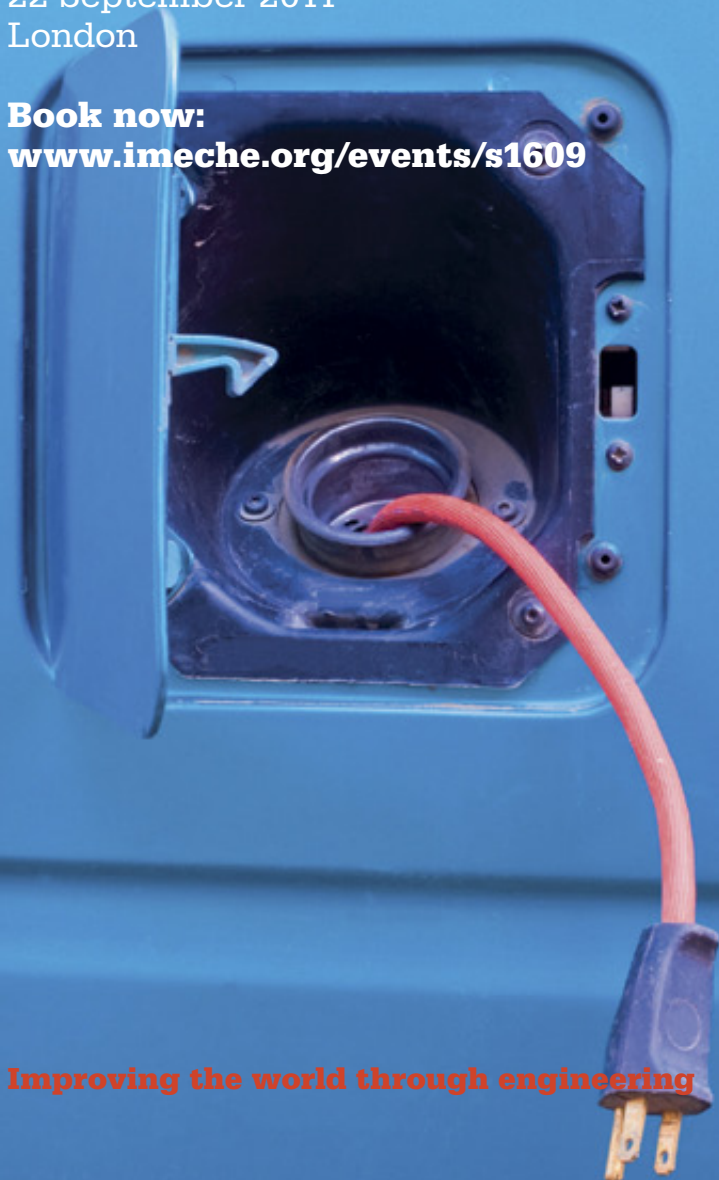


INNOVATION, INTEGRATION AND IMPLEMENTATION: THE ELECTRIC VEHICLE REALITY.

Institution of
**MECHANICAL
ENGINEERS**

22 September 2011
London

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ATTENDING WILL HELP YOU:

- Address how we can ensure consumer affordability
- Hear the latest developments in EV technology
- Update on infrastructure implementation plans
- Discuss case studies of user experience

INNOVATION, INTEGRATION AND IMPLEMENTATION: THE ELECTRIC VEHICLE REALITY.

For electric vehicles (EV's) to impact on the wider passenger car market, it is essential not only that the technology of the vehicles themselves is of the highest quality, but also that the vehicle is both affordable and supported by a reliable infrastructure.

The seminar programme will explore the latest technological developments as manufacturers start to bring electric cars to the mass market; focusing on the infrastructure developments required to support the vehicles, consumer affordability and user experience, particularly of range and charging patterns.

With speakers from both manufacturers and those involved in implementation projects, the programme will cover a rounded view of the future of electric vehicles and provide a good opportunity for discussion.

