



Welcome to PHEV News, the latest news and information on the SMART@CAR program at The Ohio State University, Center for Automotive Research.



AEP Finishes Internal Assessment of Plug-in Hybrid Electric Vehicles

by Larry Dickerman— Director, Distribution Engineering Services, American Electric Power

American Electric Power (AEP) recently completed its internal assessment of PHEV technology. The team, which consists of over twenty people across nearly every area of the company, provided what AEP believes to be one of the most comprehensive looks into PHEV technology impacts thus far.

AEP approached this assessment by looking at the potential impact both on its electrical system and its business. While some of the detailed results are still confidential, AEP has made the following conclusions:

Technology

- PHEV technologies exist and are proven. However, cost remains the primary barrier to customer adoption.*
- AEP does not expect PHEV load to have a major impact on its generation and transmission system for at least 10-15 years. However, a significant near-term impact on the company's distribution system is expected at the zip code level.*
- Implementation of AEP's gridSMART initiative is a key component in managing PHEV/EV technology. By implementing smart grid technologies on its system, AEP can leverage its use of capital to solve multiple issues, including PHEV load. The technology would allow AEP to make control over vehicle charging nearly seamless to the customer, while maintaining an optimal load shape for its electrical system.*

Policy

AEP must take an active approach in the federal legislative and state regulatory processes to secure its interests for both its shareholders and customers.

- In state or federal legislation related to renewable and energy efficiency performance standards, AEP needs to secure provisions for load growth from PHEVs.*
- With carbon allowance allocation being hotly debated, AEP needs a mechanism to transfer additional allocations to the electric utility industry as tailpipe emissions are displaced by electric generation related emissions.*

Customers

- *Customers and regulators need to understand the societal impact of the vehicle technology and how they can play an active role in improved national energy management.*

Going forward, AEP plans to lead in the industry by leveraging its technological capabilities and geographic footprint. AEP will utilize its Dolan Lab and Distributed Energy Resources group to gain a better understanding of how it can integrate PHEV technology into its electrical system. It will also utilize its presence in its 11 state jurisdictions with hopes to develop national PHEV standards and regulatory plans.

Driving Ohio Forward—Conference, Columbus, OH—June 3-4, 2009

Clean Fuels Ohio (www.CleanFuelsOhio.org) is pleased to present a conference designed to educate Ohio's decision makers on advanced transportation energy, vehicle technologies, and the policies necessary to "Drive Ohio Forward." Clean Fuels Ohio has received generous support from the Cleveland and George Gund Foundations to perform outreach and education around our vision for Ohio's transportation future. The agenda features an opening exhibition and alternative fuel vehicle ride and drive as well as four major workshops and over a dozen breakout sessions. These sessions are divided among three main topic areas: Electrification of Transportation, Gaseous Fuels, and Biofuels.

Info, agenda and registration at www.drivingohioforward.org/page/conference-3

Battery Research Symposium—held at CAR, March 20, 2009

The Center for Automotive Research held its first "Battery Research Symposium" on March 20, 2009. The workshop was a huge success with over 50 people in attendance, representing 16 companies: American Electric Power, Argonne National Laboratory, Battelle, Bright Automotive, Caterpillar, EWI, Ford, General Motors, LTC (Lithium Technology Corporation), Lotus Engineering, Magna, Oak Ridge National Laboratory, PJM Interconnection, PlugSmart, SEA and Vanner. Presenters included: Prof. Yann Guezennec, Prof. Steve Yurkovich, Prof. Giorgio Rizzoni, John Neal, B.J. Yurkovich, Nick Picciano, Simona Onori, Lorenzo Serrao, Vincenzo Marano, Shrikant Nagpure, Prof. Suresh Babu, Prof. B. Bushan, Stephanie Stockar.

Info and agenda at <http://car.osu.edu/node/123>. CDs with presentations are available upon request.

SMART@CAR Meeting—MEMBERS ONLY, June 4, 2009

CAR is pleased to invite SMART@CAR members to the projects review meeting of the SMART@CAR program, scheduled for Thursday, June 4, 2009 at The Center for Automotive Research (CAR) at The Ohio State University.

If your company is not a member it is not too late to join! Please contact us if you would like to be involved in the meeting.

Founding Members

- American Electric Power
- Duke Energy
- Electric Transportation Engineering Corporation (eTec)
- PlugSmart/Juice Technologies, LLC
- PJM Interconnection
- Vanner, Inc.
- CAR Industrial Research Consortium (Caterpillar, Chrysler Motors, Eaton, Ford Motor Company, General Motors Corporation, Hitachi, Oshkosh Corporation, and TRC Inc)
- The Ohio State University- College of Engineering

Affiliates

- Buckeye Power, Inc.
- BottomLine Resource Technologies LLC
- Clean Fuels Ohio

News

SMART@CAR on Intelligent Utility Magazine — March / April 2009

The magazine addresses core smart grid components, including distribution automation, substation automation, smart meters, demand response, home area networks, intelligent consumer devices, distributed generation, SCADA, GIS, outage management systems, mobile workforce technologies, work management and asset management. *Intelligent Utility* also covers broader issues - both inside and outside of the utility - that impact the grid. These areas include capital planning, finance, enterprise IT systems, aging workforce, regulation, legislation and the environment.

Read the article (pages 59-60) at

http://www.nxtbook.com/nxtbooks/energycentral/iu_20090304/index.php?startid=58#/60

SMART@CAR helps companies bring power to the marketplace

Read the article from OSU onCampus <http://oncampus.osu.edu/article.php?id=2701>

Current Research

Deliverables for Quarter 1 have been posted on our website www.car.osu.edu/smartatcar DOWNLOAD AREA (members only access with userID and password).

Contact Information

For additional information and to join the program, please visit our website (www.car.osu.edu/smartatcar) or contact:

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FOUNDING MEMBERS



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