

## DOE Bulk Storage of Gaseous Hydrogen Virtual Workshop Speakers

Serge van Gessel – Netherlands Organization for Applied Scientific Research



Serge van Gessel is a senior geoscientist and advisor at TNO – Geological Survey of the Netherlands where he advises national and regional authorities on the use of the subsurface in the energy transition. As Chairman of the Geo-Energy Expert Group at EuroGeoSurveys and the UNFC Injection Projects Working Group at UNECE he is responsible for setting up international research collaboration on sustainable GeoEnergy including geothermal energy, CCS and energy storage. Under the umbrella of the IEA-Technology Collaboration Programme, he currently coordinates a global R&D task on Underground Hydrogen Storage.

Eric Lewis – National Energy Technology Laboratory



Eric Lewis, P.E. is a Senior Engineer at the U.S. Department of Energy's (DOE) National Energy Technology Laboratory (NETL). Eric's experience at NETL has focused on leading techno-economic analyses (TEA) of numerous advanced, fossil-based energy systems in support of DOE's mission. A Chemical Engineer by background, he has also spent time in Project and Process Engineering roles in the commodity chemicals and midstream natural gas industries.

Raja Amirthalingam – Plug Power



Dr. Raja Amirthalingam is a Professional Chemical Engineer who contributed in the area of Hydrogen Production, distribution, and Refueling Stations. His previous experiences are from Emerson, ABB, and Air Liquide and he served as a HyCO Committee Chairman in CGA. Dr. Amirthalingam has recently joined Plug Power and he is Principal R&D Engineer in the CTO Office responsible for Hydrogen Production, Storage, and Transportation.

Tony Leo – FuelCell Energy



Anthony (Tony) Leo joined FuelCell Energy in 1978 and has held key leadership roles in research, development, and commercialization of electrochemical systems during his tenure. He is well known throughout the battery and fuel cell industry, and has authored numerous papers, contributed to technical books, holds several US Patents, and has served as Chairman of the American Society of Mechanical Engineers PTC-50 Fuel Cell Performance Test Code committee and as a member on the Department of Energy's (DOE) Hydrogen and Fuel Cell Technical Advisory Committee (HTAC). Mr. Leo holds a Bachelor of Science degree in Chemical Engineering from Rensselaer Polytechnic Institute.

Michael DeBortoli – Northern California Power Agency (NCPA)



Spending his whole career in the power industry, Michael DeBortoli is a Professional Engineer and has spent 27 years in the development and operation of geothermal and combustion turbine power generation projects. More recently, he's spent time with Northern California Power Agency (NCPA) and their Lodi Energy Center. It is a 300 MW combined cycle combustion turbine built on the Siemens SGT6-5000F technology. He chose the unit for its fast and flexible operation profile to allow it to integrate with renewables and hit startup targets for the evening ramp.

More recently, Michael has taken on the role as lead in the green hydrogen development for NCPA and has completed the first step in preparing the units for green hydrogen combustion. He looks forward to expanding on that project with the production and storage of green hydrogen.

Upshur Quinby – Microsoft



Upshur Quinby is part of Datacenter Advanced Development group focusing on future solutions for Microsoft's energy and sustainability goals. Prior to Microsoft worked in power, renewable energy, and oil hydrogen processing.

Hilary Petrizzo – SoCalGas



Hilary Petrizzo is the new SoCalGas Carbon Capture, Utilization, and Sequestration 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.

Greg Wright – Wabtec



Greg Wright is the senior engineer at Wabtec Corporation leading the hydrogen decarbonization efforts. He has more than 13 years of experience in the rail industry. He has worked in various roles spanning from engine, cooling, systems to product management. He is looking at the complete hydrogen ecosystem to provide a comprehensive solution to Wabtec's rail customers.

Nico Bouwkamp – California Fuel Cell Partnership



As the CaFCP Technical Program Manager, Nico is the project lead of member project teams intending to solve technical and informational challenges. In this role, he leads efforts related to fueling heavy-duty FCEVs with hydrogen, and roadmapping for passenger fuel cell vehicles, transit buses and medium- and heavy-duty trucks.

Robert Smith – Pipeline & Hazardous Materials Safety Administration



In the position since 2003, Robert (Bob) manages pipeline R&D budget planning, program strategy and performance issues for PHMSA, with other Federal and State agencies, industry trade organizations and standards developing organizations. In addition, Bob works with several Technical Task Inspectors assigned to awarded research projects while also managing several projects as Agreement Official's Representative. Bob is also a Program Manager (Level 1) and Contracting Officer's Representative (Level 3). Prior to arriving at PHMSA in 2003, Bob worked seven years for the Bureau of Safety and Environmental Enforcement (formerly the Minerals Management Service)

within the Department of the Interior as the Pipeline and Human Factors Research Manager. Bob graduated from the Pennsylvania State University in 1997 with a BS in Petroleum and Natural Gas Engineering.

Vincent Holohan – Pipeline & Hazardous Materials Safety Administration



Mr. Holohan serves as an engineer within the Engineering and Research Division of the Office of Pipeline Safety (OPS), Pipeline and Hazardous Materials Safety Administration (PHMSA) at the United States Department of Transportation (DOT), which he joined in 2008. PHMSA is the DOT agency responsible for administering the Department's national regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline. In addition to various other projects, Vincent acts as the OPS prime technical contact for both hydrogen and carbon dioxide pipelines.

