

EPIC Symposium | Accelerating Clean Energy Innovation

Tuesday, February 19, 2019 | Sacramento Convention Center

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

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

9:00-9:05 a.m. Welcome and Introduction: **Laurie ten Hope**, *Deputy Director, California Energy Commission*

9:05-9:15 a.m. Opening Remarks: **Dr. Robert B. Weisenmiller**, *Chair, California Energy Commission*

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

9:35-9:40 a.m. EPIC Awardee Spotlight Video – Sunfolding: Getting to the Grid

9:40-10:30 a.m. Thought Leaders Fireside Chat

Moderator: Dr. Danielle Applestone, *Executive-in-Residence, Cyclotron Road*

Panel: Dr. David Danielson, *Managing Director, Breakthrough Energy Ventures*; **Dr. 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 climate goals. This session will feature two leaders who have been change agents in both public and private organizations.

Breakout Sessions, 10:40 – 11:40 a.m.

Room 309-310 **Survival Tips for Entrepreneurs**

Energy entrepreneurs face a number of challenges and pitfalls in bringing new energy inventions to market. These 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 will provide their perspective on what contributed most to their success and suggest how California can further enhance support for clean energy entrepreneurship.

Moderator: Dr. Danielle Applestone, *Executive-in-Residence, Cyclotron Road*

Presenters: Dr. Gregory Poilasne, Chairman and CEO, NUVVE; **Kristin Sampayan**, CEO and Founder, Opcondys, Inc.; **Tim Latimer**, Co-Founder, Fervo Energy; **Leila Madrone**, Chief Technical Officer and Founder, Sunfolding; **Dr. Kristin Denault**, Founder and CEO, Fluency Lighting Technologies, Inc.

Room 306-308 **Electrifying 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 research to increase market traction of electric technologies in buildings.



Moderator: Panama Bartholomy, Director, Building Decarbonization Coalition
Presenters: Theresa Pistochini, Engineering Manager, UC Davis Western Cooling Efficiency Center; **Dr. Paul Raftery**, Professional Researcher, UC Berkeley Center for the Built Environment; **Bryan Dove**, Director of Asset Management, Mutual Housing California; **Cathy Higgins**, Research Director, New Buildings Institute; **Ryohei Hinokuma**, Manager, Strategic Alliances, Daikin US Corporation

Room 304-305 **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.

Moderator: David Erne, Supervisor of Technology Systems Integration, California Energy Commission

Presenters: Dr. Brian Chen, Principal Manager, SCE; **Brian D'Agostino**, Director of Fire Science & Climate Adaptation, SDG&E; **Dr. Larry Dale**, Staff Scientist, LBNL

Room 302-303 **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.

Moderator: Janea A. Scott, Commissioner, California Energy Commission

Presenters: Anthony Harrison, Director of Smart Cities and Fleet Policy, ChargePoint; **Dr. Tim Lipman**, Co-Director, Transportation Sustainability Research Center, UC Berkeley; **Dr. Sunil Chhaya**, Technical Executive, EPRI; **Alissa Harrington**, Program Manager for Connected eMobility, BMW N. America

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

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

12:35-12:40 p.m. Room 306-308 EPIC Awardee Spotlight Video – Nuvve Corporation: INVENT

12:40-1:30 p.m. Room 306-308 CalSEED Entrepreneur Pitch Session

Join us for a rapid-fire, cleantech pitch session featuring the four winners of the first California Sustainable Energy Entrepreneur Development (CalSEED) Follow-on Funding Award Competition. These entrepreneurs will describe how their technologies are advancing California's transition to a clean energy future, and how the CalSEED Initiative is helping to move their projects from idea to marketplace.

Moderators: Ian Rogoff, Chairman, California Clean Energy Fund; **Debarshi Das**, Director of Energy, Los Angeles Cleantech Incubator

Presenters: Matt Miller, CEO, Nativus, Inc.; **Dr. Peter Frischmann**, CEO & Co-founder, Sepion Technologies, Inc.; **Dr. Cheng Jin**, Powerflex Systems; **Kim Goodrich**, Director, CodeCycle LLC



Breakout Sessions, 2:15 – 3:30 p.m.

