

Energy Storage for Manufacturing and Industrial Decarbonization Workshop

“Energy StorM”

Enabling Carbon-Free Energy for Industrial Decarbonization

February 8-9, 2022

Hosted by:



Chemical Storage Panel

Panel Chairs:

Kristin Hertz, Hydrogen Program Manager, Sandia National Laboratories

Lynn Wendt, Research Scientist, Idaho National Laboratory

Panelists:

Brittany Westlake, Sr. Technical Leader, Electric Power Research Institute (EPRI)

Hilary Petrizzo, Commercial Development Manager CCUS, SoCalGas

Sumanth Addagarla, Vice President, BayoTech Inc.

Todd Brix, CEO & Co-Founder, OCO Inc.

Trevor Brown, Executive Director, Ammonia Energy Associations

David Lynch, General Manager, Research & Development, Enerkem

Biographies

Dr. Kristin Hertz is the Hydrogen Program Manager at Sandia National Laboratories and the Sandia point of contact for U.S. Department of Energy's Hydrogen Fuel Cell Technology Office. Kristin earned a Ph.D. from University of Rochester in nuclear physics before starting her career at Sandia as a post-doctoral employee working on hydrogen effects in metals. Most of her career has focused on radiation and nuclear signatures and detector development. Recently she returned to the hydrogen program as the manager of the Hydrogen and Materials Science Department.

Dr. Lynn Wendt serves as the Laboratory Relationship Manager to the U.S. Department of Energy's Bioenergy Technologies Office (BETO). Dr. Wendt is also a senior research scientist in the Energy and Environment Science and Technology Directorate at Idaho National Laboratory (INL). She has served as a principal investigator for multiple projects sponsored by BETO and has contributed to strategic planning for INL's Biomass Feedstock National User Facility and associated programs. Dr. Wendt holds a bachelor's degree in biochemistry from the University of Minnesota, a master's in biology from Idaho State University, and a Ph.D. in environmental science from the University of Idaho. Dr. Wendt is a bioenergy research expert in post-harvest physiology and chemistry of biomass storage systems and microbial systems for bioenergy feedstock supply chain processes. She has pioneered the development of biomass and algae material storage and handling systems that stabilize stored biomass materials while increasing biomass value during short- and long-term storage. Her 23 biomass-related publications and 2 patent applications are the authoritative reference on value-add biomass storage systems.

At EPRI, **Dr. Brittany Westlake** leads R&D and demonstration projects related to hydrogen production from electrolysis on EPRI's Low-Carbon Resources Team. Working to understand electrolysis technology performance and the technical and economic considerations for adoption pathways and deployment on the grid. She previously worked with EPRI's Energy Storage and Distributed Generation Program to understand battery, storage, hydrogen, and fueled distribution technology performance characteristics and the role they play in a variety of applications from stationary storage, the transportation sector, and to support the generation sector. Prior to joining EPRI, Brittany worked as a Science and Technology Policy Fellow at both the U.S. Department of Energy's Office of Electricity and the American Chemical Society. She holds a B.S. in Chemistry from the University of Georgia, and a M.S. and Ph.D. in Physical Chemistry from the University of North Carolina at Chapel Hill.

Hilary Petrizzo is the new SoCalGas CCUS Commercial Development Manager. Prior this role, Hilary was the first member of the SoCalGas Hydrogen Engineering Team where she led a focus on hydrogen storage and the SoCalGas Hydrogen Blending Demonstration Program. Hilary also has a background in petroleum geology and geohazards. Hilary has a Masters in Geology from UT Austin and Bachelors in Geology from UCLA.

Dr. Sumanth Addagarla is the Vice President at BayoTech Inc., based in Albuquerque, NM. Sumanth in his current role manages strategic accounts and specifically in proposing hydrogen storage and transportation solutions.

Sumanth spent almost 30 years at Chevron in a variety of roles such as research engineer, business development manager and project manager in the Downstream business.

Sumanth holds a PhD in Mechanical Engineering from Drexel University. His thesis involved studying chemical reactions during the oxidation of fuels using the Sandia Engine.

Sumanth has been involved with the AIChE's Center of Hydrogen Safety as Co-Chairman for the US and Asia-Pacific conferences, and, has been involved as a mentor and judge for the CleanTech Open.

Todd Brix is the Chief Executive Officer of OCOchem. Todd is a former General Manager and Partner at Microsoft who started, led and grew business groups in IoT, Mobile and eCommerce in the Windows Business Group. Prior to Microsoft, Todd was a co-founder of an Industrial Automation system start-up, worked at both Intel and Silicon Graphics in semiconductor processing equipment automation, and began his career at Chevron Research and Technology as a hydro-processing engineer in its R&D and refining operations in Richmond, CA. Todd holds a BS in Chemical Engineering from the University of Washington and an MBA with High Distinction from the Harvard Business School.

Trevor Brown is the Executive Director of the Ammonia Energy Association, a global trade association that promotes the responsible use of ammonia in a sustainable energy economy. The AEA's mission encompasses both the decarbonization of ammonia for existing applications, as well as the adoption of low-carbon ammonia in new applications, including direct use as a fuel and indirect use as a hydrogen carrier. Originally, Trevor was an award-winning theater and film producer, in London and New York. He retrained in finance when he began to understand the climate change challenge, earning the Chartered Financial Analyst designation. Since 2012, when he established himself as an independent ammonia industry analyst, he has agitated for the commercialization of sustainable ammonia synthesis technologies. Trevor is also a partner in Carbon-Neutral Consultants, a consulting firm established in 2019.

At Enerkem, **Mr. David Lynch** manages laboratory testing and pilot integration that has provided data-driven support for Enerkem's commercial process design. Mr. Lynch orchestrated the bench scale development of Enerkem's methanol-to-ethanol process and has established pilot and laboratory facilities in Edmonton, AB.

Mr. Lynch builds on more than 25 years of industry experience, where he advanced development and scale up of various new products and manufacturing processes.

He holds a Master of Science degree in Management of Technology from Rensselaer Polytechnic Institute and a Bachelor of Science degree in Chemistry from Fairfield University.