3rd International FEV Conference

ZERO CO₂ MOBILITY

NOVEMBER 7 – 8, 2019
AACHEN, GERMANY

Focus of the conference

- New light and heavy duty BEVs Concepts
- Strategies for commercial vehicles & transport
- Batteries and recycling in Europe
- Hydrogen in transport
- Energy grids and storage
- Power to X and e-fuels

Scientific Committee

Dr. C. Balzer
Shell Global Solutions GmbH

M. van Schijndel-de Nooij
EARPA

R. Weber
Volkswagen AG

Gaetano de Paola
IFP Energies Nouvelles

Dr. N. Omar
ABEE Group

Dr. N. Alt
FEV Europe GmbH

Dr. T. Hülshorst
FEV Group GmbH

C. Schemnus
FEV Europe GmbH

A. Ruplieper
Linde AG
Dear colleagues,

The European emission reduction goals, ratified in the COP21 Paris agreement, require major CO\textsubscript{2} emission reductions from the transportation sector until the year 2050. However, there are different ways to achieve these decarbonisation targets.

Increasingly, the experts agree on the conclusion that, while propulsion system electrification is an important element of the solution, it is not the only approach for achieving CO\textsubscript{2}-neutral mobility. In particular, when “well-to-wheel” rather than “tank-to-wheel” efficiency is considered, renewable alternative fuels become increasingly interesting as solutions.

Achieving a balanced fleet strategy requires focus on needs-based propulsion system solutions that assure sustainable and clean mobility. In this sense, a mixture of electrification, optimized combustion engines and synthetic fuels appears to be a promising combination.

Charging times, battery production costs and real driving range have already been significantly improved, becoming more and more competitive. While e-vehicles can lower local emissions in short distance and inner-city driving, synthetic fuels represent a good means for minimizing CO\textsubscript{2} emissions from the conventional combustion engines in existing fleets.

As a result, the percentage of renewable energy across the mobility sector is directly increased with fuels based on electricity, approaching zero emissions.

After the positive feedback in 2018 the international FEV conference on “Zero CO\textsubscript{2} Mobility” will take place again this year and offer a platform for strategic discussion on the potential and performance of various zero CO\textsubscript{2} emission strategies and introduce the latest developments in the fields of battery technologies, fuel cells and e-fuels.

You are cordially invited to join the other conference participants from the fields of research, development and politics as an important contributor to this forum of experts.

