

# FUELS OF THE FUTURE



## 15<sup>th</sup> International Renewable Mobility Congress

FUELS OF THE FUTURE 2018

22. – 23.01.2018 | Berlin

[www.fuels-of-the-future.com](http://www.fuels-of-the-future.com)

Organiser:



Supported by:





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## MONDAY, 22/01/2018

REGISTRATION: MAIN ENTRANCE CITYCUBE/MESSEDAMM ENTRANCE

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### PANEL 1 – ROOM A6

Renewable mobility in Europe

10:00 – 13:00 HOURS

### PANEL 2 – ROOM A6

Panel discussion – prospects for renewable mobility in the run-up to 2030

14:00 – 15:30 HOURS

### PANEL 3 – ROOM A6

Future of the combustion engine:  
Revolution in drive systems and fuels

16:15 – 18:30 HOURS

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EVENT ROOM ON **LEVEL 1** IN THE CITYCUBE – ROOM **A6**

Bioenergy evening reception at **19:00** on the exhibition grounds in Hall 4.2.

**TUESDAY, 23/01/2018**

**PANEL 4 – PARALLEL FORUMS**

- A** Biodiesel..... ROOM **M1 – M3**
- B** Bioethanol..... ROOM **M4 – M5**
- C** Power-to-X..... ROOM **M6 – M7**
- D** Biomethane ..... ROOM **M8**

**09:00 – 11:00 HOURS**

**PANEL 5 – PARALLEL FORUMS**

- A** Development status of alternative fuels . ROOM **M1 – M3**
- B** Biofuels in shipping and aviation ..... ROOM **M4 – M5**
- C** Electromobility ..... ROOM **M6 – M7**
- D** International biomethane ..... ROOM **M8**

**11:30 – 13:30 HOURS**

**PANEL 6 – PARALLEL FORUMS**

- A** Analysis and implementation of sustainable and renewable mobility in the EU transport sector by 2030..... ROOM **M1–M3**
- B** Biofuel trade..... ROOM **M4–M5**
- C** Biofuel in agriculture and forestry..... ROOM **M6–M7**

**14:30 – 16:30 HOURS**

PARALLEL FORUMS ON **LEVEL 3** IN THE CITYCUBE –  
ROOMS **M1 – M8**

Ladies and gentlemen

The Paris climate agreement stipulates that global warming should be limited to a maximum 2° Celsius temperature increase, and should if possible be restricted to a 1.5° Celsius increase. In order to achieve that objective, rising global greenhouse gas emissions must be halted by 2020, and by 2050 there should be a 60% cut in these emissions compared with 2010 levels. This is an ambitious goal that poses a huge challenge for the world economy. How can these goals be attained without constraining transport of goods and passengers, which is so crucial for trade and global mobility?

Germany is already leading the way with its 2050 climate protection plan. In addition, the Federal Ministry of Transport has transmitted an important policy signal thanks to its timely initiative in developing a mobility and fuel strategy, as well as organising a dialogue with industry to flank this strategy.

The thrust of policy pursued by the EU's Member States will play a crucial role in reducing emissions caused by transport. The Commission's proposals on revision of the November 2016 Renewable Energies Directive have met with criticism from certain Member States and from professional associations at both the European and national level.

Representatives from the world of agriculture and the bioenergy industry are convinced that the transport sector can make a much more significant contribution to climate protection than is currently foreseen in the Commission proposal. Dependable national and European policies are crucial in this context to create a stable competitive and regulatory framework, enabling investors to take action to foster climate protection in the transport sector.

Since news broke about falsified test results for diesel engines, and in particular during campaigning for the German general elections, there has been vigorous debate on a range of sometimes contradictory proposals for measures to ensure greater climate protection in the transport sector. Such proposals encompass higher taxes on energy, driving bans in city centres, prohibition of combustion engines, increased government funding for electromobility, and overhead power lines for trucks, along with a raft of other proposals. However, climate protection goals in the transport sector can only be attained if the strategy adopted takes an open-minded stance on a broad spectrum of technologies and embraces all available options to cut greenhouse gas emissions. This includes for example a statutory obligation, already successfully introduced in Germany, to cut fuel emissions that adversely affect the environment and to replace fossil fuels by renewable energy sources.

