



# MICROGRID & DERs SUMMIT WEST

February 26- 27, 2019

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

Building a Resilient, Efficient and Sustainable Future







# 2018 PROGRAM HIGHLIGHTS



Tom Fanning, CEO, Southern Company whiteboarding his vision and strategic planning for delegates on the future of a resilient, efficient & sustainable energy sector.



Assistant Secretary Bruce Walker, DOE discussing cyber resiliency and DOE's initiatives towards DERS with delegates. Military Service Leaders on resiliency and business models: Ms. Lisa Jung, SES, OUSD; The Honorable Mr. John Henderson, USAF, The Honorable Mrs. Phyllis Bayer, USN ; Mr. Jordan Gillis, SES, USA



Utility Leadership Panelists from TVA, AES, CPS Energy & AEP : Terence Donnelly, President & COO ComEd on lessons learned towards building out a 21st Century Utility

<p><b>Who we are:</b></p>	<p>RSC is a premier <b>non-partisan woman owned, minority owned, small business</b>. Since 2011, Roosevelt Strategic Council (RSC) has convened the most senior and respected leaders in business, technology and the federal government to collaborate and examine the next generation of challenges transforming global business enterprises, and mission priorities for the federal government.</p> <p>Through our high level educational and training summits and symposiums we bring together the relevant representatives in our neutral forums in order to foster the necessary discussions and debates to help them achieve efficient and effective mission success with their partners in the public, private and academic sector. <b>In order to maintain our neutrality, we receive no funding or investment for operating costs from any outside organization, group, or individual.</b></p> <p>RSC is the parent organization to Defense Strategies Institute (DSI) which focuses solely on the DoD and Federal Government communities: DSI has convened over 100 senior level forums for leaders across the military services, and federal government. We invite you to learn more at: <a href="http://rscouncil.org">rscouncil.org</a></p> <p><i>Supporting our Veterans, severally injured Service men and women, and their families through our charitable donations and contributions is a core mission of Roosevelt Strategic Council. To learn more about the charities we support and how you may get involved, please visit our defense division site: <a href="http://dsigroup.org/giving-back">dsigroup.org/giving-back</a>. (This Summit is not an official fundraising event.)</i></p>
<p><b>Program Design &amp; Goal</b></p>	<p><b>A non-partisan educational and training Summit designed as a “Town Hall” format</b> that encourages an interactive level of discussion and debate amongst all in attendance.</p> <p>The objective of the Summit is to serve as a catalyst for collaboration and the interchange of knowledge among a cross sector of the energy stakeholder community towards the topic of “Building a Resilient, Sustainable and Efficient Energy Future” and the integration of DERS and microgrids</p> <p>The Summit consists of two days of structured plenary and panel sessions.</p> <p>By participating in one of our meetings, you will discover an environment that strives to encourage real actionable outcomes for its participants, while fostering new and continued relationships amongst all in attendance</p>
<p><b>Focus Areas Include:</b></p>	<p><b>Technical Focus:</b></p> <ul style="list-style-type: none"> <li>- Data analytics in optimizing DR, energy efficiency, and DER management</li> <li>- Advancements in microgrid controllers: intelligent software for load prediction and management</li> <li>- Cyber resilience strategies and capabilities</li> <li>- Distributed energy resource management systems (DERMS)</li> <li>- Remote, real time monitoring, tracking, measuring and verification of microgrid performance</li> <li>- Energy storage solutions</li> </ul> <p><b>-Business Focus:</b></p> <ul style="list-style-type: none"> <li>-Emerging business model frameworks for utilities towards DERS and microgrids</li> <li>-Energy storage and future business models</li> <li>-Regulation, standards and interoperability issues</li> <li>-Current trends and future revenue opportunities with microgrids and DERS</li> <li>--Risk Management: Building effective strategies to increase resiliency, improve response time and enhance overall system robustness.</li> </ul>
<p><b>Location:</b></p>	<p><b>The Parma Payne Goodall Alumni Center, San Diego State University   San Diego, CA</b></p> <p><b>(Rental fees directly support the Alumni Center) : under 20 minutes from San Diego Airport</b></p>

**General Target Audience:**

**Public and private sector participants**

**Key titles include:**

- C-level charged with strategic planning and performance management professionals
- Energy innovation Directors and emerging technologies representatives
- Grid or market operators/Transmission system operators
- Energy Managers / Facility Managers
- System integrators and consultants
- Senior level commercial, public, federal, and industrial end users
- Smart grid technology and software developers
- Regulators and public policy makers

