NUTC Seminar Series


Vehicle Choice Modeling Efforts at the U.S. Department of Energy

U.S. Department of Energy (and Argonne National Lab) visit to Northwestern University

October 14, 2014 - 3:00-4:00 pm

Location: McCormick School of Engineering, CEE Conference Room – Rm A230

Abstract: The market for plug-in electric vehicles in the U.S. is inherently uncertain; analysts have projected market penetrations ranging from near-nothing to near-market saturation over time. One useful analytical framework for making sense of this broad future uncertainty is a vehicle choice model, which estimates consumer willingness-to-pay at the interface of advanced vehicle characteristics and driver preferences. This presentation will introduce and discuss a suite of six U.S. Department of Energy and National Laboratory vehicle choice models designed and used to explore technology and policy options to facilitate an electric mobility future. Special focus will be made on the past application—including structure comparison, input standardization, and policy analysis—and future potential application (both by DOE and its national labs, as well as through potential external collaborations) of these models

Speakers

Jacob W. Ward
Program Manager, Vehicle Technologies Office
U.S. Department of Energy, Washington, DC

Thomas S. Stephens
Principal Transportation Systems Analyst
Argonne National Laboratory, Argonne, IL

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.

Dr. Thomas Stephens is a member of the Systems Assessment Section in the Energy Systems Division at Argonne National Laboratory. He examines implications of new vehicle technologies for energy use and greenhouse gas emissions over the lifecycles of vehicles and fuels as well as their potential costs and market potential. He analyzes the various factors that influence consumer adoption of new vehicle types of vehicles and how new types of vehicles might be used, e.g. driving and fueling or charging patterns. He also examines models of consumer vehicle choice for light duty passenger vehicles.

He has a master’s degree from the School of Natural Resources and Environment at the University of Michigan and a Ph.D. in Chemical Engineering from the University of Massachusetts. Prior to joining Argonne, he developed of materials and processes and provided production support for various aerospace and defense applications at Los Alamos National Laboratory and the Naval Air Warfare Center and worked for a year at the U.S. Department of Energy (DOE) Vehicle Technologies Office.