Increasing diversification of drive technologies, along with development and market launch of alternative fuels, poses a challenge and simultaneously offers the key to achieving our climate goals in the transport sector. There is therefore a particular focus on development and introduction of new drive technologies in the 2018 congress programme.

The international "Fuels of the Future" congress is one of the key European forums for discussions on topical issues concerning the mobility of the future, based on new fuel and drive technologies. This year we are once again looking forward to a wide range of presentations on the latest technological developments, and hope the congress will prove instructive for all participants.

Yours sincerely  
Artur Auernhammer  
Member of the German Bundestag  
Chairman, BBE Board



photo credits: © Tobias Koch

## Panel 1:

### Renewable mobility in Europe

#### ROOM A6

**Moderation:** Stephan Arens, German Association for the Promotion of Oil and Protein Plants, UFOP

##### 10:00

Biofuels for climate protection and renewable mobility  
Artur Auernhammer, Member of the German Bundestag, Chairman of the Board of the German Bioenergy Association, BBE

##### 10:20

Biofuels in the German government's mobility and fuel strategy  
N.N., Federal Ministry for Transport and Digital Infrastructures (BMVI)

##### 10:40

Biofuels in Europe to 2030 and beyond  
Bas Eickhout, Member of the European Parliament

##### 11:00

Renewable mobility in Europe – differences of opinion between industry and policy-makers  
Kyriakos Maniatis, Directorate-General for Energy, European Commission

##### 11:20

Biofuels and renewable mobility – future role and requirements from the automotive industry's perspective  
Erik Jonnaert, European Automobile Manufacturers' Association (ACEA)

##### 11:40

From multimodality to robotaxi – what do we need on our roads to implement the energy turnaround?  
Tobias Kuhnimhof, German Aerospace Center (DLR)

## Panel 1:

### Renewable mobility in Europe

#### ROOM A6

**12:00**

Discussion

**13:00**

Lunch break

## Panel 2:

### Panel discussion – prospects for renewable mobility in the run-up to 2030

#### ROOM A6

**14:00 – 15:30**

Renewable mobility and prospects in the run-up to 2030

**Moderation:** Sonja van Renssen, energy post

- Bas Eickhout, Member of the European Parliament
- Erik Jonnaert, European Automobile Manufacturers' Association (ACEA)
- Kyriakos Maniatis, Directorate-General for Energy, European Commission
- N.N., Federal Ministry for Transport and Digital Infrastructures (BMVI)
- Marijana Petir, Member of the European Parliament
- Norbert Schindler, German Bioethanol Industry Association, (BDB<sup>e</sup>)

**15:30**

Coffee break

## Panel 3:

### Future of the combustion engine: Revolution in drive systems and fuels

#### ROOM A6

**Moderation:** Professor (assoc.) Uwe Lahl, Head of Department, Baden-Württemberg Ministry of Transport

#### 16:15

Prospects for the revolution in drive systems and fuels in implementing the energy turnaround

Professor (assoc.) Uwe Lahl, Head of Department, Baden-Württemberg Ministry of Transport

#### 16:35

The future of the combustion engine – future developments from a scientific viewpoint

Professor Gennadi Zikoridse, University of Applied Sciences Dresden

#### 16:55

Pros and cons of combustion engines from the WWF's perspective

Michael Schäfer, WWF Deutschland

#### 17:15

Automotive industry views on the revolution in drive systems and fuels

Dr Joachim Damasky, German Association of the Automotive Industry (VDA)

#### 17:35

Which will win the day – biofuels or PtX-fuels?

