

EV Everywhere Grand Challenge – Electric Drive (Power Electronics and Electric Machines) Workshop

Tuesday, July 24, 2012 – Doubletree O’Hare, Chicago, IL

Event Objective: *DOE aims to obtain stakeholder input on the Power Electronics and Electric Machines (PEEM) goals of the EV Everywhere Grand Challenge. This input will advise the aggressive next-generation technology research and development necessary to enable U.S. companies to be the first in the world to produce plug-in electric vehicles (PEVs) that are as affordable and convenient for the average American family as today’s gasoline-powered vehicles within the next 10 years.*

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| 8:30-8:35 AM | CONTINENTAL BREAKFAST |
| 8:30-8:35 AM | CALL TO ORDER
<i>Mr. Patrick Davis, DOE EERE Vehicle Technologies Program</i> |
| 8:35-8:50 AM | WELCOMING REMARKS—SETTING THE STAGE
<i>Dr. David Danielson, Assistant Secretary of Energy, EERE</i> |
| 8:50-9:05 AM | RESULTS FROM INITIAL FRAMING WORKSHOP
<i>Patrick Davis, DOE EERE Vehicle Technologies Program</i> |
| 9:05-9:25 AM | THE EV-EVERYWHERE CHALLENGE – TARGET SETTING
<i>Jake Ward, DOE EERE Vehicle Technologies Program</i> |
| 9:25-9:50 AM | ELECTRIC DRIVE COMPONENT TECHNOLOGY—CURRENT STATE-OF-ART
<i>Susan Rogers, Steve Boyd, DOE EERE Vehicle Technologies Program</i> |
| 9:50-10:05 AM | ARPA-E's POWER ELECTRONICS (ADEPT) AND MOTORS (REACT) PORTFOLIO CHALLENGES & OPPORTUNITIES
<i>Mark Johnson, DOE ARPA E Program</i> |
| 10:05-10:10 AM | GUIDELINES AND CHARGE TO BREAKOUT SESSIONS
<i>Steven Boyd, DOE EERE Vehicle Technologies Program</i> |
| 10:10-10:30 AM | BREAK (move into breakout rooms) |
| 10:30-12:00 PM | BREAKOUT SESSION #1: (three groups) <ul style="list-style-type: none">• Traction Drive System• Power Electronics and Thermal Management• Electric Motors and Critical Materials |

Breakout group introductions and presentations:

- *Introductions and discussion of current state-of-art of the breakout group's focus area.*
- *Are the initially posed EV Everywhere electric drive component performance and cost targets achievable?*
- *What role can the breakout group's focus area play on achieving these targets? What are the major pathways to cost reduction? What are the major barriers?*

12:00-12:30 PM BREAK (pick up lunch for working lunch in breakout session)

12:30-2:00 PM BREAKOUT SESSION #2: (same three groups)

Key Questions to be Addressed:

- *What are the specific highest-impact critical technology breakthroughs that are needed to achieve the EV-Everywhere Challenge?*
- *Are there "out of the box", risky, or other approaches that should be considered?*
- *Each participant is encouraged to informally endorse or propose a single research idea or concept that could be applied to EV Everywhere*

2:00-2:15 PM BREAK

2:15-3:40 PM BREAKOUT SESSION #3 – DEVELOP ACTION PLANS & PREPARE SLIDES OF MAJOR FINDINGS

- *What role can the breakout group's focus area play toward enabling the success of the technologies being discussed by the other groups?*
- *What advances from the other technology areas will enable success in your focus area?*

3:40-3:50 PM REASSEMBLE FOR REPORTING OUT FROM BREAKOUT GROUPS

3:50-4:50 PM BREAKOUT GROUPS REPORTS

- Traction Drive System
- Power Electronics and Thermal Management
- Electric Motors and Critical Materials

4:50-5:00 PM WRAP-UP / CLOSING REMARKS

5:00 PM ADJOURN