Prior to joining DOT, Vincent worked in the natural gas industry as a Materials Engineer. And before that, Vincent was a civilian Materials Engineer with the US Navy at Norfolk Naval Shipyard, working in their Regional Materials Test Laboratory, focusing on metallurgical testing and failure analysis.

Vincent received his Bachelors of Science in Materials Science and Engineering from Georgia Tech in 2000 and his Masters of Materials Science and Engineering from the University of Virginia in 2007.

Vincent was raised in southern New York State and currently lives in Falls Church, VA.

Nicolas Huerta – Pacific Northwest National Laboratory



Nicolas Huerta is a research scientist and team lead within the Pacific Northwest National Laboratory's (PNNL) Energy & Environment Directorate. He has a background in combining laboratory experiments with numerical simulation to understand complex and coupled processes in subsurface energy systems. Specifically, his research interests involve understanding well integrity, assessing geologic carbon storage risks, developing web-based visualization tools for complex spatial/analytic data to provide decision support at environmental remediation sites, and more recently in advancing subsurface hydrogen storage. Dr. Huerta is PNNL's lead on the Dept. of Energy Office of Fossil Energy and Carbon Management's Subsurface Hydrogen Assessment, Storage, and Technology Acceleration (SHASTA) project.

Tim Reichwein – Lane Power & Energy Solutions, Inc.



As Executive Vice President, Tim leads the pursuit, planning and execution of engineering and Engineer-Procure-Construction Management (EPCM) projects for hard rock and salt storage caverns and cavern facilities.

Tim has more than 45 years' experience in the storage cavern industry, including service with oil and gas operators, consulting engineering firms and construction organizations. He has performed both national and international projects. A Life Member of the American Society of Mechanical Engineers (ASME), he holds Bachelor's and Master's Degrees in Construction Management.

Mariel Schottenfeld – Air Products



Mariel started her career in a geomechanics laboratory, working with physical models of San Andreas (strike-slip) Fault variables. From there, she went into mining as a structural geologist. Mariel worked with the Nevada Copper Co.'s Pumpkin Hollow Deposit, restoring normal faults around the area in search of new ore deposits. Next, she went to ExxonMobil, where she continued working in structurally complex basins in the Brazil Pre-Salt, Gulf of Mexico, and the Rocky Mountains. Mariel worked in Exploration, Research, and Production units. While she was with ExxonMobil, Mariel was the Lead Geologist on the LaBarge Carbon Capture project. Mariel is now with Air Products as the company's Senior Geologist, working with our Subsurface Technology teams on CCUS projects and their related components, such as Geological Hydrogen Storage opportunities.

#### Kevin Harris – Hexagon Purus



Kevin has been engaged in pushing the hydrogen economy forward since 2001 and currently works in the field of Business Development and Sales for Hexagon Purus. Kevin is responsible for growing Hexagon's business in the Americas in hydrogen refueling, stationary, marine, rail, and distribution applications. Kevin's previous employers include Hydrogenics Corporation and, separately, Cummins Engine Company.

Kevin has lead the commercial side of hydrogen and fuel cell projects including trucks, buses, back-up power, forklifts, portable power, passenger ferries, electrolytic and reforming refueling stations, and transport trailers.

He is actively involved in organizations that promote the use of hydrogen and fuel cells including the California Fuel Cell Partnership, the California Hydrogen Business Council, and the Fuel Cell & Hydrogen Energy Association.

Kevin holds a Bachelor of Applied Science in Mechanical Engineering from the University of Waterloo, and is an MBA graduate from the Richard Ivey School of Business at the University of Western Ontario.

#### Brian Weeks – Gas Technology Institute



Brian Weeks is the Senior Director, Business Development for Gas Technology Institute (GTI). GTI is an independent, not-for-profit research and development institute that has been bringing innovative technology to the energy industry for 80 years.

Mr. Weeks has authored several papers on hydrogen infrastructure, LNG, and energy storage technologies for GTI's client organizations. In his current role, Mr. Weeks manages technology demonstration projects for GTI, including those that address advanced fuel infrastructure systems for hydrogen, natural gas, and hybrid electric vehicles. He is a sought-after advisor on technical, market, and regulatory issues surrounding the introduction of emerging energy technologies – especially those involving hydrogen. Mr. Weeks is a graduate of Vanderbilt University where he received his engineering degree. He also has an MBA and is a registered Professional Engineer in the State of Texas.

#### Claudio Lanzarini – FIBA Technologies Inc.



Claudio Lanzarini is the Director of Engineering at FIBA Technologies Inc, and he is based in its Littleton, MA office. His work focuses on developing new designs for new applications involving transportation and storage of gases.

Claudio has more than 25 years of experience with design and manufacturing of equipment used in gaseous hydrogen and other gases service. His background includes design of pressure vessels according to ASME, DOT and other different Codes used worldwide. He is a designated U.S. expert representing ANSI for the development of an ISO standard for design, manufacture and testing of cylinders and tubes for stationary storage of gaseous hydrogen.

Prior to joining FIBA, Claudio spent seven years at AGA SA, where he was involved with design of plants for hydrogen production through electrolysis, air gas plants, fill stations and cryogenic equipment.

Claudio received his bachelor's degree in mechanical engineering from the University of Rio de Janeiro.