Dr Max Kofod, Shell Global Solutions

#### 17:55

Discussion

#### 18:30

End of the first conference day

#### 19:00 Bioenergy evening reception

at the exhibition grounds in hall 4.2

(free admission for all conference participants)

**Panel 4: Parallel forum A****Biodiesel research – presentation of selected planned projects****ROOM M1 – M3**

**Moderation:** Professor Jürgen Krahl, President of the Ostwestfalen-Lippe University of Applied Sciences, Chairman of the UFOP 'Biofuels and renewable resources' Expert Commission

**09:00**

Use of biodiesel in industrial and agricultural machinery with the emission level EU V with exhaust aftertreatment  
Dr Volker Wichmann, University of Rostock

**09:20**

Studies on the interactions between fuels and fuel-carrying vehicle components in plug-in hybrid vehicles  
Simon Eiden, Oel-Wärme-Institut gGmbH

**09:40**

Development of an on-board sensor system for early detection of deposit formations in biodiesel-containing fuels  
Jens Staufenbiel, Technology Transfer Centre for Automotive Technology, University of Applied Sciences Coburg

**10:00**

Ageing process of diesel exhaust-gas catalytic converters powered by biofuels (Rapid Cat Ageing)  
Felix Link, University of Leipzig

**10:20**

Biodiesel: Past and future – element load in exhaust gas treatment systems and new parameters – the standard beyond  
Dr Richard Wicht, German Association for Biodiesel Quality Management, AGQM

**10:40**

Discussion

**11:00**

Coffee break

## Panel 4: Parallel forum B

### Bioethanol



#### ROOM M4 – M5

**Moderation:** Carola Wunderlich, German Bioethanol Industry Association, BDB<sup>e</sup>

**09:00**

Actual emissions of a flexible fuel vehicle powered by ethanol-containing fuels

Maximilian Frankl, Technology and Support Centre Straubing (TFZ)

**09:20**

Production of bio-ETBE from bioethanol and renewable isobutene

Ronan Rocle, Global Bioenergies

**09:40**

Emissions-reduction potential of ethanol-containing petrol (E5, E10, E20) – studies of CO<sub>2</sub> emissions and particulate matter emissions in real driving conditions

Professor Bernhard Geringer, Marcus Szikora, Vienna University of Technology

**10:00**

2G biorefineries – implementation timeframe in Europe

Melich Dietrich Seefeldt, Novozymes AS

**10:20**

Discussion

**11:00**

Coffee break

## Panel 4: Parallel forum C

### Power-to-X



## ROOM M6 – M7

**Moderation:** Dr Franziska Müller-Langer,  
German Biomass Research Centre, DBFZ

**09:00**

Electricity-based fuels as a link between the electricity  
and transport sectors

Alexander Tremel, Siemens AG

**09:20**

Power-to-liquids – current status and next steps

Sebastian Becker, sunfire GmbH

**09:40**

Synthetic petrol production technology

Stephan Schmidt, Chemieanlagenbau Chemnitz GmbH

**10:00**

Comparing the climate impact of drive systems: fossil  
fuels, biofuels, PtX or battery

Horst Fehrenbach, Axel Liebich, IFEU Institute for Energy  
and Environmental Research Heidelberg

**10:20**

Renewable fuels – system comparison BtX and PtX

Karin Naumann, German Biomass Research Centre, DBFZ

**10:40**

Discussion

**11:00**

Coffee break

## Panel 4: Parallel forum D

D

### Biomethane in the transport sector in Germany

#### ROOM M8

**Moderation:** Dr Claudius da Costa Gomez,  
German Biogas Association, FvB

**09:00**

Biomethane: A cornerstone of climate protection  
in the transport sector?

Frank Bonaldo, Federal Ministry for Economic Affairs and  
Energy (BMWi)

**09:20**

Potential of biomethane mobility

Johan Grope, Institute of Biogas, Waste Management  
and Energy

**09:40**

Biomethane in Germany – the status quo  
from a market player's perspective

Marcel Leue, Arcanum Energy Management GmbH

**10:00**

Climate-neutral local traffic in Augsburg –  
biomethane buses in use

Dr Walter Casazza, Stadtwerke Augsburg Holding GmbH

**10:20**

Discussion

**11:00**

Coffee break

## Panel 5: Parallel forum A

A

### Development status of alternative fuels

#### ROOM M1 – M3

**Moderation:** Professor Thomas Willner,  
University of Applied Sciences Hamburg

**11:30**

Conclusions of the 'Building Up the Future' final report from the European Commission's Sub-Group on Advanced Biofuels (SGAB)

