

Feb 9, 2024

Hydrogen Value Chain

ABSTRACT

During the early part of the 21st century, increasing imports of crude oil and natural gas that threatened US energy security, and scientific evidence of global warming, inspired visions of a hydrogen economy offering energy independence without any need for fossil energy from coal, oil, or natural gas. At that time fossil energy accounted for more than 85% of US energy consumption, and it still accounts for nearly 80%. Combustion of fossil energy releases 92% of total US greenhouse gas (GHG) emissions. The most cost-effective low carbon intensity hydrogen generation comes from fossil energy. This presentation will explain how hydrogen can play an instrumental role in cost effectively achieving goals for net zero GHG emissions by 2050 while improving quality of life.

BIOGRAPHY

Dr. Christine Ehlig-Economides is Professor and Hugh Roy and Lillie Cranz Cullen Distinguished University Chair at the University of Houston. Prior to her current position, Ehlig-Economides taught at Texas A&M University for ten years and worked twenty years for Schlumberger. While at A&M, she managed research in production and reservoir engineering in conventional and shale reservoirs and helped the petroleum engineering department to grow and evolve to a broader energy scope that she now leverages toward research related to the energy transition. Ehlig-Economides was elected to the U.S. National Academy of Engineering in 2003 and was a member of the National Academy of Science Committee on America's Energy Future and the NRC Board on Energy and Environmental Systems (BEES). She chaired The Academies of Medicine, Engineering, and Science in Texas (TAMEST) shale task force in 2017. She currently is a Board member for QRI and Omnes Fuel Technologies. She became an Honorary Member of the Society of Petroleum Engineers in 2018. Ehlig-Economides earned a Bachelor of Arts in Math-Science from Rice University, a Master of Science in chemical engineering from the University of Kansas, and a Ph.D. in petroleum engineering from Stanford University.



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Seminar Details

Friday, Feb 9, 2024
2:30pm – 4:00pm

UH Science Building
Room S105

Online via Teams

<https://www.cive.uh.edu/research/beyer-distinguished-lecture>