With best regards

Prof. Dr.-Ing. Stefan Pischinger
President and CEO of FEV Group GmbH
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Company</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Registration and welcome coffee</td>
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<tr>
<td>08:35</td>
<td>Welcome speech</td>
<td>Stefan Pischinger, CEO</td>
<td>FEV Group</td>
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<tr>
<td>08:45</td>
<td>Zero CO₂ mobility – status &amp; outlook</td>
<td>Norbert Alt, CEO</td>
<td>FEV Europe</td>
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<tr>
<td>09:15</td>
<td>Electrifying transportation towards zero CO₂ mobility</td>
<td>Georg Bäuml, Head of Group R&amp;D – Environmental Product</td>
<td>Volkswagen</td>
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<tr>
<td>09:45</td>
<td>Sustainable mobility: Challenges and opportunities for a globally acting company</td>
<td>Sebastian Barth, Senior Project Engineer Digital Solutions &amp; Electrification Research</td>
<td>Honda</td>
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<td>10:15</td>
<td>Coffee Break</td>
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<td>10:45</td>
<td>Sono Motors Sion – the first series-produced solar electric vehicle made to be shared</td>
<td>Roberto Diesel, CTO</td>
<td>Sono Motors</td>
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<td>11:15</td>
<td>Volkswagen e-mobility – The time is right – Market, customer and portfolio</td>
<td>Andreas Lassota, Head of Product Marketing e-mobility</td>
<td>Volkswagen</td>
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<td>11:45</td>
<td>Strategies for commercial vehicles &amp; transport</td>
<td>Alper Sina Yaman, Electrified Powertrain Senior Engineer</td>
<td>Ford Otosan</td>
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<td>12:15</td>
<td>e.GO Mover - Electrified and autonomous mobility</td>
<td>Volker Lücken, Team Leader Strategic Research</td>
<td>e.GO Mobile</td>
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<td>12:45</td>
<td>Lunch</td>
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<td>14:00</td>
<td>Comparison of different propulsion systems for future Heavy-Duty On-Road applications</td>
<td>Lukas Virnich, Technical Specialist</td>
<td>RWTH / FEV Europe</td>
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<td>14:30</td>
<td>The role of the supply side in corporate EV adoption of commercial fleets</td>
<td>Byeronie Epstein, Associate Transport</td>
<td>WBCSD</td>
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<td>15:00</td>
<td>Batteries and environmental sustainability assessment – Zero CO₂ mobility through integrated computational life cycle engineering</td>
<td>Christoph Herrmann, Chair of Sustainable Manufacturing &amp; Life Cycle Engineering</td>
<td>TU Braunschweig/ Fraunhofer Institute</td>
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<td>15:30</td>
<td>Battery technology development 2025</td>
<td>Michael Stapelbroek, Department Manager Electronics &amp; Electrification</td>
<td>FEV Europe</td>
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<td>16:00</td>
<td>Coffee Break</td>
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<td>16:30</td>
<td>Battery recycling: state-of-the-art and future trends – Battery 2030+ Initiative</td>
<td>Marcel Meeus, Senior advisor / Managing Director</td>
<td>EMIRI / Susteco</td>
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<td>17:00</td>
<td>The transition of European value chains</td>
<td>Peter Müller-Baum, Managing Director VDMA</td>
<td>VDMA</td>
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<td>Hosted by Alexander Nase, Managing Director, FEV Consulting GmbH</td>
<td>Stefan Dwenger, Director Research &amp; Development</td>
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<td>Alfred Jansche, Senior Manager Market Research</td>
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<td>Daniela Jansen, Project Manager e-mobility</td>
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<td>19:30</td>
<td>Conference dinner</td>
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<td>08:30</td>
<td>Welcome and introduction</td>
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<td>08:45</td>
<td>KEYNOTE</td>
<td>The future of zero-emission fuel cell electric vehicles</td>
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<td>Randy MacEwen, CEO</td>
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<td>08:45</td>
<td>HYDROGEN IN TRANSPORT</td>
<td>Hydrogen heavy duty transport – Scaling up</td>
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<td>- Shell’s view on providing hydrogen for heavy duty applications</td>
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<td>Lars Zimmermann, Hydrogen Business Development Manager</td>
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<td>Shell Deutschland Oil</td>
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<td>09:15</td>
<td>FCH-JU: Accelerating the implementation of hydrogen and fuel cells in Europe</td>
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<td>Bart Biebuyck, Executive Director</td>
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<td>Fuel Cells and Hydrogen joint undertaking</td>
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<td>Coffee Break</td>
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<td>10:45</td>
<td>KEYNOTE</td>
<td>Decarbonising transport to 2030: Update of JEC WTW pathways for Europe</td>
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<td>Heiko Maas, Technical Specialist</td>
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<td>Ford Motor Company</td>
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<td>11:15</td>
<td>ENERGY GRIDS &amp; STORAGE</td>
<td>Chances and challenges of coupling the power and the transport sector</td>
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<td>Reinhold Elsen, Head of Research and Development / Quality Assurance</td>
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<td>11:45</td>
<td>Dark doldrums: Can FEV-EV feed long term back-up power into the electric grid?</td>
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<td>13:30</td>
<td>POWER TO X AND E-FUELS</td>
<td>Small-scale methanol plants as key for the sector coupling</td>
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<td>Christian Schweitzer, Managing Director</td>
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<td>bse engineering Leipzig</td>
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<td>14:00</td>
<td>Opportunities and challenges with renewable fuels for Porsche</td>
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<td>Karl Dums, Head of Development Drive Unit Strategy and Pre-Development</td>
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<td>Porsche</td>
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<td>14:30</td>
<td>Synergistic value in vertically integrated power-to-gas energy systems</td>
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<td>Gunther Glenk, Assistant Professor for Sustainable Business Economics</td>
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<td>University of Mannheim</td>
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<td>15:00</td>
<td>A techno-economic comparison of power-to-fuel routes towards alcohols, ethers and hydrocarbons</td>
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<td>Ralf Peters, Head of Fuel Processing and Systems</td>
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<td>Forschungszentrum Jülich</td>
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<td>15:30</td>
<td>Coffee Break</td>
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<td>15:45</td>
<td>PANEL DISCUSSION</td>
<td>Fast track to defossilization - regulations &amp; boundary conditions</td>
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<td>Hosted by Thilo Bein, Head of Knowledge Management, Fraunhofer Institute</td>
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<td>Benedikt Wirmer, Head of Climate Protection</td>
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<td>Jorgo Chatzimarkakis, Secretary General</td>
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<td>Thomas Puls, Senior Economist and others...</td>
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<td>MWV</td>
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<td>IW Köln</td>
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<td>16:45</td>
<td>Concluding remarks and adjournment</td>
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<td>17:00</td>
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**ARRIVAL AND SIDE PROGRAM**

**Conference Hotel**
Hotel Pullman Aachen Quellenhof  
Monheimsallee 52  
52062 Aachen · Germany  
Tel. +49 (0)241 91320  
www.pullmanhotels.com

Reservation reference for your hotel room:  
Zero CO₂ Mobility

**Focus on Networking**
To enhance your conference experience, the 3rd edition of Zero CO₂ Mobility offers multiple opportunities for technical exchange and business conversations among engineering experts and industry representatives. In the evening of the first conference day the delegates are invited to join the reception dinner in the conference hotel.

**Exhibition and Sponsoring**
- Technology displays and branding close to the conference area  
- Vehicle demonstrations and exclusive sponsoring packages

**Target groups:**
- OEMs and suppliers – powertrain management, future product and technology planning responsibles  
- Oil, gas and energy suppliers and processing industry  
- Political stakeholders
CONTACT INFORMATION AND REGISTRATION

Please contact us for further information about Zero CO₂ Mobility:
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Other FEV Conferences

6th INTERNATIONAL FEV CONFERENCE
DIESEL POWERTRAINS 3.0
Turin, Italy
July 8-9, 2020

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