

Is Hydrogen the Answer to the Quest for Sustainability?

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Location: Bldg. 59-2015

Speaker:

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Abstract:

Saudi Aramco announces its first overseas hydrogen shipment of 40 tons of high-grade blue ammonia from Saudi Arabia to Japan (September 2020).

NEOM announces its plan to build a 5-billion dollars' hydrogen production facility powered by 4 gigawatts (GW) of renewable energy to supply 650 tons of carbon-free hydrogen daily for export to global markets (August 2020).

Global hydrogen demand is predicted to increase 10-fold by 2050 from its 2015 levels.

In this talk, I will attempt to highlight why hydrogen matters in the context of sustainability from both the global perspective and the local perspective of Saudi Arabia; addressing the opportunities and various challenges related to large-scale production and utilization of hydrogen. Research activities at KFUPM related to hydrogen will also be briefly discussed.

Bio:

Dr. Ali Al-Awami obtained his Ph.D. in Electrical Engineering from the University of Washington in 2010. He is an Associate Professor at the EE Department and an IEEE Senior Member. His research interests include the integration of renewable energy sources into the smart grid, electricity markets, and hybrid energy systems (such as hydrogen-power systems and water-power systems). He holds four patents, authored five book chapters and more than 80 articles on these subjects. Dr. Al-Awami won several awards from IEEE, University of Washington, and KFUPM honoring the quality of his research. Dr. Al-Awami's industrial experience includes working for the Saudi Electricity Co. and Bonneville Power Administration.

