprises along the way -Advice and perspective towards the most compelling paths of adaptation, current challenges, and innovation needed to ensure the evolution into 'energy farmers' <p>Mr. Jim Zoellick, Managing Research Engineer and Mr. David Carter, Senior Research Engineer, Schatz Energy Research Center, Humboldt State University (confirmed)</p>
12:10 -12:20	<p>Case Study: Fuel Cell to Support Resiliency, Efficiency and Sustainability of Microgrids in Utility, Government and Commercial Installations"</p> <p>Case Study 1- University of California San Diego Case Study 2- Naval Submarine Base New London</p> <p>Mr. Frank Wolak, Vice President, Fuel Cell Energy (confirmed)</p>
12:20–12:50	Networking Lunch

ENERGY STORAGE BUSINESS MODELS AND INNOVATION

12:45 – 1:30	<p>Energy Storage Leadership Panel: Evolving Business Models and Innovation with Energy Storage</p> <ul style="list-style-type: none"> -Storage in the Future of Markets: What are emerging as the key challenges and encouraging pathways for distributed storage in market conversations -Supporting Innovation: where technical innovations are occurring to help speed the integration : current challenges and next steps needed to improve interconnection .Panelists will discuss their perspective on storage in integrated resource planning, grid modernization and public policy-driven planning efforts <p>PANELISTS:</p> <p>Mr. Jonathan Adelman, Vice President, Strategic Resources and Business Planning, Xcel Energy (confirmed)</p> <p>Mr. Larsh Johnson, CTO, Stem (confirmed)</p> <p>Mr. Walker Wright, VP, Public Policy, ENGIE Storage (confirmed)</p>
1:30 – 1:40	Networking Break
1:40 – 2:10	<p>UTILITY KEYNOTE:</p> <p>The Evolving Strategic Operational and Business Model Frameworks for Integrating DERS and the Role of the Utility</p> <ul style="list-style-type: none"> -How to frame the evolving business models for integrating distributed resources into the grid, and does that model need to adjust if the goal is necessarily to achieve resiliency, efficiency, carbon reduction and / or sustainability - Perspective towards where supporting technologies and policy need to make the greatest strides to help support the integration of DERS into the grid - What should the role of the utility of the near term future look like? Over the next 5 years, what are the most compelling paths of adaptation and innovation for the utilities to ensure their unique role in society

SUPPORTING INNOVATION

2:10- 2:40	<p>Opportunities for Operational Innovation through DERs Integration</p> <ul style="list-style-type: none"> -Approach to the integration of a distributed energy management system and what new insight and operational capabilities have emerged : how far can the data currently take us? -Integrating technology enablers for empowering the customer into the overarching operational landscape -Perspective towards where technical innovations will make the greatest strides in the near term that will help improve the resilience, efficiency and sustainability of the Grid: what are the transformational next -steps needed <p>Utility representative TBD</p> <p>www.asdevents.com - www.asdevents.com/event.asp?id=19216</p>
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2:40 – 3:00	<p>How the IIoT is Aiding the Electric Utility for DER Integration: Standards, Architecture, Security</p> <ul style="list-style-type: none"> -Layered Databus architecture; opening new realms for DER integration -Past, Present, Future; the approach to incorporating today's DER with your existing system. <p>RTI, Vice Chair and members of the Industrial Internet Consortium (confirmed)</p>
3:00 – 3:30	<p>Emerging Innovation to Support Microgrids & DERS Projects</p> <p>Helping the world's largest energy companies around the world to be more innovative, by connecting them with relevant startups in energy storage, DERs, renewables, EVs, predictive analytics, Industrial IoT, cyber security etc</p> <p>This session will highlight some of the most innovative companies working here in San Diego and supported by the State of California and the 501 c(3) CleanTech San Diego</p>
3:30 – 3:45	<p>Exploring Blockchain Applications and Processes for the Energy Sector</p> <ul style="list-style-type: none"> - Understanding the implications of decentralized computing platforms in the context of the energy transition - What potential users need to know about current technical limitations and regulatory uncertainties - How utilities, grid operators, and consumers are using blockchain today - and how it may support greater DER and microgrid market participation in the future
3:45	End of Summit

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