

# 3RD BUS AND COACH ENGINEERING SEMINAR: WHOLE LIFE COSTS AND RELIABILITY IN A LOW EMISSIONS INDUSTRY

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28 JULY 2017

Institution of  
**MECHANICAL  
ENGINEERS**

Automobile Division  
**Seminar**

**19 September 2017**  
One Birdcage Walk, London

## KEY SPEAKERS INCLUDE:

Collin Field, Engineering Director  
**Bath Bus Company**

Tom Druitt, Managing Director  
**The Big Lemon**

Iain Miller, Head of Innovation  
**Northern Powergrid**

Stuart Cottrell, Head of Advanced Engineering  
**Alexander Dennis**

Mike Kerslake, Technical Manager  
**BYD**

Simona Webb, Principal Policy and Programme  
Officer Air Quality and Hydrogen  
**Greater London Authority**



## SUPPORTING ORGANISATIONS:



## EVENT PARTNERS:



Save 10% before 28 July 2017 [www.imeche.org/bus](http://www.imeche.org/bus)

# 3RD BUS AND COACH ENGINEERING SEMINAR: WHOLE LIFE COSTS AND RELIABILITY IN A LOW EMISSIONS INDUSTRY

19 September 2017

One Birdcage Walk, London

**THIS SEMINAR FOCUSES ON THE RELIABILITY AND WHOLE LIFE COSTS ASSOCIATED WITH LOW EMISSION BUSES, BASED ON REAL EXPERIENCES IN THE FIELD. ATTEND TO HEAR THE MOST COST-EFFECTIVE AND RELIABLE OPTIONS FOR CURRENT AND FUTURE REGULATORY COMPLIANCE.**

Operators and manufacturers will share knowledge and experiences and rigorously debate the pros and cons of Euro VI, fully electric, hybrid and hydrogen vehicles. Discuss what the bus industry of the future will look like, in light of future regulations, technology developments and the changing expectations of our customers.

## **NEW FOR 2017:**

Take part in our discussion groups with your peers and an expert moderator, who will talk you through the main issues affecting bus and coach engineering. Group members will share their experiences and detail how pertinent industry issues were overcome in this lively, interactive session.

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## **KEY PROGRAMME HIGHLIGHTS:**

- **The whole life costs of alternative fuel buses:** what you need to know before you invest in a new fleet
- **Real life experience of Euro VI buses:** how is their environmental and operational performance in the field?
- **Infrastructure for fully electric and hydrogen fuel cell fleets:** how have companies faced the hurdles of planning permissions, grid capacity and costs?
- **How will bus engineering change** in the face of swiftly evolving customer expectations?
- Insights into the new **ISO 26262** and what the bus industry needs to do to prepare for its implementation

## **ATTEND THIS EVENT TO:**

- Hear about bus operators' experiences of maintaining fully electric, hybrid, hydrogen and Euro VI diesel buses so you can make an informed decision about your future investments
- Stay ahead of the curve with your planning, get an update on the direction of future regulations including ULEZ, the proposed Euro VII and ISO 26262
- Learn about the latest technology developments in batteries, powertrains and more in our interactive exhibition zone
- Make new contacts and learn from their experiences in our interactive discussion groups

## **ORGANISING COMMITTEE:**

Automobile Division  
**Institution of Mechanical Engineers**

## **MEMBERS CREDITS:**

John Bickerton,  
Head of Engineering and Innovation  
**Reading Buses**

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**BOOK EARLY AND SAVE UP TO 10%  
OFFER ENDS 28 JULY 2017**

