



ADVANCED BATTERY MANUFACTURING

Enabling the New Electric Infrastructure for Mobility & Power in North America

April 15-17, 2009 | Almas Temple Club | Washington, D.C.

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Thursday, April 16, 2009

8:30-8:45 Chairman's Introduction
Richard Baxter, *Senior Vice President*, ARDOUR CAPITAL INVESTMENTS

8:45-10:15 **National Policy Perspectives on the Role of Advanced Batteries for a North American Clean Energy Infrastructure**
We may be in the midst of the most dramatic moment in the history of the North American auto industry. It seems likely that federal funding beyond the \$25 billion re-tooling loan will be available to support the integral role of energy storage in the new clean energy infrastructure. This panel of congressional experts and leaders of key trade associations and policy groups will explore the new landscape of federal intervention in clean power and transport.

Moderator

Richard Eidlin, *Business Outreach Director*, THE APOLLO ALLIANCE

Panelists

Ric Fulop, *Co-Founder and Vice President*, A123 SYSTEMS and *Board Member*, ELECTRIC DRIVE TRANSPORTATION ASSOCIATION

James Greenberger, *Partner*, REED SMITH LLP

(Representative of the NATIONAL ALLIANCE FOR ADVANCED TRANSPORTATION BATTERIES (NAATBatt))

Ron Minsk, *Senior Vice President for Policy*, SECURING AMERICA'S FUTURE ENERGY

Margo Tsirigotis Oge, *Director, Office of Transportation and Air Quality, Office of Air and Radiation*, U.S. ENVIRONMENTAL PROTECTION AGENCY

Mark Wagner, *Vice President Government Relations*, JOHNSON CONTROLS, INC.

10:15-10:45 Networking Break

10:45-11:45 **State Support for New Battery Manufacturing**

Against the backdrop of shrinking state revenues, what kind of support—monetary or otherwise?—can technology companies and supply chain vendors look to from state governments? How do states see the economic contribution of a retooled auto industry focusing on the electric vehicle? This panel will assemble state officials and NGO officials to explore how a massive industry transition can be assisted, help with meeting state and Federal codes and requirements for establishing manufacturing facilities, and how it fits with existing state environmental, employment, transit and commerce policies. The panel will also touch on the role of emerging technology hubs and “knowledge bases.”

Moderator

Michael Stosser, Attorney at Law, DAY PITNEY LLP

Panelists

Jose Beceiro, Director of Clean Energy, Economic Development, AUSTIN CHAMBER OF COMMERCE

David Crane, Special Advisor for Jobs and Economic Growth, OFFICE OF GOVERNOR ARNOLD SCHWARZENEGGER

Nick d’Arbeloff, President, NEW ENGLAND CLEAN ENERGY COUNCIL

Doug Parks, Senior Vice President, MICHIGAN ECONOMIC DEVELOPMENT CORPORATION

Jim Stanford, Economist, CANADIAN AUTO WORKERS

11:45-1:15 Luncheon Presentation by:

Charles Gassenheimer, CEO and Chairman, ENER1 INC.



1:15-2:15 **Funding Advanced Battery Factories: Who Will Pay?**

Solid estimates for building an advanced battery factory from scratch are hard to come by. Computer chip fabrication lines can be on the order of \$1B plus. Where will the equity and debt to get these facilities built come from? Are venture investors or private equity open to partnering with the taxpayer? If so, under what kinds of terms? Even if the money is there, what about the tools and management expertise, not to mention production line skilled workers? Will financing be available when the auto industry as a whole is ailing? What are the macroeconomic factors that would aid or hinder the viability of a handful of manufacturing facilities? Are there new design and manufacturing models on the horizon that cross

traditional barriers and might invigorate a new hybrid clean energy/transport industry?

Moderator

Richard Baxter, Senior Vice President, ARDOUR CAPITAL INVESTMENTS

Panelists

Rob Day, President, RENEWABLE ENERGY BUSINESS NETWORK

William Lese, Managing Director, BRAEMAR ENERGY VENTURES

Dhiraj Malkani, Principal, ROCKPORT CAPITAL PARTNERS

Marc van den Berg, Managing Director, VANTAGEPOINT VENTURE PARTNERS

2:15-3:30 **Auto Makers Weigh in on Sourcing Batteries for Next Generation Mobility**

All major auto suppliers have hybrid or electric vehicles on the drawing boards or close to market. Japanese makers have led the way, and followed by European companies, are preparing to shift from hybrid to pure plug-in EV. A raft of upstarts, dedicated from the start to PHEVs, are positioning themselves to meet demand. This panel will present a cross-section of decision-makers responsible for integrating advanced batteries into vehicle design and engineering, and making purchasing decisions. How are they thinking about supply security for lithium or ingredients of alternative chemistries? What are the current feelings about safety, recyclability, affordability, and the consumer's appetite for shortened driving ranges?

