



## Call for Papers

### IEEE Transactions on Smart Grid

# Special Issue on Transportation Electrification and Vehicle-to-Grid Applications

Current transportation systems are heavily based on the century-old technology of internal combustion engines (ICE). Electrification is a clear trend to improve efficiency, performance, and sustainability of transportation systems. A long-term transportation electrification goal is to integrate the transportation industry with the electric power industry, generate more and more electricity from Carbon-free and renewable energy sources, and use the electricity in transportation. Electricity is cleaner, greener, more affordable, and domestically produced in many parts of the world. As the electrification level is increased in transportation, the electric power grid is getting cleaner and greener as well since more renewable energy sources provide power to the grid. This special issue is focused on transportation electrification and its smart grid and vehicle-to-grid applications.

Prospective authors are invited to submit manuscripts for review for publication in this special issue. Original research and practical contributions as well as surveys and state-of-the-art tutorials are welcome. Topics of interest include, but are not limited to, the following:

- Plug-in Electric and Hybrid Electric Vehicles
- Vehicle-to-Grid (V2G) and Vehicle-to-Home (V2H) Interface and Applications
- Energy Storage; Hybrid Battery/Ultra-Capacitor Energy Storage Systems
- Charging Stations; Level I, II, and III Charging; Fast and Opportunity Charging
- Onboard Chargers; Vehicle Connectivity Modules
- Electrified Powertrains and Applications of Power Electronics and Electric Machines
- Electrification of Heavy-Duty Vehicles
- Mass Transit/Public Transportation Electrification; Transit Buses; Rail Vehicles; Trains and Locomotives
- Utility Issues Related to Plug-in Vehicles
- Vehicle Grid Communication and Control; Standards; Modeling and Simulations
- Emissions; Environmental Impacts; Source-to-Wheel (STW) Analysis
- Demonstration Projects and Case Studies

### Submission of Manuscripts to the Transactions:

IEEE Transactions on Smart Grid is published quarterly in March, June, September, and December of each year. This special issue is targeted for December 2011. Complete manuscripts for the special issue are to be submitted by March 25, 2011 electronically via <http://mc.manuscriptcentral.com/tsg-pes>. For manuscript preparation, please refer to the Author's Kit available at <http://www.ieee-pes.org/meetings-and-conferences/calls-for-papers/pes-authors-kit>. Authors must complete the IEEE electronic copyright form before the publication of the manuscript. Copyright is not transferred to IEEE unless the paper is accepted and published. For additional information regarding the call for papers, please contact the Guest Editor-in-Chief of this special issue, Dr. Ali Emadi (Illinois Institute of Technology) at [emadi@iit.edu](mailto:emadi@iit.edu).

### Important Dates:

- Full Paper Submission Deadline: March 25, 2011
- Expected Final Acceptance of Manuscripts: September 1, 2011
- Expected Publication Date: December 2011

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