**Specific fields include:**

- Investor-owned, public, municipal, and co-op utility professionals
- Microgrid project developers, owners and entrepreneurs
- Solar, PV, wind power, biogas, CHP, and renewable energy companies
- Power control systems and software developers and Systems integrators
- Energy storage companies

**Sessions are not in final starting order and not all outstanding invited sessions are listed.**

FEBRUARY 26, 2019 | SUMMIT DAY 1

7:30 – 8:30	Registration and Networking Breakfast
8:15 – 8:30	Welcoming remarks: RSC
8:30 -9:00	<p><b>Department of Energy Opening Remarks: Building a Resilient, Efficient and Sustainable Energy Future</b></p> <ul style="list-style-type: none"> <li>-Tactics, techniques and procedures for increasing cyber support efforts to strengthen the utility sector</li> <li>-Current security and resilience concerns towards the increased penetration of DERS and Microgrids into the Grid</li> <li>- Cultivating an ecosystem of resilience and how our stakeholders can get involved</li> </ul> <p><b>The Honorable Ms. Karen Evans, Assistant Secretary, Office of Cybersecurity, Energy Security, and Emergency Response, U.S. Department of Energy (invited)</b></p>
<b>BUSINESS MODELS TO SUPPORT RESILIENCY, SUSTAINABILITY and EFFICENCY</b>	
9:00- 9:50	<p><b>Military Leadership Panel: Enhancing Energy Assurance and Resiliency for Military Installations</b></p> <ul style="list-style-type: none"> <li>-Emerging business models and approaches towards achieving energy resilience in our DoD installations: from defining the goals to structuring the supporting contracting guidance</li> <li>-Current initiatives and strategies for delivering an increased grid-independence capability: the role for microgrids and DERs on our installations</li> <li>-Viewpoint towards the “energy security as a service” model - drivers, challenges, and possible business models</li> </ul> <p><b>Panelists:</b></p> <p><b>Maj. Gen. Bradley D. Spacy, USAF Commander, Air Force Installation and Mission Support Center (confirmed)</b></p> <p><b>BG William Boruff, USA, Commander, Mission Installation Contracting Command (invited)</b></p> <p><b>RDML Yancy Lindsey, USN, Commander, Navy Region Southwest, Commander, Navy Installations Command (confirmed, speaker TBD)</b></p>
9:50 – 10:20	<p>Networking Break</p> <p>Continued on next page...</p>

10:20 -11:10	<p><b>Utility Panel: Evolving Strategic Business Models and Integrating DERs into the Utility of the Future</b></p> <ul style="list-style-type: none"> <li>-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</li> <li>-Developing a new systems configuration without reducing reliability: what needs to occur to get us there</li> <li>-What are the opportunities for utilities with large-scale storage and microgrid projects?</li> <li>- 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</li> </ul> <p><b>Panelists:</b></p> <p><b>Mr. Andy Butcher</b> Chief Operating Officer, Platte River Power Authority <b>(confirmed)</b></p> <p><b>Ms. Shelee Kimura</b>, Senior Vice President, Business Development and Strategy, Hawaiian Electric Company <b>(confirmed)</b></p> <p><b>Mr. Louis Ting</b>, Director of Power Planning Development &amp; Engineering, LADWP <b>(confirmed)</b></p> <p>(one additional utility representative coming soon)</p>
--------------	---

**OPERATIONAL PERSPECTIVE ON DER INTEGRATION**

11:10 -11:40	<p><b>Building the Utility of the Future to Improve Sustainability, Resiliency, and Efficiency</b></p> <ul style="list-style-type: none"> <li>-Transformational steps needed to achieve a modernized electric grid able to integrate an ever-expanding supply of clean-energy technologies.</li> <li>- 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</li> </ul> <p><b>Mr. Jacob Tetlow, Vice President, Transmission and Distribution Operations, Arizona Public Service Company, (tentative)</b></p>
--------------	--

11:40-12:10	<p><b>An Engineer's Perspective Towards Integrating DERs onto the Grid, While Maintaining Stability and Reliability</b></p> <ul style="list-style-type: none"> <li>-The evolving technical frameworks and transformational steps needed to achieve a modernized electric grid able to integrate an ever-expanding supply of DERs.</li> <li>- How far can the data really take us? Current maturity, and limitations, of advanced data analytics to support the integration of DERs</li> <li>- Advice towards technical factors to consider when undertaking DER Integration : 3 things we got right and 3 surprises along the way</li> </ul> <p><b>Dr. Thomas Bialek, Chief Engineer, SDG&amp;E (confirmed)</b></p>
-------------	---

