

ICEPAG 2020

A Virtual Colloquium

Hydrogen: A Platform for Sustainability

Smart Grid | Mobility | Electricity | Storage | Economics | Microgrids

September 14, 15, 16, 2020 | UC Irvine

Program Day 1: Monday, September 14

8:00 – 8:45 am

Colloquium Opening

- **Introduction to ICEPAG 2020**
Scott Samuelsen and Jeffrey Reed
UCI Advanced Power and Energy Program (APEP)
- **Keynote: Hydrogen Progress Around the Globe**
Sunita Satyapal, U.S. Department of Energy

8:45 – 10:00 am

Hydrogen for On-Road Transportation – Light Duty Vehicles

- **Progress on Light-Duty Technology Advancement**
Craig Scott, Toyota
- **Maintaining Market Momentum**
Steve Ellis, Honda
- **Advances in Hydrogen Fueling Infrastructure**
Tim Brown, FirstElement Fuel

10:00 – 10:30 am

BREAK (LUNCH BREAK EAST)

10:30 – 12:10 pm

Hydrogen for On-Road Transportation – Medium and Heavy Duty Vehicles

- **Total Cost-of-Ownership Outlook for Fuel Cell Transit Buses**
Tim Sasseen, Ballard
- **Perspectives from an Early Adopter**
Lauren Skiver, Sunline Transit
- **Hydrogen for Long-Haul Trucking**
James Kast, Toyota
- **Hydrogen for Long-Haul Trucking**
Brian Lindgren, Kenworth

12:10 – 12:40 pm

BREAK (LUNCH BREAK WEST)

12:40 – 3:30 pm

Hydrogen as a Platform for Sustainability

- **Do We Really Need Hydrogen?**
Jack Brouwer, UCI Advanced Power and Energy Program
- **Achieving a Self-Sustaining Renewable Hydrogen Sector in California**
Jeffrey Reed, UCI Advanced Power and Energy Program
- **The Role of Hydrogen in Least-Cost Deep Decarbonization Scenarios**
Sarah Wang, UCI Advanced Power and Energy Program
- **Integrating Electrolysis and Renewables Under Different Market Configurations**
Josh Eichmann, National Renewable Energy Lab
- **Hydrogen as a Game Changer in Decarbonization of Sectors - European Perspective**
Jakub Kupecki, Institute of Power Engineering, Warsaw
- **Policy Challenges and Solutions for Hydrogen in California**
Angelina Galiteva, Renewables 100 Policy Institute
- **Global Progress on Hydrogen**
Andy Marsh, Plug Power

3:30 pm

Day 1 Close

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Program Day 2: Tuesday, September 15

