

TRANSPORTATION ENGINEERING SEMINAR

Optimizing the Rollout of Filling Stations for Alternative-Fuel Vehicles

Friday, April 10, 2015

3:00pm to 4:30pm

Please join us in Schwada Building (SCOB) room 101 

Michael Kuby, Ph.D.

Professor, School of Geographical Sciences and Urban Planning

Lack of refueling infrastructure is considered the #1 barrier to the transition to electric, hydrogen, and natural gas vehicles. This presentation will introduce the trip-based approach to optimizing the location of alternative-fuel station stations for a successful rollout of new fuels and vehicles. The Flow Refueling Location Model maximizes the number of trips that can be successfully completed, assuming that drivers stop along their way on their shortest paths between their origins and destinations, and given a maximum driving range between fill-ups and the number of stations to be built. This presentation will introduce the trip-based modeling approach as well as survey research evidence for whether drivers tend to refuel near home or somewhere along their route. Recent advances for long-distance trucking, promoting consumer purchase of vehicles, and locating near freeway interchanges will also be introduced.



Michael Kuby is a Professor in the School of Geographical Sciences and Urban Planning at Arizona State University, and Director of ASU's Interdisciplinary Graduate Certificate Program in Transportation Systems. He earned a Bachelor's degree from The University of Chicago in 1980 and a Ph.D. from Boston University in 1988, both in Geography. His research interests are in transportation, energy, and geospatial optimization of sustainable infrastructure networks. He has focused on alternative-fuel stations and driver behavior since 2002. His work has been funded by the U.S. Department of Energy, the National Science Foundation, and the World Bank, among others. He currently serves on the editorial boards of the International Regional Science Review and the Journal of Transport Geography and is Location Area Editor for the journal Networks and Spatial Economics. Recently, he co-edited the April 2015 Arizona Town Hall Background Report on Transportation, to which many ASU professors contributed.



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