12:10 -12:50	Networking Lunch
--------------	------------------

**CYBER RESILIENCE**

12:50 – 1:30	<p><b>DHS' National Risk Management Center: Developing a unified collective approach to cyber resilience and security</b></p> <ul style="list-style-type: none"> <li>- Current threat landscape towards the security and resilience of the utility sector</li> <li>- 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</li> </ul> <p><b>Mr. Mark Kneidinger, SES, Deputy Director, National Risk Management Center, Department of Homeland Security (confirmed)</b></p>
--------------	--

1:30 – 2:00	<p><b>A Utility CIO's Perspective towards Cyber Resilience, and DERS Integration</b></p> <ul style="list-style-type: none"> <li>- Best practices towards baking in cyber resiliency across your ecosystem including "edge" devices</li> <li>- How we work with vendors to improve and integrate cyber resiliency measures</li> <li>-The role of data in supporting DER/ microgrid integration: How far can the data take us? Current maturity of advanced analytics</li> </ul>
-------------	--

2:00- 2:30	<p><b>Understanding the Threat landscape and How to Increase Cyber Resiliency for Critical Infrastructure in the Energy Sector</b></p> <ul style="list-style-type: none"> <li>-Current threat landscape towards increased penetration of DERs and what energy stakeholders can begin to implement today to increase cyber resilience</li> <li>-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?</li> </ul> <p><b>Mr. Tobias Whitney, Technical Executive, EPRI (confirmed)</b></p>
------------	--

2:30 – 3:00	<p><b>Implementing a Cyber Resilient Microgrid Control Systems</b></p> <ul style="list-style-type: none"> <li>- Best practices towards designing, implementing, testing, and installing cyber resilient microgrid control systems</li> <li>- Brief review on increasing performance through edge optimization intelligence and consolidating data formats and exchange protocols used for system optimization</li> </ul> <p><b>Mr. Bob Morris, Chief Engineering Services Officer, Schweitzer Engineering Laboratories (confirmed)</b></p>
<b>CAMPUS FOCUS &amp; TOUR</b>	
3:00 – 3:15	<p><b>Closing Remarks: Strategic planning to develop and advance sustainable energy initiatives for San Diego State University</b></p> <p><b>Mr. Tom Abram, Energy and Sustainability Officer, San Diego State University (confirmed)</b></p>
3:15pm	End of sessions for Day 1
3:30 – 6:00	<p><b>University of California, San Diego SITE TOUR FOR ALL ATTENDEES /SPEAKERS</b></p> <p><b>SITE TOUR</b></p> <p>3:30 – depart for UC San Diego Site Tour</p> <p>4:00pm – 5:45pm guided tour: 5:45pm - depart and return to downtown San Diego and venue</p>
<b>FEBRUARY 27, 2019   DAY 2</b>	
7:30 – 8:45	Networking Breakfast and welcome back
<b>REGULATORY &amp; MARKETS LANDSCAPE</b>	
8:50 – 9:45	<p><b>Panel Discussion: The Regulatory Landscape Towards Microgrid and DERS Integration into the Grid</b></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><b>Moderator: Mr. Chris Schroeder, Vice President, SEPA (Smart Electric Power Alliance) confirmed</b></p> <p><b>Panelists:</b></p> <p>Mr. Elijah Abinah, Director, Utilities, Arizona Corporation Commission <b>(confirmed)</b></p> <p>Mr. Simon Baker, Chief of Staff, Energy Division, California Public Utilities Commission <b>(confirmed)</b></p> <p>Mr. Drew Bohan, Executive Director, California Energy Commission <b>(confirmed)</b></p> <p>Mr. Branden Sudduth, Vice President of Reliability Planning and Performance Analysis, Western Electricity Coordinating Council <b>(confirmed)</b></p>
9:45 – 10:15	<p><b>CAISO: Building a Resilient, Sustainable and Efficient Energy Future: Markets and the Integration of DERS</b></p> <ul style="list-style-type: none"> <li>-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</li> <li>-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</li> </ul> <p><b>Dr. Keith Casey, Vice President, Market and Infrastructure Development, CAISO (confirmed)</b></p>
10:15 -10:45	Networking Break
<b>PROJECT EXECUTION / CASE STUDIES</b>	
10:45 -11:15	<p><b>USACE Case Study: Kwajalein Atoll Project</b></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><b>COL John Hurley, USA, Commander, U.S. Army Engineering and Support Center, Huntsville (confirmed)</b></p>