TERMS AND CONDITIONS APPLY

# PROGRAMME

## TUESDAY, 19 SEPTEMBER 2017

- 08:30** REGISTRATION AND REFRESHMENTS
- 09:00** **CHAIR'S OPENING REMARKS**  
John Bickerton, Head of Engineering and Innovation, Reading Buses
- 09:15** **FUTURE BUS AND COACH TRANSPORTATION: EMISSIONS REGULATIONS, POWERTRAIN AND VEHICLE TECHNOLOGIES**  
Andy Noble, Head of Heavy Duty Engines, Ricardo
- 09:40** **REGULATORY UPDATE: THE NEW LONDON ENVIRONMENT STRATEGY AND UK POLICY DIRECTION FOR BUSES AND COACHES**  
Simona Webb, Principal Policy and Programme Officer Air Quality and Hydrogen, Hydrogen for Innovative Vehicles (HyFIVE) Project Coordinator, Greater London Authority
- 10:00** **PANEL DISCUSSION: WHAT DO WE NOW KNOW ABOUT THE WHOLE LIFE COSTS OF EVS AND HYBRID VEHICLES?**  
Mike Kerslake, Technical Manager, BYD  
Tom Drutt, Managing Director, The Big Lemon  
Simon Buckley, Programme Manager, Magnetic Systems Technology  
Matthew Bloxham, Depot Engineering Manager, Arriva
- 11:00** NETWORKING REFRESHMENT BREAK
- 11:30** **CASE STUDY: ARE EURO VI VEHICLES DELIVERING IN THE FIELD?**  
Collin Field, Engineering Director, Bath Bus Company
- 11:55** **THE TFL RETROFIT TRIALS: WHAT CAN WE LEARN FROM THEM AS AN INDUSTRY?**  
Finn Coyle, Environmental Manager, Transport Emissions, Transport for London
- 12:20** **PANEL DISCUSSION: DEVELOPING THE INFRASTRUCTURE TO GET THE FUEL AND ELECTRICITY INTO A SITE FOR BUS OPERATION**  
Steve Atkins, Lead Commercial Contract Manager, Scottish & Southern Electricity Networks  
David Yorke, New Technology, Training and Projects Manager, Tower Transit  
Ben Todd, Director, Arcola Energy  
Iain Miller, Head of Innovation, Northern Powergrid  
Derek McCreadie, i-Travel Programme Manager, City of York Council  
Steve Cornes, Principal Project Officer, Public Transport - Development, Nottingham City Council
- 13:00** NETWORKING LUNCH
- 14:00** **MINI-WORKSHOP: UNDERSTANDING DUTY CYCLES TO IMPROVE FUEL EFFICIENCY AND FLEET RELIABILITY**  
Andy Eastlake, Managing Director, The Low Carbon Vehicle Partnership
- 14:30** **DISCUSSION GROUPS**  
Select the discussion group that best fits your priorities, and join a group of your peers around a table hosted by an expert moderator who will talk you through the main issues, and will also allow group members to contribute their experience and questions throughout this lively, interactive session.
- A. Powertrain innovations: What is in development for buses and coaches?  
B. Manufacturers' recommendations for compliance with low emissions and clean air zones  
C. Approaches to overcoming the skills gap as the evolution of bus technology speeds up  
D. The potential impact of Brexit on the bus industry: will this change the course of our regulations?  
E. How to prepare for the new Functional Safety Standard ISO 26262 publishing in January 2018  
Helen Monkhouse, Commercial Manager – Functional Safety, HORIBA MIRA  
F. How do you achieve a zero emission double deck?  
Stuart Cottrell, Head of Advanced Engineering, Alexander Dennis
- 15:30** NETWORKING REFRESHMENT BREAK
- 16:00** **REPORTING BACK SESSION**  
Discussion leaders share the most poignant points from their groups' debates
- 16:20** **CASE STUDY: HYDROGEN VEHICLES: WHERE ARE WE WITH COST AND FUEL SUPPLY ISSUES?**  
Ian Foster, Engineering Director, Metroline
- 16:50** **QUICK-FIRE PRESENTATIONS AND QUESTION AND ANSWER SESSION: THE FUTURE OF THE CUSTOMER EXPERIENCE: WHAT CAN ENGINEERING DO TO ENABLE BUSES AND COACHES TO REMAIN COMPETITIVE?**  
Speakers include:  
Ray Stenning, Designer, Best Impressions  
David Barnett, Advanced Products Director, Wrightbus
- 17:20** **CHAIR'S CLOSING REMARKS**
- 17:30** **END OF SEMINAR**

For the most up-to-date and detailed programme for the event, please visit [www.imeche.org/bus](http://www.imeche.org/bus)

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

## HOW TO BOOK YOUR PLACE

### FEES AND CHARGES

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

Seminar	Early Bird Rate Until 28 July 2017	Standard Rate
Member, Institution of Mechanical Engineers/Supporting Organisation	£270 + VAT = £324	£320 + VAT = £384
Non-member	£360 + VAT = £432	£420 + VAT = £504
Student/Retired	£90 + VAT = £108	£100 + VAT = £120

Group booking discounts are available. Contact us for more information.

### THREE WAYS TO BOOK

- 1 Online:  
[www.imeche.org/bus](http://www.imeche.org/bus)
- 2 Email:  
[eventenquiries@imeche.org](mailto:eventenquiries@imeche.org)
- 3 Phone:  
**+44 (0)20 7973 1251**

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, ie dietary or access, on the relevant section of the booking form or email [eventenquiries@imeche.org](mailto:eventenquiries@imeche.org)

#### CANCELLATION

For a refund (minus £25+VAT admin charge), cancellations must be received at least 30 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.

#### CONFERENCE VENUE

Institution of Mechanical Engineers  
One Birdcage Walk  
Westminster  
London  
SW1H 9JJ

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### OTHER EVENTS TO LOOK FOR



#### SIMULATION AND MODELLING 2017

12-13 September 2017, Birmingham

Take away cross-industry insights from the aerospace and automotive industries who are utilising simulation and modelling to drive down costs, reduce inefficiencies and eradicate costly prototypes.

[www.imeche.org/simulationandmodelling](http://www.imeche.org/simulationandmodelling)



#### REAL DRIVING EMISSIONS: THE IMPACT ON ENGINEERS

1 November 2017, West Midlands

This seminar will address the real-life impact of engineers following the introduction of RDE package three and WLTP test cycles. Hear directly from manufacturers on how the change in regulation has impacted them and how challenges have been overcome.

[www.imeche.org/emissions](http://www.imeche.org/emissions)

The Institution of Mechanical Engineers organises over 120 events a year, including lectures as well as conferences, seminars, annual luncheons and dinners. Please visit [www.imeche.org/events](http://www.imeche.org/events) for the complete list of events.

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