

Dave Tuttle

Integration of PEVs and the Electric Grid, Grid Renewables

Department of Electrical and Computer Engineering

Advisor Dr. Ross Baldick

Education & Background:

- University of Texas at Austin: PhD Studies:
 - Power Systems I/II, Power Electronics, Wind Turbine modeling, Power Quality, LMP, Energy Policy
- Master of Electrical Engineering (Highest Honors) , B.S. (Highest Honors) University of Louisville
- Microprocessor and Computer system design: IBM (Power1/2sc/3, 601, Deep Blue, SOI),Sun Microsystems (CMP)
- MBA, The University of Texas at Austin (Dean's Award, Sord Scholar)
 - Technology Transfer, Intrapreneurship, diversification and renewal

Research Areas & Interests:

- PEVs and the Electric Grid: Firming renewables with intelligent PEV charging:
 - Modeling of synergistic charging of vehicles with renewable generation
- Electricity Market/Economics, Energy policy, Energy economics
- Communications for intelligent PEV charging
- PEV technologies and trends
- V2H (Vehicle to Home): PEVs acting as backup generator to a home
- PEV grid infrastructure/Smartgrid (DOE Texas River Cities Project, DOE Texas Triangle Project, Pecan Street)

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Papers , Publications, Presentations, other activities:

- The Evolution of Plug-In Electric Vehicles-Grid Interactions, w/Dr. Baldick, *IEEE Transactions on Smart Grid Special Issue on Transportation Electrification and Vehicle-to-Grid Applications*.
- Electrified Vehicle Technology Trends, Infrastructure implications, and Cost Comparisons w/Dr. Kockelman, published in the *Journal of the Transportation Research Forum*
- GridSec2012: Home Energy Management Systems (HEMS), Home Area Networks (HANS) and Plug-In Electric Vehicles (PEVs), Irving, Texas, March 2012
- EPRI Plug-In 2012 Conference Presentation: BEV Range Sufficiency, PHEV Electrification of Miles, TCO, & Increasing PEV Adoption Rate, July 2012,
- DOE PEV Projects:
 - Texas River Cities (Austin-San Antonio Corridor),
 - Texas Triangle (Dallas-Houston-San Antonio-Austin)
- Peer Reviews of IEEE and TRB papers : 10
- USAEE (U.S. Association for Energy Economics) Case Competition Judge, Fall 2012