



ALTERNATIVE TRANSPORTATION FUELS

Session VI- Automotive Technologies

Tuesday, February 20, 2007

Speaker Biographies

Douglas Arent, Director, Strategic Analysis, NREL and Visiting Fellow, CSIS Energy Program

Douglas Arent is director of strategic energy analysis with the National Renewable Energy Laboratory (NREL). He specializes in strategic planning and financial analysis competencies; clean energy technologies and energy and water issues; and international and governmental policies. Arent also has expertise in strategic market management, product planning, and risk portfolio management. In addition to his NREL responsibilities, Arent is on the Advisory Board of E+Co, a public purpose investment company that supports sustainable development across the globe. He is also on the Advisory Board of the Energy and Environmental Security Institute at the University of Colorado and is the chair of the Quantitative Work Group in support of the Clean and Diversified Energy Advisory Council of the Western Governors' Association. Arent supports education efforts through coaching and judging science competitions and is a judge for the Net Impact national case study competition, where M.B.A. teams present possible solutions with corporate social responsibility and best business practices guidelines. Prior to joining NREL, Arent was a management consultant to clean energy companies, providing strategy, development, and market counsel. Previous positions held include: director of strategic marketing and business development at Network Photonics; director of media gateway products and strategic planning manager at Lucent Technologies (now Avaya); and vice president of business development for Amonix, Inc. Arent holds a Ph.D. from Princeton University, an M.B.A. from Regis University, and a B.S. from Harvey Mudd College in California.

Michael Brylawski, Senior Consultant, Rocky Mountain Institute (RMI)

Michael Brylawski, Senior Consultant, is working with Winning the Oil Endgame implementation efforts and the Breakthrough Design Team. Now in his second tenure with RMI, his diverse work portfolio includes positions at a top-tier management-consulting firm, a Fortune 50 aerospace company, and several roles within RMI in the 1990s, including co-founding RMI's spinoff Hypercar, Inc. (now Fiberforge). He holds an MBA from MIT's Sloan School of Management (where he was a Leader for Manufacturing Fellow), an MS in Mechanical Engineering from MIT, and a BS with

honors in Earth Systems Science from Stanford University. He brings to RMI functional expertise in whole-systems design, market research, operations, competitive and strategic analysis, financial modeling, technology strategy, and corporate venturing. Most recently, Mr. Brylawski was a consultant at the Boston Consulting Group (BCG). At BCG, he worked in a variety of industries-including medical devices, athletic footwear and apparel, aerospace, and vacation ownership. His work included advising senior management on implementing innovative strategic planning processes; reconfiguring the supply chain to speed concept-to-shelf times; and conducting primary market research to unearth latent customer needs. Prior to BCG, he worked for Boeing's Australian subsidiary Hawker de Havilland, where he advised senior management on non-core growth strategies in the aerostructures market, and established a corporate venturing program that led to two new product initiatives. During his first tenure at RMI, Mr. Brylawski was Senior Research Associate, where he led research and consulting engagements with automotive OEMs and suppliers on efficient light-vehicle design and advanced technology adoption strategies. He coauthored five technical papers and the pioneering study *Hypercars: Materials, Manufacturing, and Policy Implications*, lectured and spoke widely, and was named a "Thought Leader" by Ideascop. At Hypercar, Inc., he was co-founder and Vice President of market development. He was responsible for creating and leading the firm's business and market planning processes, including authoring the company's business plans and pro forma financials, and leading primary and secondary market research. He co-resides in Los Angeles and Snowmass, Colo., and is an avid biker, snowboarder, and (aspiring) surfer.

Terry A. Cullum, Director, Corporate Responsibility and Environment & Energy, General Motors Public Policy Center

Terry A. Cullum is currently Director, Corporate Responsibility and Environment & Energy, General Motors Public Policy Center. He is responsible for corporate responsibility issues on a global basis, as well as supporting the staff on global environmental initiatives. Cullum is GM's Liaison Delegate to the World Business Council for Sustainable Development. He is also GM's key contact to the United States Council for International Business and is the current Chair of their Environment Committee.

Cullum began his career at General Motors' Cadillac Motor Car Division as a project engineer in Materials Engineering in 1981. He held various positions dealing with selection of materials, validation testing, and specification development before joining the corporate environmental staff in 1994.