Room 309-310 **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.

Moderator: Edward Randolph, Deputy Executive Director, Energy and Climate Policy, CPUC

Presenters: Laurence Abcede, Manager of Distributed Energy Resources, SDG&E; **Richard Wirz**, Scientific Advisor, Element 16; **Philippe Bouchard**, Senior Vice President of Business Development and Marketing, Eos Energy Storage; **Rick Winter**, CEO, UniEnergy Technologies; **Byron Washom**, Director of Strategic Energy Initiatives, UC San Diego

Room 306-308 **Connecting New Technology Solutions to California's Underserved Communities**

The Energy Commission is launching a new web platform to connect stakeholders to the development and adoption of new clean energy technologies. This session will highlight one application of this new platform, which is to provide a more structured mechanism for underserved communities and technology and project developers to connect and collaborate on proposals for funding opportunities. This new web platform will enable underserved communities to identify their needs and technology interests and find technology and project developers working solutions aligned with those needs and interests.

Overview: Erik Stokes, Manager, California Energy Commission

Presenters: Kathryn Collins, Senior Consultant, Navigant Consulting; **Thomas Jensen**, Executive Director, iCatalysts; **Laura Vogel**, Managing Consultant, Navigant Consulting

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.

Moderator: Max Gomberg, Climate and Conservation Manager, California State Water Resources Control Board

Presenters: Dr. Hanna Breunig, Research Scientist, LBNL; **Thomas Gratz**, US Sales Manager, HZI; **Logan Olds**, General Manager, Victor Valley Wastewater Reclamation Authority; **Dr. Sebastien Tilmans**, Director of Operations, Stanford University Codiga Resource Recovery Center; **Mark McDannel**, Engineer, Los Angeles County Sanitation Districts



Room 302-303 **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.

Moderator: Aaron Renfro, Senior Advisor, SCE

Presenters: Mark Esguerra, Director of Integrated Grid Planning and Innovation, PG&E;

Simon Han, Principal Manager of Transmission & Distribution, Grid Operations, SCE; **Christine Asaro**, Aviation Services Project Advisor, SDG&E

Networking Break, 3:30 – 3:45 p.m.

Breakout Sessions, 3:45 – 5:00 p.m.

Room 309-310 **Non-Battery Solutions for Grid Flexibility**

Storage is often touted as the remedy to the challenges of managing a high-renewables, high-distributed energy resource future. However, there are other technologies and strategies with the potential to provide many of the same values to the grid and to customers at a lower cost. These technologies, building upon previous information and communications technology (ICT) and Internet of Things (IoT) approaches, bring the benefits of advanced communications to the electricity sector and can enable low-cost, low-carbon options for managing solar and wind generation intermittency. This panel will discuss how ICT and IoT advancements are providing traditionally “dumb” devices with the intelligence needed to effectively support California's renewable generation goals.

Moderator: Matthew Tisdale, Executive Director, Gridworks

Presenters: Tom Tansy, Chairman, SunSpec; **Dr. Ajit Renjit**, Smart Grid Systems Engineer, EPRI;

Dr. Edward Cazalet, Founder & CEO, TeMix Inc.

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 underserved 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 underserved communities.

Moderator: Martha Guzman Aceves, Commissioner, CPUC

Presenters: Michelle Tirto, Associate Sustainability Asset Manager, LINC Housing; **Ram**

Narayanamurthy, Technical Executive, EPRI; **Andy Brooks**, Director of West Coast Operations, Association for Energy Affordability; **Dr. Peter Alstone**, Assistant Professor, Humboldt State University; **Madeline Stano**, Energy Equity Legal Counsel, The Greenlining Institute

Room 302-303 **Investor Owned Utility Coordination of Research Administration Plan & Coordination with EPIC Administrators**

Get an overview of the investor-owned utilities' forthcoming research administration plan and plans to coordinate their EPIC investments.

Moderator: Dan Gilani, Program Manager, PG&E

Presenters: Dan Gilani, Program Manager, PG&E; **Aaron Renfro**, Senior Advisor, SCE; **Frank Goodman**, EPIC Program Manager, SDG&E

