

Panel Title: Electric Hybrids for Commercial Vehicles

Wednesday, September 7, 2011, 2:00 PM – 3:40 PM

Panel Moderator: William Batten, Director, Government Accounts, Eaton Corporation

Panelists: Vern Caron, ArvinMeritor
Michael Mekhiche, BAE
Mike Stark, Freightliner
Darren Gosbee, Navistar

Panel Summary: This panel is comprised of industry leaders from the commercial vehicle industry – all of whom have a unique interest in electric hybrid development and commercialization. Companies represented on this panel include:

- ArvinMeritor – Vern Caron
- BAE – Michael Mekhiche
- Eaton – William Batten
- Freightliner – Mike Stark
- Navistar – Darren Gosbee

This panel will focus on the opportunities and challenges that exist to successfully commercialize an electric hybrid or electric vehicle in the “Commercial Vehicle” market segment. Issues to be addressed will include:

- Unique vocational requirements for Commercial Vehicles
- Initial cost vs. ROI
- Future R&D focus areas
- Infrastructure needs/requirements
- Reliability needs/requirements

Short Biographies:

William Batten is currently the Government Account Director for the Vehicle Group of Eaton Corporation. In this role, Bill is responsible to develop this new market segment and grow sales to the US Government, both military and non-military, by leading and directing all sales strategy, voice of the customer and industry-government relations activities. Earlier in his career, Bill has held positions in Engineering, Marketing, Business Development, Product Planning and held the position of Business Unit Manager – Europe for Eaton Corporation. Prior to his employment with Eaton Corporation, Bill worked for General Motors Corporation at the Pontiac Motor Division and Allison Transmission Division. Bill has received his MBA degree from Butler University, Indianapolis, IN, in 1989 and BSME degree from the General Motors Institute, Flint, MI, in 1973.

Vern Caron joined ArvinMeritor in April of 2003 as Director of Commercial Vehicle Electronics and is currently director of Commercial Vehicle Hybrid engineering. Projects

initiated since joining ArvinMeritor include development of the drive train for the Unicell/Purolator battery-electric delivery vehicle; release of electronics hardware for the Commercial Vehicle Emissions Thermal Regenerator; development of the dual-mode diesel-electric for class-8 applications (Wal-Mart and Navistar/DOE Super Truck contracts) and release of tire pressure and suspension controls for a number of military programs. From 2000 until 2003, Vern operated Caron Engineering, a consulting firm engaged in hardware, software and systems design for passenger car and commercial vehicle applications. Primary customers included Wabash National, Valeo, AMG and Eaton. Vern spent 12 years (1988-2000) with Eaton Truck Components Division as Chief Engineer of Antilock Brake Systems and later as Manager of Engineering and Product Planning for Advanced Chassis Controls. In addition to ABS projects, responsibility included engineering support for the VORAD program, Tire Pressure Management, and for several of the automated transmission projects. Between 1981 and 1988, Vern was Chief Engineer in charge of Engine Electronics for Navistar's Engine Division. At Navistar, he managed design and development efforts for a variety of engine electronics projects, including cold starting systems, fuel injection electronics, and turbo charger controls. One of these projects was the design of the prototype controls for the HEUI injection system. Vern Caron spent the first ten years of his career at Chrysler Corporation engaged in the design of electronic ignition, fuel injection and emission controls. Among other projects, he was responsible for the design of the engine electronics for the Omni and Horizon car lines. Vern received his bachelors degree in Electrical Engineering from the University of Minnesota in 1971. In 1981, while at Chrysler, he earned a Masters degree in Mechanical Engineering from Wayne State University. In 1987, he received an MBA from Keller Graduate School of Management in Chicago. Vern holds 25 U.S. patents and is registered as a Professional Engineer in Michigan and in Illinois. Vern has been a member of SAE since 1973 and has been active in various SAE committees and subcommittees including the Convergence Committee and Buckendale Committee. (Vern authored the 2001 Buckendale Lecture "Commercial Vehicle Electronics Design"). He is currently a member of the Truck and Bus Council, past Chairman of the Heavy Duty Brake Committee and current Chairman of the Advanced and Hybrid Power Train Committee.

Michael Mekhiche has over 20 years of business management and technology development experience in the field of power management, conversion and propulsion systems development and implementation. He is currently Director of Programs in the Power & Energy Management business area with BAE Systems' Electronic Solutions Sector and a recognized BAE Systems Engineering Fellow. He received his MS and PhD in Electrical Engineering in 1989 and 1993 respectively. Mike's responsibilities include leadership and ownership of all development, implementation, production and market introduction activities of the HybriDrive® Parallel hybrid propulsion family of products at the global scale. Prior to his current position, Mike was a Chief Engineer working on the development of new and advanced power management and propulsion capabilities for both military and commercial applications. Before joining BAE Systems, he held several positions with other major defense and commercial employers such as DRS Technologies, Kaman Aerospace and SatCon Technology Corp. His responsibilities ranged from Engineering Manager and Technical Director through

General Manager and led multi-million dollar power systems related program execution in the ground, naval and airborne markets. Mike authored a number of publications in internationally recognized scientific journals and magazines. Mike and his family live in Binghamton, New York.

Darren Gosbee is Director of Electric Vehicle and Hybrid Powertrain Product Development for Navistar Corporation. At Navistar's Engine Development Centre in Melrose Park Chicago, Illinois, and Truck Development Centre in Fort Wayne, Indiana, he is responsible for the engineering activities of both the EStar electric vehicle and the hybrid powertrains for the corporation's vehicle brands. Prior to his appointment to Navistar Inc. Mr. Gosbee was the Senior Manager Head of European Powertrain Electronics, responsible for all the product development, program delivery and commercial aspects of Visteon's European Powertrain business. This responsibility covered electronic control systems, air and fuel handling components and powertrain cooling systems components for both diesel and gasoline engines. Mr. Gosbee also led the advanced powertrain development activities ranging from next generation of engine and vehicle control systems to Hybrid Integrated Stop / Start technologies. Mr. Gosbee holds a Bachelor's Degree in Electrical and Electronic engineering from City University, London and a Master's Degree in Advanced Automotive Engineering from Loughborough University. He is a Fellow of the Institute of Engineering Technology and a Chartered Engineer registered with the Engineering Council and is a member of SAE.