Moderator

Brian Wynne, President, ELECTRIC DRIVE TRANSPORTATION ASSOCIATION

Panelists

Mark Aubrey, North American Marketing Director, SMITH ELECTRIC VEHICLES

Nancy Gioia, Director, Sustainable Mobility Technologies and Hybrid Vehicle Programs, FORD MOTOR COMPANY

Gary Starr, Founder, ZAP

John Waters, CEO & President, BRIGHT AUTOMOTIVE

3:30-4:00 Networking Break

4:00-5:30 **Battery Developers on Manufacturing Operations and Supply Chain**
Currently no lithium ion batteries are manufactured in the US, despite the fact that the technology itself originates from US labs. On the other hand, lead acid batteries have a strong US production base, and technology

breakthroughs promise to keep lead acid a real, and often cheaper, option for electric transport of the future. This panel will present the views of leading battery companies on the state of the supply chain, the evolution of the vehicle and grid-connected storage markets, and the economic pros and cons of domestic manufacturing.

Presenter and Moderator

David Howell, *Manager, Electrochemical Energy Storage R&D, Office of Vehicle Technologies, U.S. DEPARTMENT OF ENERGY*

Panelists

Edward Buiel, Ph.D., *Vice President and Chief Technical Officer, AXION POWER INTERNATIONAL, INC.*

Sankar Das Gupta, *CEO, ELECTROVAYA*

Ric Fulop, *Co-Founder and Vice President, A123 SYSTEMS*

Charles Gassenheimer, *CEO and Chairman, ENER1 INC.*

Robert Kanode, *President and CEO, VALENCE TECHNOLOGY*

Ralph Wise, *Director of Technology, ULTRALIFE CORPORATION*

5:30-7:00 **Networking Reception sponsored by:** 

Friday, April 17, 2009

9-9:15 **Chairman's Recap**

9:15-9:45 **Presentation: The Apollo Alliance "Make It America" Program**
The Apollo Alliance is committed to rebuilding the American manufacturing industries, focusing on the renewables, energy efficiency and advanced automotive sectors. Our "Make it America" program calls for federal and state legislation that will incentivize companies, through loans, bonds, tax credits and public-private partnerships, to manufacture the component parts required for a low carbon economy. These policies and increased funding will help create thousands of good jobs, better organize the supply chain and help American firms better compete in a global economy.

Richard Eidlin, *Business Outreach Director, THE APOLLO ALLIANCE*

9:45-11:00 **Plugging Advanced Batteries into the Power Grid: Distributed Storage and the Vehicle-to-Grid Model**
Both lead acid and lithium ion battery makers are targeting "grid-connected" (stationary) storage applications, where batteries are run in

clusters to generate energy in the 1Kw hr or higher range. Another approach, popularized under the “V2G” acronym, is to use the batteries on electric vehicles as a distributed resource for frequency regulation, spinning reserve and backup power. Both approaches will require “smart” home charging and control technology that is still in its early stages. This panel will assemble the leaders defining the shape of the “Smart Garage” of tomorrow and the role of home or business –located batteries in utility demand response programs.

Moderator

Colette Lamontagne, *Managing Consultant, Energy, NAVIGANT CONSULTING, INC.*

Panelists

Paul Heitmann, *Senior Program Architect, COMVERGE, INC.*

Kristen Helsel, *Director, EV Solutions, Efficient Energy Systems, AEROVIRONMENT, INC.*

Edward Kjaer, *Director of Electric Transportation, SOUTHERN CALIFORNIA EDISON*

Kevin Morrow, *Executive Vice President, ELECTRIC TRANSPORTATION ENGINEERING CORPORATION (ETEC)*

Saul Zambrano, *Director, Clean Air Transportation Department, PG&E*

11:00-11:30 Networking Break

11:30-12:00 **Presentation: Regional Green Technology/Manufacturing Incubators and Knowledge Base**

Vehicle electrification will not only require serious public discussion of our overarching energy strategies and their environmental and geopolitical impacts, but also support for new businesses. In the fledgling industries now developing, many businesses will stream into the gaps that exist, both in technical areas, and in services. Staffing these businesses requires collaboration among our universities, government and industry. New models and compacts will develop as we meet the unprecedented challenge of altering the portfolio of vehicle technologies, and it is critical that these new models are both expected, and welcomed.

Anne Marie Sastry, Ph.D., *Founder, SAKTI3 INC.*

12:00-12:15 **Chairman’s Closing Notes**

12:15 Conference Adjourns