Cullum received his Bachelor of Science degree from the University of Michigan-Dearborn. He is a member of the Society of Automotive Engineers and serves on the following Boards: Center for Sustainable Systems External Advisory Committee at University of Michigan (Chair); ERB Institute External Advisory Board at University of Michigan; Center for Resilience at Ohio State University.

Erik Peterson, Senior Vice President; William A. Schreyer Chair in Global Analysis; Director, Global Strategy Institute, CSIS

Erik Peterson is senior vice president at CSIS and holds the William A. Schreyer Chair in Global Analysis, an endowed position named in honor of the Merrill Lynch chairman emeritus and CSIS Executive Committee member. He is also director of the Center's Global Strategy Institute, the mandate of which is to assess long-range policy challenges and opportunities. In addition, he leads the Seven Revolutions Initiative, a broad-based effort to forecast key trends out to the year 2025. From 1993 to 2003, Mr. Peterson served as director of studies at CSIS. In that capacity, he was responsible for the planning and development of the wide range of research projects at the Center. Mr. Peterson came to the Center from Kissinger Associates, where he was director of research. He holds an M.B.A. in international finance from the Wharton School at the University of Pennsylvania, an M.A. in international law and economics from the School of Advanced International Studies at the Johns Hopkins University, and a B.A. from Colby College. He holds the Certificate of Eastern European Studies from the University of Fribourg in Switzerland and the Certificate in International Legal Studies from The Hague Academy of International Law in the Netherlands. For the past seven years, Mr. Peterson has co-taught a course on global trends at the Schreyer Honors College at Pennsylvania State University. He has also lectured on international economics and finance and geopolitical risk at many colleges and universities, including Chapman and George Mason Universities, Georgia Tech, and the Wharton School. Currently, he is a member of the Global Risk Network of the World Economic Forum, a board member of the Center for Global Business Studies at the Pennsylvania State University, and a member of the Advisory Board of the Center for the Study of the Presidency. In September 2006, in recognition of his achievements at the Center, Mr. Peterson was named by the CSIS Board of Trustees as its 2006-2007 Trustees Fellow.

Steve Plotkin, Transportation Energy Analyst, Argonne National Laboratory

Steve Plotkin is a staff scientist with Argonne National Laboratory's Center for Transportation Research, specializing in analysis of transportation energy efficiency. He has worked extensively on automobile fuel economy technology and policy as a consultant to the Department of Energy, and was a consultant to the National Research Council's study on the *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards*. He is a lead author on the Intergovernmental Panel on Climate Change (IPCC) 2007 Assessment Report on Mitigating Climate Change. He was for 17 years a Senior Analyst and Senior Associate with the Energy Program of the Congressional Office of Technology Assessment (OTA) and prior to that he was an environmental engineer with the U.S. Environmental Protection Agency.

Mr. Plotkin has a BS degree in Civil Engineering from Columbia University, and a Master of Engineering (Aerospace) degree from Cornell University. He is the 2005 recipient of the Society of Automotive Engineers' Barry D. McNutt Ward for Excellence in Automotive Policy Analysis.

Robert Wimmer, National Manger, Toyota Motor North America

Mr. Wimmer is responsible for managing Toyota Motor North America's (TMA) environmental research and advanced vehicle activities. He oversees efforts on the Global Climate and Energy Project (GCEP) at Stanford University, advanced energy production, CO₂ capture/sequestration research, and TMA's interactions with the US Department of Energy. He also coordinates TMA's hybrid and fuel cell vehicle activities with other Toyota divisions and supports alternative fuel and climate change activities within TMA.

Robert has been with TMA for nearly four years and is currently working with Toyota in Japan and other North American Toyota affiliates to analyze the benefits and challenges of alternative fuels, such as ethanol and hydrogen, and issues relating to advanced vehicle deployment.

Prior to joining Toyota Mr. Wimmer was the Technical Director of Fuel Cell Bus Programs at Georgetown University (GU). For 12 years he provided technical and program management oversight during the design, fabrication and testing of five fuel cell / battery hybrid transit buses. He brings a strong systems understanding of fuel cell and hybrid vehicle technology to TMA.

Robert is a California native with an MS in Systems Management from the University of Southern California and a Mechanical Engineering degree from California State Polytechnic University in San Luis Obispo, CA.

He has been an active member of SAE (Society of Automotive Engineers) since 1984.