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EPIC Symposium | Accelerating Clean Energy Innovation

Tuesday, February 19, 2019 | Sacramento Convention Center

Complete program at <https://2019epicsymposium.eventbee.com/>

CHECK-IN AND REGISTRATION 8:00-9:00 a.m.

Opening Session, 9:00 – 10:30 a.m., Room 306-308

9:00-9:15 a.m. Opening Remarks: **Dr. Robert B. Weisenmiller**, *Chair, California Energy Commission*

9:15-9:35 a.m. Keynote Address: **Senator Henry Stern**, *27th Senate District*

9:45-10:30 a.m. Thought Leaders Fireside Chat

Moderator: **Danielle Applestone**, *Executive in Residence, Cyclotron Road*

Panel: **David Danielson**, *Managing Director, Breakthrough Energy Ventures* (invited); **James Zahler**, *Associate Director for Technology-to-Market, ARPA-E*

This session will offer an interactive and thought-provoking discussion on how targeted, strategic investments can be transformative in achieving California and global energy and climate goals. This session features two leaders who have been change agents in both public and private organizations.

Breakout Sessions, 10:30 – 11:45 a.m.

Room 302-303 **Survival Tips for Entrepreneurs**

Energy entrepreneurs face a number of challenges and pitfalls in bringing new energy inventions to market. These challenges and pitfalls can add needless costs and delays to a new breakthrough technology's development, deterring private sector investment. In this panel session, California energy entrepreneurs will discuss lessons learned along with some of the challenges they've faced—and how to avoid them. In addition, they'll provide their perspective on what contributed most to their success and suggest how California can enhance support for clean energy entrepreneurship.

Room 304-305 **Electrified Transportation – on the Road to V2B and V2G**

Concepts such as vehicle-to-building and vehicle-to-grid have the potential to improve the economics of electric vehicle ownership and drive increased adoption. The panel will discuss technology advancements that can enable vehicle-to-building and vehicle-to-grid applications in a manner that seamlessly provides value and benefits to electric vehicle owners while protecting the health and lifespan of the battery pack.

Room 306-308 **Reducing the Carbon Intensity of Buildings**

Building electrification is a key strategy for meeting California's greenhouse gas reduction goals. California's building sector still relies on natural gas for three key end uses: cooking, space heating, and water heating. While electric options exist for these end uses, current commercial offerings do not meet most consumers' demands for cost and performance. This panel will discuss current efforts to increase market traction of electric cooking and heating technologies in buildings.

Room 309-310 **Wildfire Prevention Technologies**

With projections indicating increased wildfire-related risks for many parts of California and the state already subject to increasingly deadly and destructive fires, our public agencies and utilities need new solutions to further mitigate the threat and impact of wildfires. This panel will discuss scientific and technological advancements that can enable the state's extensive electric infrastructure to support more accurate, effective, and timely prediction of wildfire risks in the state, and mitigate the system's ignition potential.

Lunch Pickup, 11:45 a.m. – 12:15 p.m., Foyer

12:15-12:35 p.m. Room 306-308 Keynote Address: **Assembly Member Eloise Gómez Reyes**, *47th Assembly District*

12:35-1:30 p.m. Room 306-308 CalSEED Entrepreneur Pitch Session

Poster Session: Meet EPIC grantees and discover the latest innovations in clean energy, 1:30 – 2:15 p.m., Room 301/Hallway



- Room 302-303 **Broadening Storage Technologies Beyond Lithium Ion**
Lithium-ion batteries are the market leader in energy storage technologies, driven largely by the growth of the consumer electronics and electric vehicle markets. However, lithium-ion batteries rely on materials that may have future supply constraints, raising concerns about whether lithium-ion technologies remain the best fit to meet the expected global demand for energy storage. This panel will discuss current efforts to develop and commercialize alternative energy storage technologies that can help meet California's projected market demand for energy storage.
- Room 304-305 **Enabling Localized Clean Energy Portfolios**
Budget and resource constraints, combined with environmental and public health concerns, are challenging the ability of municipalities to sustainably manage waste in their jurisdictions without large rate increases. Energy is a major operating expense for waste and wastewater treatment operations. This panel will highlight new technology solutions that are helping municipalities reduce their energy expenses while simultaneously improving the carbon footprint and economics at their waste management facilities.
- Room 306-308 **Training Session: Connecting New Technology Solutions to California's Underserved Communities**
The Energy Commission is launching a new web platform to connect stakeholders key to the development and adoption of new clean energy technologies. This training session will highlight one of the use cases of this new platform, which is to provide a more structured mechanism for vulnerable communities and technology and project developers to connect and collaborate on proposals for funding opportunities. This new web platform will enable vulnerable communities to identify their needs and technology interests and find technology and project developers working solutions aligned with those needs and interests.
- Room 309-310 **Efforts to Operationalize Investor Owned Utility EPIC Demonstration Projects**
Discover how California's investor-owned utilities are incorporating and integrating research results and technologies into their mainstream operations. Projects include demand reduction through targeted analytics, proactive storm analysis, and the use of unmanned aircraft systems.

- Room 302-303 **Non-Battery Solutions for Grid Flexibility**
The Internet of Things (IoT) – sensors combined with machine learning and intuitive user interfaces – has a number of applications to the electricity sector. IoT technologies, when integrated into customer-level and grid-level devices such as inverters and thermostats, can enable low-cost, low-carbon options for managing the intermittency of solar photovoltaic and wind generation. This panel will discuss how IoT advancements are providing traditionally “dumb” devices with the intelligence needed to support California's renewable generation goals.
- Room 304-305 **Resilient and Equitable Communities**
Technological learning also referred to as “learning-by-doing” or “learning-through-implementation” is a necessary step in the adoption of new energy technologies, especially in vulnerable communities that have not been primary locations for new technology demonstrations. This panel session will discuss projects demonstrating new energy technology solutions in disadvantaged- and low-income communities, the technological learning that has resulted from these demonstrations, and how this learning can be applied to streamline the time and cost of future deployments in the state's most vulnerable communities.
- Room 309-310 **Investor Owned Utility Coordination of Research Administration Plan & Transportation Electrification**
Get an overview of the investor-owned utilities' forthcoming joint research administration plan and learn how coordination is expediting innovation in transportation electrification. Projects cover topics such as fast charging with integrated storage and electric load management for ridesharing electrification.