Ingvar Landälv, Sub-Group on Advanced Biofuels (SGAB)

**11:50**

Challenges and opportunities of future fuels for transport sector decarbonisation – an industry perspective

Dr Armin Günther, Air Liquide Global E&C Solutions  
Germany GmbH

**12:10**

Importance of liquid alternative fuels for climate protection – a ProcessNet position paper

Professor Thomas Willner, University of Applied Sciences  
Hamburg

**12:30**

Advanced biofuels – contributing to the energy turnaround?!

Dr Thomas Kuchling, Andrey Awgustov, Hendrik Wollmerstädt, Professor Sven Kureti, Technical University of Bergakademie Freiberg

**12:50**

Development and prospects for the bioliq® process  
Professor Nicolaus Dahmen, Karlsruhe Institute of  
Technology (KIT)

**13:10**

Discussion

**13:30**

Lunch break

## Panel 5: Parallel forum B

### Biofuels in shipping and aviation

A circular logo with a white background and a dark orange border, containing the letter 'B' in a dark orange, sans-serif font.

#### ROOM M4 – M5

**Moderation:** Lars Schulze-Beusingsen,  
EnergyAgency.NRW

**11:30**

Road map for the introduction of biofuels into Europe's  
aviation industry

Sierk de Jong, Utrecht University, The Netherlands

**11:50**

Economic and ecological considerations concerning the  
performance of alternative fuels in the aviation industry

Robert Malina, University of Hasselt, Belgium/  
Massachusetts Institute of Technology, USA

**12:10**

Focus on sustainable biofuels in shipping

Sjors Geraedts, GoodFuels Marine, The Netherlands

**12:30**

Potential and challenges for drop-in biofuels in the  
shipping industry

Claus Felby, University of Copenhagen, Denmark

**12:50**

Discussion

**13:30**

Lunch break

**Panel 5: Parallel forum C**  
Electromobility



**ROOM M6 – M7**

**Moderation:** Bernhard Strohmayer,  
German Renewable Energy Federation (BEE)

**11:30**

Industry and economic policy applied to electromobility  
Birgit Hofmann, Federal Ministry for Economic Affairs  
and Energy (BMWi)

**11:50**

Integrate e-mobility across sectors  
Marie-Luise Martin, Digital Energy Solutions GmbH & Co. KG

**12:10**

Charging infrastructure – state of play and experiences  
from the 1<sup>st</sup> year of Germany's Charging Infrastructure  
Funding Directive  
Johannes Pallasch, NOW GmbH

**12:30**

Volkswagen AG's electromobility strategy  
Olaf Schilgen, Volkswagen AG

**13:10**

Discussion

**13:30**

Lunch break

## Panel 5: Parallel forum D



Biomethane in the transport sector –  
an international perspective

### ROOM M8

**Moderation:** Professor Dr Daniela Thrän,  
Helmholtz Centre for Environmental Research, UFZ

**11:30**

Incentives for the European biomethane market:  
European Renewable Gas Registry  
Attila Kovacs, European Biogas Association, EBA

**11:50**

Best Practice 1: Biomethane in Holland – a success story?  
Pelle Schlichting, Orange Gas NL, The Netherlands

**12:10**

Best Practice 2: Cross-border trade with biomethane –  
experiences and outlook  
Zoltan Elek, Landwärme GmbH

**12:30**

Gas for Climate – The role of gas in a low-carbon economy  
Daan Peters, Ecofys – a Navigant Company

**12:50**

Global mobility with biomethane:  
An international perspective  
Frank Hofmann, German Biogas Association, FvB

**13:10**

Discussion

**13:30**

Lunch break

## Panel 6: Parallel forum A



Analysis and implementation of sustainable and renewable mobility in the EU transport sector by 2030

### ROOM M1 – M3

**Moderation:** Elmar Baumann,  
Association of the German Biofuels Industry (VDB)

**14:30**

Analysis of the potential economic impact of switching to electromobility

Dr Patrick Plötz, Fraunhofer Institute for System and Innovation Research (ISI)

**14:50**

ARAL Study – 2017 vehicle sales trends – just a change of mindset or impacting dealerships too?

