

Webinar on Sustainability Transportation Fuels “Coupling the Electric Power and Transport Sectors”

This second webinar in the series is June 30th from 11:15 to 12:45 PM at the Environmental Education Center, Regents Row, A116 (NW corner of the complex, courtyard side). Brown bag it if you'd like!

The basic story of "coupling the power and transport sectors" is that renewable energy technologies, especially at high penetration, will at times produce "low-value electrons" in the open market, creating the potential for arbitrage. Such "electrons" could be stored for use at a different time, stored in battery electric vehicles, or used to produce water (through, for example, reverse osmosis), or used to produce hydrogen, to name a few possibilities.

Conversations about battery electric vehicles are happening. However, other conversations are also important. For example, what if many of the electrons divert to the transportation sector, are we accelerating the combined transition or making it more challenging? Are we increasing economic efficiency? Would recycling waste CO₂, as a carbon source to produce fuels, facilitate a combined transition, or impede one or the other?

Numerous issues arise with a greater coupling among the sectors, hence situating electric power-to-fuels as a jumping-off point for the following types of more general questions:

- Do current policy and business frameworks encourage and harness or impede arbitrage possibilities? Is there a need for policy support or will normal market forces suffice?
- Could increasing communication and awareness at the interfaces among stakeholder groups lead to greater responsiveness of the combined sectors?
- Are there more business and technology innovations at the intersection of the stationary power and transportation sectors that might add economic efficiency and accelerate the transition? Does envisioned policy actions support or impede such innovations?

Meet the Panel

Moderator: Clark Miller is the Director of the Energy, Society and Policy Initiative at Arizona State University, which seeks to understand the social dynamics and societal implications of large-scale changes in energy systems. Dr. Miller's research focuses on governance challenges posed by global environmental change.



Robyn Beavers leads NRG Energy's internal innovation team focused on advancing its microgrid strategy. Previously she was a strategic advisor to the founders of Google and created and led Google's Green Business and Operations Strategy Group, the first business unit focused on sustainability strategy at the company.



Dawn Manley is a senior manager at Sandia National Laboratories and has been responsible for developing and leading programs in transportation energy analysis with government, industry, academic and international partners. She has provided testimony on fuels and transportation to the California State senate, supported an international congressional delegation of the Senate Energy and Natural Resources Committee on clean energy and served on the National Petroleum Council's Future Transportation Fuels and Technologies Committee. In these roles, Dr. Manley has analyzed technology options for future transportation energy pathways, including advanced efficiency, biofuels, hydrogen and electric vehicles.



Marc Melaina is a Senior Engineer with the National Renewable Energy Laboratory. His research involves modeling alternative fuel infrastructure development, market barriers, stakeholder decisions, and low-carbon transportation scenarios. Before joining NREL in 2007, Dr. Melaina served as a research track director within the Institute of Transportation Studies at the University of California at Davis.



Levi Tillemann is the Cal and Jeff Leonard Fellow at the New America Foundation and author of "[The Great Race: The Global Quest For The Car Of The Future](#)". Dr. Tillemann previously served as Special Advisor for Policy and International Affairs at the US Department of Energy. Prior to that, he was the CEO of IRIS Engines - a company he co-founded to develop a more efficient, and more powerful combustion engine

The remaining webinars in the Future of Sustainable Transportation Fuels cover (no dates yet):

- Webinar 3: Recycling CO₂ to Liquid Hydrocarbon Fuels
- Webinar 4: Challenges and Opportunities in Designing Good Metrics to Assess Promise

For more information and any questions, please contact Dr. joni newcomer at newcomer@nmsu.edu or 202-9989.