



EPP and Center for Climate and Energy Decision Making Sponsored Seminar

Sonia Yeh

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Institute of Transportation Studies

University of California, Davis

Presenting on:



“Modeling to Support California’s Climate Policy”

April 13th, 2015

12:00 noon

(Lunch will be served)

Baker Hall 129 Conference Room

Department of Engineering and Public Policy

Seminar Abstract:

California is a leader in developing and implementing policies that reduce greenhouse gas emissions, improve air quality, and improve efficient use of energy and other resources. At the same time policymakers are often limited in their access to transparent and high-quality technical and economic models that can help them evaluate plausible future scenarios and assess environmental and economic impacts of current or proposed policy targets and policy instruments. This talk will start with the context of how modeling tools have been used to support state in setting policy targets and goals. Then I will focus on our recent research in strengthening the demand side modeling in energy economic models, particularly in the areas of consumer choice modeling and incorporating demand response in energy system models. In particular, I will discuss how we use optimization model to mimic the “behaviors” of choice model by creating consumer groups (addressing heterogeneity in demand), creating clones (heterogeneity in preferences), adding disutility terms (consumers maximizing utilities), and adding random disturbance terms (nested multinomial logit). I will use specific examples to illustrate how we analyze the impacts of non-regulatory policies in incentivizing EV adoption in California.

Speaker Bio:

Dr. Sonia Yeh is a research scientist at the Institute of Transportation Studies (ITS), and faculty member of the Transportation, Technology and Policy (TTP) graduate group and Graduate Group in Ecology (GGE), University of California, Davis. She is also an adjunct professor at the Department of Engineering and Public Policy, Carnegie Mellon University. Her research focuses on analyzing possible transition paths towards sustainable future in energy and the specific resource, technological, environmental and policy challenges associated with the transitions. She leads research programs in Best Policy and Incentive Strategies for Alternative Fuel and Energy, and Energy System Modeling for the Sustainable Transportation Energy Pathways Program (STEPS) within ITS.

Dr. Yeh’s expertise is in energy economics and energy system modeling, lifecycle analysis of greenhouse gas emissions, alternative transportation fuels, sustainability standards, and technological change induced by government policy. Between 2007 and 2013, she co-led the collaborative team from UC Davis and UC Berkeley to support the design of California’s Low Carbon Fuel Standard (LCFS) and co-directed the National Low Carbon Fuel Standard Project participated by six universities and research institutes across the US. She regularly advises legislators and government agencies in California, the Western states and internationally, and chairs expert workgroups for governments and NGOs. She received Academic Federation Award for Excellence in Research by the University of California, Davis in 2014.