

Shaping the Transportation Revolution Roundtable

Jacob Ward, U.S. Department of Energy – Vehicle Technologies Office
Margaret Taylor, Stanford University & Lawrence Berkeley National Laboratory

Wednesday, October 21

1:00 – 5:00 pm (*includes 1 break | no lunch*)

Offered at no charge

Workshop is not limited

Workshop Overview:

The transportation system is undergoing rapid change in the face of demographic shifts and technological innovation. How can new knowledge about individual and organizational behavior and decision-making help direct that change toward a low-energy future? What insights can social science research and engagement with the humanities bring to the tricky issues involved in a low-energy transformation of the transportation system? What needs to be learned in the areas of behavior/decision science in the next 3 years, the next 5-7 years, the next 10 years, etc., to support this low-energy transition most effectively?

This workshop, co-hosted by the U.S. Department of Energy (DOE) and Lawrence Berkeley National Laboratory, seeks to engage a broad range of researchers and practitioners in an effort to begin wrestling with these questions. Specific objectives of this follow-up to the BECC spotlight on the future of transportation, which will help motivate and scope new DOE efforts to apply behavior and decision science to advance transportation energy goals, include:

- Strengthening the linkage between individual and organizational behavior/decision science and topics associated with reducing the energy associated with passenger travel and goods movement;
- Gathering new insights about the behavior and decision/making of transportation system users, value chain actors, and oversight bodies, given changing demographics/consumer preferences and new transportation technologies (e.g., vehicle technologies; technologies that enable transport-as-a-service options; information technologies that enhance existing transportation system elements, etc.);
- Learning from a range of social sciences, such as economics, psychology, sociology, anthropology, etc. regarding data, quantitative/qualitative analytical approaches, and modeling techniques;
- Identifying future research needs and opportunities.

Tentative Agenda:

1:00p Welcome and Introductions

- *Jacob Ward, Program Manager for Analysis, U.S. DOE Vehicle Technologies Office*
- *Margaret Taylor, Project Scientist, Lawrence Berkeley National Laboratory*

1:15p Background and Motivation – The Big Picture of Smart Mobility

- Transportation as a user-oriented system
Jillian Anable, Professor and Chair of Transport and Energy Demand, University of Aberdeen
- Vehicle ownership preferences: Engaging with new technologies and business models
Regina Clewlow, Research Associate, Stanford University
- U.S. transportation and demographic trends
Don Pickrell (Invited), Chief Economist at U.S.DOT's Volpe, the National Transportation Systems Center

2:00p Responses to Opening Presentations – Candid Observations and Provocative Questions

- Behavior/Decision Data: Knowns, unknowns, gaps, and opportunities
Paige Fitzgerald (Invited), Manager of the Waze Connected Citizens Data Exchange Program
- Behavior/Decision Modeling: Current toolset, near-term challenges, and long-term opportunities
Pat Mokhtarian (Invited), Professor & Group Coordinator of Transportation Systems Engineering, Georgia Tech
- Behavior/Decision Insight and Public/Private Application: the DOE Opportunity Space
Reuben Sarkar, U.S. DOE Deputy Assistant Secretary for Transportation

2:45p Break

3:00p Conversations in Action—Breakout discussions to brainstorm on research needs. Leading the group conversations are:

- Data: *Jeffrey Gonder, Senior Engineer, NREL Center for Transportation Technologies & Systems, NREL*
- Modeling: *Joshua Cunningham (Invited), Branch Chief, Sustainable Transportation Technology, California ARB*
- Insight for Public/Private Application: *Susan Handy (Invited), Professor & Director of National Center for Sustainable Transportation, UC Davis*

3:45p Guided Open Discussion

In light of the big picture trends related to smart mobility, what are the key transportation energy behavior research needs for data, modeling, and public/private application? ...in the next 3 years? ...the next 5-7 years? ...the next 10 years and beyond?

4:30p Summary, Final Discussion, and Distillation

5:00p Adjourn

About the organizers:



Jacob "Jake" Ward serves as the Program Manager for Analysis in the Vehicle Technologies Office of the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy. His work includes advanced vehicle and energy efficiency market analysis, technology forecasting, macroeconomic benefit accounting, and the public distribution of vehicle technology information. He received the Secretary's Appreciation Award in 2010 for his work interpreting the long-term benefits of Recovery Act projects.

Jake joined the DOE in 2008 as a Presidential Management Fellow after earning a Master of Public Policy from Georgetown University, where he focused on Environmental and Regulatory Policy and International Policy and Development. He also holds a BS in Mechanical Engineering and BAs in Latin American Studies and the Plan II Honors interdisciplinary liberal arts program from the University of Texas at Austin.



Margaret Taylor investigates how policy and innovation interact in climate and energy-related industries. Her research aims to inspire practical solutions to the environmental, economic, and security challenges associated with energy use. A former professor of public policy at Berkeley and co-chair of the annual Behavior, Energy, and Climate Change conference, Margaret has dual appointments at Stanford's Precourt Energy Efficiency Center and at Lawrence Berkeley National Laboratory.