Dr Ruprecht Brandis, BP Europa SE

**15:10**

Sustainable and renewable mobility: Industry perspective  
N.N., Neste

**15:30**

Implementation of the Renewable Energy and Fuel Quality Directives in the UK

Verena Leckebusch, Department for Transport,  
United Kingdom

**15:50**

Innovative fuel options for technology-oriented design of tomorrow's mobility

Alexander Holle, EnergyAgency.NRW

**16:10**

Discussion

**16:30**

End of conference

## Panel 6: Parallel forum B

### Bioenergy and fuel trade



#### ROOM M4 – M5

**Moderation:** Dietrich Klein,  
German Bioethanol Industry Association, BDB<sup>e</sup>

**14:30**

10-year outlook for global biofuel markets and agricultural feedstocks

Marcel Adenäuer, Organisation for Economic Co-operation and Development (OECD)

**14:50**

IEA outlook: Development of conventional and advanced biofuels in the world market

Pharoah Le Feuvre, International Energy Agency (IEA)

**15:10**

Global biofuel trade: Intercontinental trade flows

Christine Ancker, Argus Media

**15:30**

Biofuel trade and the shift to an international low-carbon fuel economy

Matthew Stone, PRIMA

**15:50**

Sustainability certification post-2020 – changes and challenges

Peter Jürgens, REDcert GmbH

**16:10**

Discussion

**16:30**

End of conference

## Panel 6: Parallel forum C

### Biofuels in agriculture and forestry



## ROOM M6 – M7

**Moderation:** Dr Edgar Remmele,  
Technology and Support Centre Straubing (TFZ)

**14:30**

Exhaust gas treatment and operational safety  
of plant-oil-powered agricultural technology  
Johannes Ettl, Technology and Support Centre Straubing  
(TFZ)

**14:50**

Initial experience with biomethane use in tractors  
Klaus Senghaas, CNH Industrial Deutschland GmbH

**15:10**

Injection behaviour of modern common-rail injection  
systems powered by vegetable oil fuels  
Robert Altmann M.Sc., Alexander Koder M.Sc.,  
Professor Hans-Peter Rabl, East Bavarian Technical  
University, OTH Regensburg

**15:30**

The oat principle for agricultural machinery  
Christoph Hänel, Bergland Clausnitz agricultural cooperative

**15:50**

Discussion

**16:30**

End of conference



## Accompanying exhibition

The congress offers companies and associations that already successfully involved in the renewable mobility sector or plan to enter this market an opportunity to present their activities to a specialist audience by organising an information stand at the event. This long-standing and well-established trade congress plays a pioneering role in European developments in this sector. Exhibitors may advertise their products and services in the foyer, giving them a chance to contact their target group in this “market place”. Gold and silver partners may also showcase their company logo, along with a reference to their role as congress partner, in the event folder and various other congress media (website, sponsor board, break screen etc.). For further details, please contact the congress office by telephone +49(0)228 8100222 or send an email to [hartmann@bioenergie.de](mailto:hartmann@bioenergie.de).

## Hotel recommendations

We have reserved a limited number of rooms in hotels of various categories for this event. Please indicate “Fuels of the Future” when making your booking.