THIS EVENT WILL ATTRACT:

Automotive Engineers
Design Engineers
Government / Local Government with Interest
Manufacturers
Students / Recent Graduates
Electrical Engineers
Environmental Specialists
Low-Carbon Specialists

TECHNICAL ADVANTAGES:

- Hear the latest developments in EV technology
- Update on infrastructure implementation plans
- Discuss case studies of user experience
- Consider the latest information on range and charging patterns
- Examine the long-term future of EVs

BENEFITS OF ATTENDANCE:

- Address how we can ensure consumer affordability
- Develop an understanding of infrastructure plans
- Understand the projects in place to integrate electric vehicles
- Network with key industrial peers to improve business opportunities
- Chance to pose specific questions, and voice your opinions
- Continual development from seminar presentations
- Share your experiences

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THE ELECTRIC VEHICLE REALITY

22 SEPTEMBER 2011

BROADWAY HOUSE, TOTHILL STREET, LONDON SW1H 9NQ

09:00 REGISTRATION & REFRESHMENTS

09:30 CHAIRMAN'S INTRODUCTION

09:45 ELECTRIC VEHICLE INFRASTRUCTURE; PLANS AND IMPLEMENTATION

- Perceived need for a planned infrastructure
- Introduction to the East of England from perspective of an EV
- Stakeholder demands on infrastructure
- Physical Infrastructure
- Power Infrastructure
- IT Infrastructure
- Interoperability
- Finally – the user experience

Dr Keith I Bevis, Managing Director, EValu8 Transport Innovations Limited

Keith Bevis is the Managing Director of EValu8 Transport Innovations Limited, the company that has been set up by the University of Hertfordshire to lead the EValu8 "Plugged in Places" project for the East of England. The project combines the initial build up of the infrastructure for electric vehicles across 7,500 square miles together with the promotion of electric transport to the public and developing the innovation potential for companies in the region. The network is presented to the public as "Source East".

This builds on his work at the University, building the practical links between academia and industry and particularly with SMEs across the region. This has included work on low carbon technologies and skills development and contributed to the Engineering Doctorate he was awarded in 2009. Before joining the University Keith had twenty five years of experience across a range of companies from GEC-Marconi down to SMEs in Medical electronics.

10:15 FORD ELECTRIC VEHICLE EXPERIENCE, AND FUTURE PLANS FOR PRODUCTION

- Prior electric vehicle research/demonstration projects
- Current electric vehicle demonstration project update
- Current electric vehicle production
- Future product plans

Dr Tim Nicklin, Project Manager, Ford Motor Company

Tim has over 20 years experience within Ford's UK Product Development organisation where he is currently project manager for electric vehicles and represents Ford's electric vehicle interests in various industry forums. Previously he worked in vehicle emissions controls, laboratory management, and powertrain technology planning.



GOOD INDUSTRY INFORMATION FOR A WIDER APPRECIATION OF THE ISSUES PRESENT AND FUTURE.

A DELEGATE AT INTEGRATING ELECTRICAL AND ELECTRONIC VEHICLE SYSTEMS: EFFICIENT TECHNOLOGY SOLUTIONS

10:45 Q&A SESSION

11:00 REFRESHMENTS

11:30 ADOPTING A LIFE CYCLE PHILOSOPHY FOR THE REALISATION OF LOW-CARBON VEHICLES

- The Life Cycle Assessment (LCA) methodology, tools, potential and weaknesses
- Techniques for strategic comparisons and development
- An introduction to Clean 'n' Lean – saving carbon and cash
- EV life cycle development and lightweighting

Adam Gurr, Systems Engineer, Ricardo UK

Adam studied Mechanical Engineering at Cardiff University before working in the manufacturing industry. He moved to Ricardo to work on research & development projects within the Technology, Innovation & Strategy department. Adam now leads a team of LCA practitioners at Ricardo, applying life cycle thinking to a number of low-carbon technology projects.

12:00 CONSUMER ATTITUDES TOWARDS ELECTRIC VEHICLES

- Attitudes before and after using electric vehicles
- Questionnaire results from 3000 users of the new and nearly new car buyers
- User perceptions, anxieties and symbolic motives

Jenny Stannard, Senior Project Manager, Behavioural Change, TRL

Jenny is a senior project manager and road risk consultant in the Behavioural Change group at TRL. She has recently project managed part of a research project for the Energy Technologies Institute (ETI) with the final aim to develop a consumer model to understand attitudes and behaviours towards electric vehicles. This informs the necessary future marketing, infrastructure and vehicle types needed in the future based on the projected vehicle uptake.

12:30 Q&A SESSION

12:45 LUNCH

13:45 THE VISTA EV FROM TATA MOTORS

- Tata Motors' strategy for greenhouse gas reduction
- Vista EV engineering challenges
- Customer reaction and usage
- Lessons learnt and future plans

Jonathan Etherington, Lead Engineer – Advance Engineering, Tata Motors European Technical Centre

Jonathan is a technical specialist at Tata Motors European Technical Centre and Chief Engineer of the Tata Vista EV project, responsible for the initial proposal to delivery of the demonstration fleet. From 1997-2007 he was Chief Engineer of TH!NK, where he led the design, development and delivery of the TH!NK City EV. In his spare time Jonathan builds a variety of electric bikes in his shed.

14:15 LOW COST VEHICLE ELECTRIFICATION; AN ESSENTIAL COMPLEMENT TO AN ELECTRIC VEHICLE STRATEGY?

- Significant CO₂ reduction across an entire OEM vehicle range requires a comprehensive strategy focused on delivering customer value in all segments
- Controlled Power Technologies (CPT) has developed a cost effective concept for CO₂ reduction, through engine downsizing without compromised torque response
- The combination of an electric supercharger with a high power ISG and low cost energy storage, can offer a competitive solution in the mild hybrid segment
- CPT's 'MM Hybrid' concept employs engine downsizing supported by Micro-Mild (MM) Hybrid technology to deliver significant CO₂ reduction at affordable cost
- CPT is co-operating with the Advanced Lead Acid Battery Consortium to deliver a low cost, low carbon MM hybrid VW Passat demonstrator – the LC Super Hybrid

Guy Morris, Engineering Director and CTO, Controlled Power Technologies

On graduating from Nottingham University in 1975, Guy has held senior positions in Rolls-Royce Motors, Bentley, Ford Motor Company and Visteon. He became the Associate Director for European Advanced Powertrain Technology, focusing on innovative CO₂ reduction technologies. In December 2007 Controlled Power Technologies (CPT) was formed, with Guy taking the position of Engineering Director and CTO. Since then, he has been leading the development of all CPT's products to service the CO₂ reduction needs of CPT's growing list of global customers.

14:45 Q&A SESSION

15:00 REFRESHMENTS

15:30 DRIVING "CABLED" CARS

- Introduction to the CABLED Project
- Objectives, Cars and Infrastructure
- Learning from Vehicle Usage Data
- Views on the Future

Neil Butcher, Associate Director Advanced Technology & Research, Arup

Neil was educated at Cambridge, and trained as a Civil Engineer designing bridges in Southampton. He started working in the vehicle industry in 1985, spending 16 years as an engineering consultant performing design and finite element analysis of automotive body structures. He specialised in vehicle crashworthiness and occupant injury prediction. Neil joined Arup in 2002, where his interest has been in the design and successful deployment of ultra low carbon vehicles and particularly electric vehicles. Neil is project manager for CABLED, the West Midlands ultra low carbon vehicle demonstrator programme of 110 electric vehicles on the streets of Coventry and Birmingham.

16:00 ELECTRIC VEHICLES AND OTHER ULTRA LOW CARBON VEHICLE OPTIONS; A COMPARATIVE OVERVIEW

- Battery EV overview including vehicle and infrastructure learning from UK trials
- Comparative perspectives on Bio-methane and Hydrogen for low carbon vehicles

Robert Evans, Chief Executive Officer, Cenex

Robert is Chief Executive Officer of Cenex, the UK's first national Centre of Excellence for Low Carbon and Fuel Cell Technologies. Robert is a graduate of Kings College London and additionally holds post graduate qualifications from Imperial College London and Leeds Trinity and All Saints. Prior to joining Cenex, Robert worked with Johnson Matthey, where he gained more than 15 years experience in developing international markets for environmental and automotive technologies including fuel cells and vehicle emissions control. Cenex was established in 2005, with UK Government seed funding, to catalyse UK motor industry supply chain and market development for low carbon vehicles. Today, Cenex manages programmes for Government as well as undertaking projects and consultancy work for public and private sector clients; all focused on low carbon vehicles and associated infrastructure deployment.

16:30 Q&A SESSION

16:45 CHAIRMAN'S CLOSING STATEMENT

17:00 SEMINAR CLOSES

This programme is subject to change.

The Institution is not responsible for the views or opinions expressed by individual speakers.

Automobile Division Seminar Chairman:

Professor Richard Folkson, Consultant

The Chairman would like to thank the following supporters:

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INNOVATION, INTEGRATION AND IMPLEMENTATION: THE ELECTRIC VEHICLE REALITY. BOOKING FORM

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