

#fuels2022
NAVIGATOR
FOR SUSTAINABLE
MOBILITY!

19<sup>th</sup> International Conference for Renewable Mobility

**FUELS OF THE FUTURE 2022** 

24 – 28.01.22, 9:00 – 16:30 (CET) each day Digital format

www.fuels-of-the-future.com

Organiser:

Supported by:













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# Register here

# **Participation Fee**

Statutory value added tax is applicable to the participation fee for the 19<sup>th</sup> International Conference "Fuels of the Future 2022". The fee includes participation in all 5 days of the event (15 sessions), copies of the presentations and session video recordings

- 570,00 € early bird rate for bookings before 30.11.2021
- 750,00 € for bookings from 01.12.2021
- 370,00 € rate for members (BBE, UFOP, VDB, BDB<sup>e</sup> and Fachverband Biogas)
- 270,00 € representatives from federal or state ministries or institutions of higher education
- 70,00 € students (on presentation of a valid student card)
  - free press (free admission on presentation of a valid press card)

### Registration & invoicing

After registration you will receive a confirmation of registration by e-mail. After receiving the confirmation of registration you are registered for the conference. The invoice will be sent to you at the beginning of January 2022. Please make sure that you enter the correct data in the section on invoicing details. If your invoicing data differs from your registration data, please be sure to enter the different invoice address in the appropriate section of the online form as well. If subsequent corrections to the invoicing data are required, a processing fee of 25,− € plus 19 % VAT will be charged. Please transfer the participation fee after receipt of the invoice, quoting the invoice number. You will receive the access data for the digital sessions after receipt of payment at least 5 days before the event.

# List of participants

If you consented during registration to publication of your first name, surname and company affiliation on a list of participants, this consent has been noted. Your consent can be revoked at any time, provided that the Bundesverband Bioenergie (BBE) is informed in writing.

### Cancellation

A processing fee of € 50,00 will be charged if you cancel your participation before o5/01/2022 (only in writing to buechner@bioenergie.de). If you cancel after o5/01/2022, the full participation fee is due. If you wish to cancel, please indicate your full name, address and invoice number. Alternatively, you can appoint a substitute participant at no extra cost.

www.kraftstoffe-der-zukunft.com/en/agb-2

# Dear colleagues,

Coping with the coronavirus crisis and significantly increasing momentum as we move towards effective climate change mitigation internationally are the major challenges of our time.

In 2021, the effects of the coronavirus pandemic have continued to determine our professional and private daily routines and have also led to a different format for our 19<sup>th</sup> International Conference for Renewable Mobility "Fuels of the Future 2022".

As Covid-19 continues to make planning difficult for conferences and other events, the organisers have decided to run the "Fuels of the Future 2022" conference in a digital format rather than maintaining the original plans for an in-person event on 24th and 25th January 2022 in Berlin. That means the "Fuels of the Future 2022" conference will be held as a 5-day event series in digital format from 24th to 28th lanuary 2022. Each day of the event is made up of three sessions. The advantage for you: the digital format means you have a chance to participate in all the conference sessions. Our conference will. as is customary, be held in two languages (German-English).

We do hope that you can appreciate why we have taken this decision on the format and are confident that at the digital "Fuels of the Future 2022" conference we will once again offer you a very attractive platform with plentiful new information as well as fascinating topics and discussions.

# The conference slogan is "Fuels of the Future 2022 – Navigator for Sustainable Mobility"!

This slogan builds a bridge to the enormous challenges for all of society in significantly intensifying future measures and activities to attain ambitious climate change mitigation in all sectors of the economy. Particularly in view of the industry's overall economic significance at the global, European and national level, defossilisation of the transport sector is a central issue in this context and requires a reliable forward-looking regulatory framework as a basis for planning.

At the European level, the EU is not only setting the framework for climate change mitigation in Europe with the Green Deal, the European Climate Law and the "Fit for 55" package, but is also setting the pace globally for ambitious climate change mitigation in other industrialised countries. The transition to greenhouse gas neutrality necessitate unprecedented an willingness to invest and, above all, the requisite financial mobilisation in the short term. In view of the time pressure for climate change mitigation, all potentials for saving greenhouse gas emissions in the vehicle fleet must be deployed in a technology-neutral manner to achieve the climate targets for the transport sector stipulated in the EU's implementation targets - including sustainable biofuels in combination with increasing percentages of synthetic fuels.

