UDEI Seminar

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322 ISE Lab

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Thomas Tarka is an engineer and thinker whose work is rooted in the philosophy that we must constantly seek to improve how we develop and use energy, pursuing both incremental and transformational solutions in order "move the ball forward."

He has worked at or supported the National Energy Technology Laboratory (NETL) in various roles since 2003. While his work at NETL is primarily focused on the responsible use and development of fossil energy, his broad interest in how we as a nation use energy has resulted in an in-depth knowledge of energy usage in the United States and abroad.

In his current role as a Senior Engineer and Team Lead, he is responsible for conceiving and executing multi-year studies on energy topics and technologies, managing contracts, and leading a multi-disciplinary team of engineers, economists, and analysts. Tom specializes in evaluating energy systems and use on a macro- and micro-scale, and is also a subject matter expert on a number of topics, e.g. non-crude oil-based liquid fuels production and carbon capture and sequestration technologies.

Tom recently returned from a two-year fellowship in Washington, DC where he supported U.S. Senator Joe Manchin III (D-WV), advising the Senator on energy issues and working to develop "All-of-the-Above" energy policies. Prior to his work in the energy sector, Tom worked for several Dot.Coms in various capacities.

He received his professional engineering certification from the Commonwealth of Pennsylvania in 2008 and his Bachelor's of Chemical Engineering degree from the University of Delaware in 1996.

A Grid in Transition: Near-Term Trends & Bottlenecks, Long-Term Opportunities

The nation's electric grid is the largest and most complex machine ever made. At present, a confluence of regulatory, market, and infrastructure issues are poised to transform both how the grid works and the market forces which underpin is operation. What's more, the energy sources supplying the grid are changing, adding further complexity to the transition at hand.

Transition periods such as this both provide opportunities and present risks, especially as the electric grid underpins nearly every aspect of our economy and our lives. This presentation will provide an overview of near-term trends in electricity supply and usage, examine long-term opportunities, and identify review current friction points where near-term risks to both reliability and affordability as we enter this time of transition.