



GLOBAL GRID TRANSFORMATION

Energy Storage North America
November 5-7, 2019 | San Diego, CA

ABOUT THE GLOBAL GRID PROGRAM

Energy Storage North America (ESNA) Conference & Expo is the largest gathering for grid-connected energy storage in North America. In collaboration with IHS Markit, the US Commercial Service and the Global Energy Storage Alliance, ESNA 2019 brings together the largest and most diverse group of global policymakers, utilities, commercial and industrial customers, and storage industry stakeholders for energy storage site tours, networking, workshops and learning sessions with a focus on building the grid of the future. ESNA 2018 counted delegates from over 30 countries.

ESNA is unique in that its mission is to educate and inspire. To pursue that mission, each year ESNA hosts the Global Grid Transformation (GGT) program, a one-day facilitated roundtable and workshop with key stakeholders from around the world. International delegations come together to promote cross-border collaboration on grid transformation issues with policymakers and companies from across the United States to exchange ideas, share success stories and brainstorm solutions to key challenges, with a focus on promoting a decarbonized, resilient and affordable power grid. Key takeaways are then shared widely through various channels including the issuance of a public whitepaper and webinars. Last year's whitepaper produced by IHS Markit can be found [here](#) and related webinars [here](#).

This year, ESNA will host the 3rd Annual California Germany Bilateral Energy Conference (CGBEC), a collaboration of two global clean energy leaders co-produced by the California Energy Commission and German Federal Ministry for Economic Affairs and Energy. The theme of ESNA 2019 is *All About Innovation: Technology, Markets, Business Models*. This theme is an ideal backdrop for the CGBEC program, which focuses on clean energy more broadly. The following day, the ESNA 2019 Global Grid program will focus on how global leaders can lead the way to realize their transition away from fossil fuels with energy storage.

Energy storage will play a central role in multi-sector decarbonization and the decentralized, resilient, affordable power grid of the future. We invite you to join the ESNA Global Grid Transformation program.

Agenda: Tuesday, November 5, 2019

8:00 - 12:00	Site Tours of deployed energy storage projects (transportation included)	
12:30 - 17:30	California Germany Bilateral Energy Conference Sponsored by the California Energy Commission and the German Ministry of Economic Affairs and Energy	ESNA Workshops
17:30 - 19:00	ESNA Welcome Remarks & Joint ESNA-CGBEC Keynotes	
19:00 - 20:30	Joint ESNA-CGBEC Networking Reception	

Agenda: Wednesday, November 6, 2019

9:00 -10:00	ESNA Morning Keynotes <ul style="list-style-type: none"> ▪ Ernesto Ciorra, Chief Innovability Office, Enel ▪ Raj Apte, Principle Engineer, Google X ▪ Ramya Swaminathan, CEO, Malta Inc
10:45 - 11:30	GGT Morning Program: Innovating the Future of Power Session 1: Multi-Sector Decarbonization To avoid catastrophic climate change, the power sector will have to work together with the transportation, gas, petrochemical, industrial, and agricultural sectors. This session will address the need and opportunities for multi-sector decarbonization and assess how different regions are approaching this concept, including the game changing role of energy storage to support these efforts. Moderated by: Janice Lin, Chief Executive Officer, Strategen Key Questions: <ol style="list-style-type: none"> 1. What bulk storage solutions are available today supporting in multi-sector decarbonization? 2. What applications are feasible for bulk storage solutions today? 3. What actions should regulators and policy makers take today to facilitate the development of super bulk storage solutions?

Agenda: Wednesday, November 6, 2019 - Continued

<p>11:35 - 12:20</p>	<p>GGT Morning Program: Innovating the Future of Power</p> <p>Session 2: Energy Storage: Where the Power & Transportation Meet</p> <p>Along with power, transportation is one of the most carbon intensive sectors on the planet. Grid innovation and design cannot be decoupled from the growth of transportation electrification. This session will discuss how policy makers can connect the dots between transportation and grid modernization to incentivize ideal outcomes.</p> <p>Moderated by: Julian Jansen, Research Manager, Energy Storage, IHS Markit</p> <p>Key Questions:</p> <ol style="list-style-type: none"> 1. How can energy storage and the power sector more broadly accelerate the Electrification of Transport? 2. How and who can unlock the value (energy/capacity/ancillary services market value, other system benefits) EVs can provide to the grid? How will this be monetized? 3. How can policy makers and regulators accelerate the value case for stronger vehicle-grid integration?
<p>12:30 - 14:00</p>	<p>VIP Global Grid Luncheon (Invitation Only)</p> <p style="text-align: center;">Sponsored by: Fluence</p>
<p>14:00 - 14:45</p>	<p>GGT Afternoon Program: Reinventing the Power Infrastructure Paradigm</p> <p>Session 3: Rebuilding in the Wake of Disaster</p> <p>Natural disasters are becoming more common and more destructive. This session invites regions marred by natural disaster such as California, Puerto Rico, and others to share the challenges and opportunities of rebuilding resilient islanded systems in the wake of disaster.</p> <p>Key Questions:</p> <ol style="list-style-type: none"> 1. What types of natural disasters amplify the need for energy storage? 2. What functions can energy storage provide? 3. How should regulators and utilities value resiliency in future resource planning? <p>Moderated by: IHS Markit</p>

<p>14:50 – 15:35</p>	<p>GGT Afternoon Program: Reinventing the Power Infrastructure Paradigm</p> <p>Session 4: Thermal Fleet Retirement & Replacement</p> <p>As gas peakers in California and coal plants in Germany are closed, companies will be left with stranded assets on the balance sheet. This session will seek solutions and lessons for how energy storage can be used to transition the fossil fleet, maintain reliability and keep the power sector affordable.</p> <p>Key Questions:</p> <ol style="list-style-type: none"> 1. What are energy storage – conventional generation hybrids? What are the benefits they provide? (for existing conventional generation) 2. How do energy storage hybrids accelerate the decarbonization of the power sector? 3. What are the specific actions regulators can take to enable faster adoption of hybrids? <p>Moderated by: Mark Higgins, Chief Operating Officer, Strategen</p>
<p>16:00 – 17:30</p>	<p>ESNA Afternoon Keynote Sessions</p>
<p>18:00 – 21:45</p>	<p>ESNA Beach Party at Kona Kai Resort (Transportation Provided)</p>