- 7:45 – 8:15 am **Opening Keynote: Hydrogen Program at the DOE Office of Fossil Energy**
Robert Schrecengost, U.S. Department of Energy
- 8:15 – 9:45 am **Microgrids: Current Status and What's Next**
- **The Microgrid Landscape in California**
Mike Gravely, California Energy Commission
 - **Marine Corps Air Station Miramar Microgrid Case Study**
Mick Wasco, Marine Corps Air Station Miramar
 - **Blue Lake Rancheria Microgrid Case Study**
Jana Ganion, Blue Like Rancheria
 - **Hydrogen and Next-Generation Microgrids**
Scott Samuelson, UCI Advanced Power and Energy Program
- 9:45 – 10:15 am **BREAK (LUNCH BREAK EAST)**
- 10:15 – 11:55 am **Hydrogen for Off-Road Transportation and Freight**
- **Hydrogen as a Strategy for Decarbonizing our Ports**
Robert Flores, UCI Advanced Power and Energy Program
 - **Hydrogen Solutions for Ocean-Going Vessels**
Kazumasa Taruishi, NYK Line
 - **San Bernardino Fuel Cell Rail Project**
Carrie Schindler, San Bernardino Transit Authority
 - **Hydrogen as an Aviation Fuel**
Dustin McLarty, Washington State University
- 11:55 – 12:25 pm **BREAK (LUNCH BREAK WEST)**
- 12:25 – 2:00 pm **Hydrogen and the Natural Gas Grid**
- **The Natural Gas Grid for Hydrogen Energy Storage**
Myles Moore, UCI Advanced Power and Energy Program
 - **Impact of Hydrogen-Methane Blends on Appliances**
Yan Zhao, UCI Advanced Power and Energy Program
 - **Gas System Operator Perspective**
Yuri Freedman, Southern California Gas Company
 - **Salt Cavern Storage / Western Energy Hub**
Rob Webster, Magnum Development
- 2:00 – 4:00 pm **Hydrogen for Power Generation**
- **Hydrogen Turbine State-of-the-Art**
Vince McDonell, UCI Combustion Laboratory
 - **Mitsubishi Power Hydrogen Turbine Development and Deployment**
David McDeed, Mitsubishi Power
 - **GE Hydrogen Turbine Development and Deployment**
Jeffrey Goldmeer, GE Gas Power
 - **Pure Hydrogen Fuel Cell Development**
Venkat Venkataraman, Bloom Energy
 - **The Evolution of Hydrogen-Fueled Solid Oxide Products**
Tony Leo, FuelCell Energy
- 4:00 pm **Day 2 Close**

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Program Day 3: Wednesday, September 16

7:45 – 8:25 am

The Role of Hydrogen in Transportation Systems

- **HDV Market Evolution: Charging and Fueling Infrastructure**
Kate Forrest, *UCI Advanced Power and Energy Program*
- **HDV Market Evolution: Vehicle and Fuel Roadmap**
Blake Lane, *UCI Advanced Power and Energy Program*

8:25 – 10:05 am

Renewable and Low-carbon Hydrogen Production

- **Progress on Electrolysis Technology**
Steve Szymanski, *NEL Hydrogen*
- **Outlook for Gasification Projects in California**
Speaker to be confirmed
- **Carbon-negative Biomass Project**
Keith Pronske, *Clean Energy Systems*
- **On-site Reformation**
Robert Wegeng, *STARS*

10:05 – 10:35 am

BREAK (LUNCH BREAK EAST)

10:35 – 11:40 am

Hydrogen Policy, Social Justice and Economic Perspectives

- **Green Hydrogen – How Do We Scale?**
Laura Nelson, *Green Hydrogen Coalition*
- **Hydrogen and Social Justice**
Diane Moss, *California Hydrogen Business Council*
- **Green Hydrogen and the Economy**
Lori Schell, *Empowered Energy*
- **Moderated Q&A**
Sammy Roth, *Los Angeles Times*

11:40 – 12:15 pm

100% Hydrogen Infrastructure

- **Is This a Pipe Dream – Is There Any Case for “Hydrogen to the Home?”**
Jeffrey Reed, *UCI Advanced Power and Energy Program*
- **The Northern England H21 Project**
Mark Neller, *Arup Engineering*

12:15 – 12:45 pm

BREAK (LUNCH BREAK EAST)

12:45 – 3:15 pm

Electrochemical Conversion Research

- **Progress on Hydrogen-Fueled Hybrid Conversion Systems**
Alberto Traverso / Aristide Massardo, *University of Genoa*
- **Advances in Membrane Electrolyte Assemblies**
Iryna Zenyuk, *UCI Advanced Power and Energy Program*
- **Progress on Reversible Solid-Oxide Cells**
Luca Mastropasqua, *UCI Advanced Power and Energy Program*
- **Electrochemical Separation of Hydrogen from Methane**
John Stansberry, *UCI Advanced Power and Energy Program*
- **Electrochemical Synthesis of Hydrogen Derivatives**
Trevor Brown, *Ammonia Energy Association*

3:15 - 3:25 pm

Closing Remarks