### Lindner Hotel Am Ku'damm

Kurfürstendamm 24  
10719 Berlin

Tel.: +49(0)30 8182 51 12 5  
[www.lindner.de](http://www.lindner.de)

Single room (business) € 119.00  
Double room (business) € 158.00  
(Breakfast included)

Available until 25.12.2017

### art'otel berlin kudamm

Lietzenburger Str. 85  
10719 Berlin

Tel.: +49(0)30 4005 57 70 0  
[www.artotels.com](http://www.artotels.com)

Art Room Single € 99.00  
Art Room Double € 109.00  
(Breakfast included)

Available until 25.12.2017

### Hotel Ibis Berlin Messe

Messedamm 10  
14057 Berlin

Tel.: +49(0)30 3039 30  
[www.ibishotel.com](http://www.ibishotel.com)

Single room standard € 130.00  
Double room standard € 161.00  
(Breakfast included)

Available until 25.12.2017

### Ringhotel Seehof Berlin

Lietzensee-Ufer 11  
14057 Berlin

Tel.: +49(0)30 3200 21 54  
[www.hotel-seehof-berlin.de](http://www.hotel-seehof-berlin.de)

Single Room – early bird € 122.80  
Double Room – early bird € 150.40  
(Breakfast included)

Available until 23.12.2017

Should you have any further questions regarding these pre-reserved rooms or any other requests about room reservations, please contact TopSelect GmbH: Tel.: + 49(0)89 628346–30

## Organisation

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### Participation fee

Participation fees for the Trade Congress “Fuels of the Future 2018” including beverages during breaks, lunch buffet, evening event and presentations on a USB stick:

€ 690.00	early booker rate until 30.11.2017
€ 890.00	standard rate from 01.12.2017
€ 490.00	for BBE, UFOP, VDB, BDB <sup>e</sup> and Fachverband Biogas members
€ 190.00	for students (with valid identification)
Free	Press (with valid press identification)

All prices plus statutory value-added tax.

### Registration

Please register using the enclosed card or online at:  
**www.fuels-of-the-future.com**

An invoice will be sent to you as binding confirmation of your participation. Please transfer the sum invoiced, indicating the invoice number. Transfer of this sum automatically registers you to attend the congress.

### Cancellation

A € 50.00 processing fee will be charged for cancellations before 17.01.2018 (cancellations may only be made in writing). The full participation fee is due for cancellations after 18.01.2018. In case of cancellation, please indicate your full name, address and invoice number; alternatively, you can appoint a substitute participant for no extra charge.

### Note

German-English simultaneous interpretation is provided at the congress. The presentations will be available for congress participants to download in English or German after the event (from 29.01.2018) at **www.fuels-of-the-future.com**. The organiser reserves the right to make programme changes for urgent reasons.

## Overview of topics:

### **Framework conditions for renewable mobility of the future**

The role of biofuels in climate protection and development of renewable mobility. The German government's mobility and fuel strategy. What prospects does EU policy offer for renewable mobility in the run-up to 2030 and beyond? Renewable mobility in Europe – differing perceptions of political decision-makers and the industry. From multimodality to robotaxi – what do we need on roads to ensure the energy turnaround?

### **The future of combustion engines: Revolution in drive systems and fuels**

What development prospects exist for a drive and fuel revolution in the energy sector? What prospects exist for science, the automotive industry and civil society?

### **Biofuels established on the market**

Biodiesel, bioethanol, vegetable oils – which market developments should we be monitoring? What kind of technological optimisation can we expect? Presentation of results from various research projects examining biodiesel. Emission reduction potential of ethanol-containing petrol fuels. Outlook for trade and market development and the availability of feedstocks for biofuels.

### **Electromobility**

Future of electromobility: Electric drives in conjunction with internal combustion engines or pure electric drives? What is the state of play in infrastructure expansion to ensure electromobility can be rolled out across the country?

### **Biomethane and power-to-X**

Which opportunities and obstacles exist for biofuels produced from biomethane? Which synergies between power-to-gas and biomethane production can be identified? How has biomethane developed compared with international standards? Comparison of the climate impact of drive systems: fossil fuels, bio, PtX or battery.

### **New biofuels**

What prospects exist for biofuel production from carbon recycling? What technical challenges arise in recycling waste into biofuels? Importance of liquid alternative fuels for climate protection and market development.

### **Parallel forums**

During the two-day conference, market developments, current research results and practical experience with market-tested and new biofuels will be presented in 13 forums and a panel discussion. This year we are again expecting over 500 international participants.