11:15-11:45	<p><b>USMC's Approach to Energy Resilience at the Facilities Level</b></p> <ul style="list-style-type: none"> <li>-Understanding the USMC's ethos towards energy resilience and how that translates to operational needs and requirements</li> <li>-Working with our private and public partners: what they need to know to help improve the energy resilience of the Marine Corps' facilities</li> </ul> <p><b>LtCol Tony Mitchell, USMC, Regional Facilities Officer, Marine Corps Installations West (confirmed)</b></p>
11:45 -12:10	<p><b>Demonstrating Technical Innovation and Viable Business Cases for Microgrid Projects and Renewable Integration</b></p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Blue Lake Rancheria microgrid project and Solar+ distributed energy project: 3 things we got right and 3 surprises along the way</li> <li>-Advice and perspective towards the most compelling paths of adaptation, current challenges, and innovation needed to ensure the evolution into 'energy farmers'</li> </ul> <p><b>Mr. Jim Zoellick, Managing Research Engineer and Mr. David Carter, Senior Research Engineer, Schatz Energy Research Center, Humboldt State University (confirmed)</b></p>
12:10 -12:20	<p><b>Case Study: Fuel Cell to Support Resiliency, Efficiency and Sustainability of Microgrids in Utility, Government and Commercial Installations”</b></p> <p>Case Study 1- University of California San Diego Case Study 2- Naval Submarine Base New London</p> <p><b>Mr. Frank Wolak, Vice President, Fuel Cell Energy (confirmed)</b></p>
12:20–1:00	Networking Lunch
<b>ENERGY STORAGE BUSINESS MODELS AND INNOVATION</b>	
1:00 – 1:45	<p><b>Energy Storage Leadership Panel: Evolving Business Models and Innovation with Energy Storage</b></p> <ul style="list-style-type: none"> <li>-Storage in the Future of Markets: What are emerging as the key challenges and encouraging pathways for distributed storage in market conversations</li> <li>-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</li> </ul> <p>PANELISTS:</p> <p><b>Mr. Jonathan Adelman</b>, Vice President, Strategic Resources and Business Planning, Xcel Energy <b>(confirmed)</b></p> <p><b>Mr. Larsh Johnson</b>, CTO, Stem <b>(confirmed)</b></p> <p><b>Mr. Nathan Wyeth</b>, Director of Grid Service, Sunrun <b>(confirmed)</b></p> <p><b>Mr. Walker Wright</b>, VP, Public Policy, ENGIE Storage <b>(confirmed)</b></p>
<b>INNOVATION TO SUPPORT DERs INTEGRATION</b>	
1:45 – 2:00	<p><b>How the IIoT is Aiding the Electric Utility for DER Integration: Standards, Architecture, Security</b></p> <ul style="list-style-type: none"> <li>-Layered Databus architecture; opening new realms for DER integration</li> <li>-Past, Present, Future; the approach to incorporating today's DER with your existing system.</li> </ul> <p><b>RTI, Vice Chair and members of the Industrial Internet Consortium (confirmed)</b></p>
2:00 – 2:30	<p><b>Emerging Innovation to Support Microgrids &amp; DERS Projects</b></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 is San Diego and supported by the State of California and the 501 c(3) <b>CleanTech San Diego</b></p> <p><b>Three innovators will present:</b></p> <ul style="list-style-type: none"> <li>○ <b>Ms. Hanna Grene</b>, Strategy and Partner Development, PXISE Energy Solutions, LLC - Sempra Infrastructure, LLC <b>(confirmed)</b></li> <li>○ <b>CleanSpark (confirmed, speaker TBD)</b></li> </ul>

2:30 – 3:10	<b>Exploring Blockchain Applications and Processes for the Energy Sector</b> <ul style="list-style-type: none"> <li>- Understanding the implications of decentralized computing platforms in the context of the energy transition</li> <li>- What potential users need to know about current technical limitations and regulatory uncertainties</li> <li>- How utilities, grid operators, and consumers are using blockchain today - and how it may support greater DER and microgrid market participation in the future</li> </ul>
3:10 - 3:15	Closing Remarks
3:15	End of Summit

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

**HOME PAGE:** <https://rscouncil.org/microgridswest>

POC: Monica Mckenzie, Managing Partner, Roosevelt Strategic Council| O. 917.435.1266

Email: [mckenzie@rscouncil.org](mailto:mckenzie@rscouncil.org)

RSC thanks our newest sponsors and supporters:

