BUS AND COACH ENGINEERING
POLICIES, TECHNOLOGIES AND STRATEGIES FOR THE LOW CARBON ECONOMY

Organised by
Institution of MECHANICAL ENGINEERS
Automobile Division

3 September 2015
One Birdcage Walk, London
www.imeche.org/bus

KEYNOTE SPEAKERS:
Chair: John Bickerton,
Chief Engineer, Reading Buses
Collin Field,
Engineering Director, Bath Bus Company
Garry Wilson,
Director for Business Development, Advanced Propulsion Centre UK

BOOK EARLY AND SAVE 15%
OFFER ENDS 10 JULY 2015
TERMS AND CONDITIONS APPLY
BUS AND COACH ENGINEERING: POLICIES, TECHNOLOGIES AND STRATEGIES FOR THE LOW CARBON ECONOMY
3 September 2015, One Birdcage Walk, London

UPDATING THE INDUSTRY ON THE VERY LATEST LOW EMISSIONS TECHNOLOGIES FOR BUSES, WHILST LOOKING AT COMPANY COMPLIANCE AND FUTURE LEGISLATION.

Through solid case studies from the most innovative pilot projects, the 2nd Bus and Coach Engineering Seminar will provide practical answers to which low carbon solutions are proving to be economically and technically viable.

Case studies and real world examples from Reading Buses, Transport for London, Bath Bus Company, Torotrak and more will demonstrate what the industry has learnt about implementing these solutions. Thought-leading debates on what lies ahead for environmentally friendly mass transportation will also be an integral part of the day in order to plan for future developments.

This is a great event for transport professionals to update their knowledge on the latest technology and events, network and speak with like-minded professionals to share best practice and wider learning.

John Bickerton, Chief Engineer, Reading Buses

KEY TOPICS COVERED:

- How to overcome the barriers to a broader rollout of fully electric and hybrid vehicles
- The viability of using alternative fuels such as CNG and biofuels
- Maintenance and automation: technology transfer from trucks, cars and other industries
- Planning for what comes next: future legislation and technology development

KEYNOTE SPEAKERS:

Chair: John Bickerton, Chief Engineer, Reading Buses
Collin Field, Engineering Director, Bath Bus Company
Garry Wilson, Director for Business Development, Advanced Propulsion Centre UK

SPONSORSHIP & EXHIBITION OPPORTUNITIES

GET INVOLVED

Attending this event as either an exhibitor or sponsor will give you the opportunity to display your solutions, services and products to the right people at the right time.

This is an excellent way to enhance your company profile and communicate effectively to your target audience.

BENEFITS OF SPONSORING

- Showcase new products
- Raise awareness of your operation
- Improve perception of your brand
- Influence other organisations’ spending plans

For more information please call +44 (0)20 7973 1309 or email sponsorship@imeche.org
THURSDAY 3 SEPTEMBER 2015

08:30
REGISTRATION AND REFRESHMENTS

09:00
CHAIR’S OPENING REMARKS
John Bickerton, Chief Engineer, Reading Buses

EMISSIONS AND AIR QUALITY: THE STATE OF PLAY IN LEGISLATION AND INDUSTRY

09:15
NEW LEGISLATION, REGULATION AND ITS IMPACT ON QUALITY AND TECHNOLOGY
Speaker to be confirmed

09:45
INDUSTRY EXPERIENCES OF IMPLEMENTING EURO VI
Mike Kerslake, Group Technology Manager, Alexander Dennis
• The progress of Euro VI compliance in the UK
• Lessons learned through implementation
• Future plans for compliance and emissions reduction

10:15
NETWORKING REFRESHMENT BREAK

AN OUTLOOK ON ALTERNATIVE FUELS FOR BUSES

10:45
CNG AS A FUEL: SETTING UP AND OPERATING A GAS POWERED BUS FLEET
Phil Herlingshaw, Engineering Manager, Reading Buses
• Implications and cost of setting up a reliable CNG fuel supply
• Vehicle development costs versus long term benefits
• Lessons learned from operating a CNG bus fleet

11:00
BIOGAS AS A FUEL: WHEN DOES IT BECOME A VIABLE OPTION FOR A BUS OPERATOR?
Collin Field, Engineering Director, Bath Bus Company
• Pricing, availability and reliability of fuel supply
• Vehicle development costs versus the long term payoff
• Experiences operating the Bio-Bus
• Compliance with current and potential future environmental legislation

11:35
QUESTION AND ANSWER SESSION

FUEL EFFICIENCY AND THE JOURNEY TOWARDS FULLY ELECTRIC VEHICLES

11:45
HYBRID BUSES: ADVANTAGES, DISADVANTAGES AND LESSONS LEARNED
Jon Hilton, Product Development and Sales Director, Torotrak
• Understand the battery life of a mechanical hybrid
• How does it compare to a parallel hybrid?
• Life expectancy and costs: what is proven and what are the unknowns?
• Operational modes and route selection for mechanical hybrids
• Real life trials and the lessons learned

12:00
LONDON BUSES EMISSIONS REDUCTION: ELECTRIFICATION OF THE FLEET
Finn Coyle, Research and Development Manager, Transport for London
• Environmental challenges and air quality targets
• Hybrid bus development, rollout and inductive charging
• Range and charging infrastructure
• Forecast emissions reduction from the electrification programme

12:30
QUESTION AND ANSWER SESSION

12:45
NETWORKING LUNCH
MAINTENANCE AND AUTOMATION: WHAT IS COMING NEXT?

13:45 THE GO-AHEAD GROUP’S REMOTE VEHICLE DIAGNOSTICS MONITORING PROJECT
James Patrick Collins, Chief Engineer, The Go-Ahead Group
• Aims of the project and the rationale behind using the one standard system instead of manufacturers’ built-in diagnostics systems
• Experiences with implementation – lessons learned
• Plans for using the data and ensuring the group gains the greatest value from investment

14:10 PASSENGER CARS: WHICH NEW TECHNOLOGIES COULD FILTER THROUGH TO BUSES?
Mike Richardson, Chief Technical Specialist, Low Carbon Vehicles, Jaguar Land Rover
• Automation systems – what’s new and which features might be applicable to buses?
• Smart technologies and design – what’s next?
• Low carbon technologies built into the vehicles

14:35 QUESTION AND ANSWER SESSION

14:55 NETWORKING REFRESHMENT BREAK

15:30 THE FUTURE OF BUS POLICY AND TECHNOLOGY: WHAT WILL IT LOOK LIKE IN 5–10 YEARS?
• Future restrictions (nitrogen oxide, CO₂ emissions) and their impact on technology development
• London’s Ultra Low Emission Zone and other nationwide schemes
• The role of biofuel in the future of buses and coaches
• Technologies versus emissions control measures - what is the most important factor?
• An outlook on zero emissions products
• The impact of incentive schemes on future development of low carbon technologies

Panelists include:
Garry Wilson, Director for Business Development, Advanced Propulsion Centre UK
Andy Eastlake, Managing Director, Low Carbon Vehicle Partnership
Wayne Ulph, Regional Manager, MAN
Sam Greer, UK Bus Regional Director, Stagecoach

16:30 CHAIR’S CLOSING COMMENTS
John Bickerton, Chief Engineer, Reading Buses

16:45 END OF SEMINAR

Find out more about our speakers at www.imeche.org/bus
• This programme is subject to change.
• The Institution is not responsible for the views or opinions expressed by individual speakers.
SPEAKERS AND CONTRIBUTORS

JOHN BICKERTON CHAIR
CHIEF ENGINEER, READING BUSES
John Bickerton graduated from the University of Bath with a MEng (Hons) in Automotive Engineering. After experience with Cosworth and Lotus he joined the country’s largest bus operator, First, as a graduate trainee, and spent time in front-line management positions before managing the company’s fuel saving strategy. John has recently moved to Reading Buses as Chief Engineer, where he is focused on building fleet reliability and controlling maintenance costs. Reading Buses operates 140 vehicles including 31 hybrid double-deck and 34 CNG single-deck vehicles.

MIKE KERSLAKE GROUP TECHNOLOGY MANAGER, ALEXANDER DENNIS
Mike Kerslake is currently Group Technology Manager for Alexander Dennis, with over 25 years of experience in the bus industry in the UK and USA. A background that includes experience in the maintenance and operation environment as well as design, development and manufacturing gives Mike a wide perspective of the bus industry.

PHIL HERLINGSHAW ENGINEERING MANAGER, READING BUSES
Phil Herlingshaw is currently the Engineering Manager for Reading Buses, a position which he has held since 2008. He started his career at Newbury bus depot under the name of Bee Line as an apprentice mechanical engineer. In 1997, he was promoted to vehicle inspector and gained his VOSA PCV inspection certificate, and in 2008 he was promoted to become the Engineering Manager for Reading Buses. Phil is responsible for 170 buses and 65 engineering staff and has been in the bus industry for 26 years.

COLLIN FIELD ENGINEERING DIRECTOR, BATH BUS COMPANY
Collin Field began his career with the National Bus Group as an engineering apprentice. He has since performed various roles within the industry, having worked in different areas including London and the South East, prior to settling in the West Country. He joined Bath Bus Company in 1999 and in 2014, when he and a fellow director were approached by Wessex Water, they entered into what became known as “The Poo Bus Project”. Collin is a Fellow of both the Institute of Road Traffic Engineers and the Society of Engineers.

JON HILTON PRODUCT DEVELOPMENT AND SALES DIRECTOR, TOROTRAK
Jon Hilton was appointed Product Development and Sales Director in January 2014. Before joining the Torotrak Board, Jon was Managing Director of Flybrid Automotive, which he co-founded with Doug Cross in 2007. He started his career at Rolls-Royce, where he designed gas turbine engines for helicopters, later moving to Cosworth and becoming Chief Engineer of the Formula 1 programme. Following five years at TWR Arrows F1, he joined the Renault F1 team as Technical Director: Engine Division. He is a Trustee, Vice President and Honorary Treasurer of the Institution of Mechanical Engineers.

FINN COYLE RESEARCH AND DEVELOPMENT MANAGER, TRANSPORT FOR LONDON
Finn Coyle is an Automotive Engineer with a background in diesel engine performance and emissions development. He presently works for the TfL Buses Directorate as Research and Development Manager where he is responsible for promoting, developing and implementing environmental policies and strategies for the bus fleet.
JAMES PATRICK COLLINS
CHIEF ENGINEER, THE GO-AHEAD GROUP
James Patrick Collins is an experienced bus industry engineer with responsibilities for vehicle operation/maintenance, engineering staff management, new technology assessment and vehicle purchasing strategies. As Chief Engineer for the Bus Division at The Go-Ahead Group, among his many responsibilities are auditing the maintenance system employed across the group’s 4,800 vehicles, vehicle procurement and the assessment of alternative vehicle fuels and technology. James’s previous roles include Fleet Project Manager at The Go-Ahead Group, Engineering Manager with National Express and Engineering Manager at Metrobus. He is a Chartered Engineer and holds an Automotive Engineering BEng (Hons) from the University of Leeds.

MIKE RICHARDSON
CHIEF TECHNICAL SPECIALIST, LOW CARBON VEHICLES, JAGUAR LAND ROVER
Mike Richardson is a Chief Engineer with over 30 years of industrial experience, spanning research, advanced engineering and product development, with particular emphasis on managing the delivery of high technology features and functions from the R&D environment to mainstream engineering. Since 2006 he has been working in the area of hybrids, electrification and low carbon vehicles at Jaguar Land Rover. Born in 1956, he holds a Doctorate and degrees in Control Engineering and Electronic Engineering, is a Chartered Engineer and a Fellow of the Institution of Mechanical Engineers.

GARRY WILSON
DIRECTOR FOR BUSINESS DEVELOPMENT, ADVANCED PROPULSION CENTRE UK
Garry Wilson has worked within the automotive industry for nearly 30 years with leadership roles in product development, programme management, manufacturing and business management. He worked at Land Rover for 14 years, followed by leadership of an engineering services provider, Roush, for five years. He has also held senior roles at Delphi and Torotrak. During his career he has worked with products as diverse as small motorcycles through to heavy off-road machinery, with experience of working with bus and coach manufacturing companies and their suppliers.

ANDY EASTLAKE
MANAGING DIRECTOR, LOW CARBON VEHICLE PARTNERSHIP
Andy Eastlake was appointed as the LowCVP’s Managing Director in April 2012, after serving both on the Board and as Chair of the member council for many years. He has a strong background in vehicle engineering, specialising in powertrain developments, fuel efficiency and emissions. He was formerly Group Head of Commercial and Projects at Millbrook Proving Ground where he led the work on alternative fuels for a variety of global OEM customers. Andy is a Board member of CENEX, the Centre of Excellence for Low Carbon & Fuel Cell Technologies, and a Fellow of the Institution of Mechanical Engineers.

SAM GREER
UK BUS REGIONAL DIRECTOR, STAGECOACH
Sam Greer has almost 30 years of experience in the bus industry. His previous roles include Engineering Director and later, Managing Director of Stagecoach West Scotland. In May 2010, Sam was appointed to the role of Regional Director Scotland for Stagecoach UK Bus, with overall responsibility for all of Stagecoach’s Scottish bus operations including Stagecoach Highland, Bluebird, Strathtay, Fife and West Scotland. He is part of the Stagecoach UK Bus Management Team with responsibility for health and safety, environment, engineering and purchasing.

WAYNE ULPH
REGIONAL MANAGER, MAN
Wayne Ulph started his career as an apprentice at Kirkby Central (now Plaxtons) where he worked for 12 years as a mechanic. His next company was SJ Caltons where he worked his way up to service manager for the site. Wayne moved to MAN in 2005 as a regional bus and coach engineer, later becoming the regional manager responsible for the north of England and for Northern Ireland. In 2010 he became Head of the Bus and Coach Field Service Team and is now the coordinator of some of the dealer training and the IRTEC skills challenge.
BOOKING FORM
EVENT CODE: S6263AB
EARLY BIRD ENDS 10 JULY 2015

REGISTRATION Please complete in capitals.

Family Name ___________________________ Title (Mr, Mrs, Miss) ____________
First Name ___________________________ Job Title __________________________
Membership No ___________________________ Institution __________________________
Name of Organisation (for name badge) __________________________
Address for correspondence __________________________

Town/City __________________________
Postcode __________________________
Contact Telephone __________________________
Email __________________________
Do you have any special requirements?

How did you hear about this event? □ Direct mail □ Website □ Colleague □ Other
We would like to keep you informed of relevant services that may be of benefit to you.
Please tick the boxes below to let us know what you’re interested in:
□ Events and training opportunities □ News and updates from the Institution □ Services and offers from our preferred partners

FEES AND CHARGES Please complete the appropriate box.

Registration fees include entry to the sessions, refreshments, lunch and a copy of the event proceedings.

<table>
<thead>
<tr>
<th></th>
<th>EARLY BIRD RATE Until 10 July 2015</th>
<th>STANDARD RATE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member, Institution of Mechanical Engineers</td>
<td>£230.00+VAT</td>
<td>£275.00+VAT</td>
<td>£</td>
</tr>
<tr>
<td>Member, supporting organisation</td>
<td>£230.00+VAT</td>
<td>£275.00+VAT</td>
<td>£</td>
</tr>
<tr>
<td>Non-member</td>
<td>£330.00+VAT</td>
<td>£385.00+VAT</td>
<td>£</td>
</tr>
<tr>
<td>Student/retired</td>
<td>£85.00+VAT</td>
<td>£99.00+VAT</td>
<td>£</td>
</tr>
</tbody>
</table>

PAYMENT DETAILS

Payment must accompany this registration form. Registration will be confirmed only on receipt of full payment.

PLEASE INDICATE METHOD OF PAYMENT:
□ Cheque Cheques should be made payable to IMechE and crossed. Please note international delegates may pay only by credit card, BACS or banker’s draft. A copy of the draft must accompany this form. It is the delegate’s responsibility to pay any bank charges.
□ Credit Card
Card type: □ Visa □ MasterCard (please note we cannot accept American Express, Diners Club or Maestro)
Card No ___________________________ Valid From / Expiry Date /
Name of Cardholder ___________________________
Billing Address of Cardholder (if different from above) ___________________________
Postcode ___________________________
Amount to be Deducted ___________________________
Signature ___________________________
□ BACS BACS bank transfers can be made to:
IMechE Current Account, NatWest Charing Cross Branch
Sort Code: 60-40-05 Acc No: 00817767
IBAN Code: GB96NWKB60400500817767
A copy of the draft must accompany this form.

□ Invoice (UK residents only) Delegates wishing to be invoiced must provide an order number.

If your company does not use order numbers please include a formal request for invoicing on your company’s letterhead. A charge of £10 +VAT will be made to cover additional administration costs. Invoices are payable on receipt and no alterations to these terms will be accepted.
Order No ___________________________
Contact Name ___________________________
Name and Address for Invoicing ___________________________
Postcode ___________________________
Tel ___________________________
Fax __________________________

FIVE WAYS TO BOOK

1 Online: www.imeche.org/bus
2 Email: eventenquiries@imeche.org
3 Phone: +44 (0)20 7973 1258
4 Post completed booking form to:
Event Registrations
Institution of Mechanical Engineers
1 Birdcage Walk
London SW1H 9JJ
5 Fax: +44 (0)20 7304 6845

Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

CONDITIONS OF BOOKING

Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, e.g. dietary or access, on the relevant section of this form.

CANCELLATION

For a refund (minus £25+VAT admin charge), cancellations must be received at least 14 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the Institution postpones an event for any reason and the delegate is unable or unwilling to attend on the rescheduled date, they will receive a full refund of the fee paid.

The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event. Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For the purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. The Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event’s webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

VENUE

One Birdcage Walk, London. SW1H 9JJ

ENQUIRIES

For event enquiries please call +44 (0)20 7973 1258 or email eventenquiries@imeche.org

The Institution of Mechanical Engineers is a registered charity (no 206882) VAT No GB299930493.
We are the market leader among professional engineering bodies. We’ve been supporting engineers since 1847 and have 111,000 members in over 140 countries, working in the world’s most dynamic and important industries. Our comprehensive events programme brings you the latest research and best practice from industry and academia.