The more advanced greenhouse gas reduction quota (GHG quota) for the transport sector that was adopted in 2021 by the German Bundestag and Bundesrat has already sent an important signal to the biofuel industry and means more climate change mitigation in the transport industry as well as greater planning security for biofuel manufacturers and feedstock producers.

To be precise, the greenhouse gas reduction quota will be raised step-by-step from its current 6 percent to 25 percent in 2030. The amendment will come into force on 1st January 2022. We assume that a total of about 175 million tonnes of CO<sub>2</sub> will be saved in the transport sector by 2030 thanks to this increased greenhouse gas reduction quota. Sustainable biofuels will contribute over 110 million tonnes of CO<sub>2</sub> reduction to that figure. Despite all the potential that electromobility and the hydrogen economy offer, we must not forget that commercially available biofuels are a vital piece in the puzzle if we wish to attain our climate targets. It is already apparent today that much of the vehicle fleet will still be using combustion engines even in 2030 and will also need to make a contribution to protecting the climate. It is therefore crucial to ensure that the share of commercially available biofuels is at least secured and supplemented by further development of advanced biofuels.

A host of challenges and areas requiring action consequently need to be tackled globally, at the EU level and nationally in order to make decisive headway on renewable mobility and climate change mitigation. As a national and international platform for discussion, the "Fuels of the Future 2022" international conference addresses these key questions for the future of mobility. Join in this future-oriented debate on decarbonisation of the transport sector and let us tackle the challenges in this area together.

# I hope you will enjoy taking part in the conference!

Artur Auernhammer, MP Chairman of the Board, German Bioenergy Association



# MONDAY, 24<sup>TH</sup> JANUARY 2022 DIGITAL CONFERENCE DAY 1 (SESSIONS 1,2+3)

"Fit for 55" and the contribution of renewable fuels in achieving European climate change mitigation targets	10:00 - 13:00
PANEL DISCUSSION Green Deal and "Fit for 55" – The role of alternative fuels for the internal combustion engine of the future	14:00 - 15:30
Impact of European climate change mitigation legislation on the transport sector	16:00 18:00

# TUESDAY, 25<sup>TH</sup> JANUARY 2022 DIGITAL CONFERENCE DAY 2 (SESSIONS 4,5+6)

E-fuels   Examples of R&D on the way into practice	9: <u>0</u> 0 11:00
5 Green hydrogen	11 <u>:</u> 30 13:30
Biodiesel research – boosting the potential for higher blending levels now!	14:30 16:30

# WEDNESDAY, 26<sup>TH</sup> JANUARY 2022 DIGITAL CONFERENCE DAY 3 (SESSIONS 7,8+9)

7 Bioethanol	9:00 11:00
8 Biomethane in the international context	11 <u>:</u> 30 13 <u>:</u> 30
9 International biofuel trade	14 <u>:</u> 30 16:30

# THURSDAY, 27<sup>TH</sup> JANUARY 2022 DIGITAL CONFERENCE DAY 4 (SESSIONS 10,11+12)

10 Biofuels from waste and residues	9: <u>0</u> 0 11:00
11 Biofuels in shipping	11 <u>:</u> 30 13:30
Climate-friendly flying? Biofuels in aviation	14:30 

# FRIDAY, 28<sup>TH</sup> JANUARY 2022 DIGITAL CONFERENCE DAY 5 (SESSIONS 13,14+15)

road to implementation	11:00
14 Biomethane as a fuel	11 <u>:</u> 30 13:30
15 Biofuels in agriculture and forestry	14:30 16:30



All times in CET (Central European Time)

# 19th International Conference for Renewable Mobility

24. - 28.01.2022



- The conference livestream (in German and English) will be made available via an event website
- · Participate via PC, laptop, tablet or smartphone
- · Chat function: During the session you can ask your questions in the chat
- · Digital coffee & lunch breaks: Presentation + exchange from and with gold partners

The organisers reserve the right to make changes to the programme any such change does not entitle participants to a refund.

Once you have made your conference booking, you will receive your access information for the conference at least 5 days before the event.



# "Fit for 55" and the contribution of renewable fuels in achieving European climate change mitigation targets

10:00 - 13:00

# Moderation:

Stephan Arens, Union for the Promotion of Oil and Protein Plants (UFOP) and Board Member, German Bioenergy Association (BBE)

# Climate change mitigation with an immediate impact through sustainable biofuels

Artur Auernhammer, Member of the German Bundestag, Chairman, Board of Directors German Bioenergy Association (BBE)

# Significance and impact of "Fit for 55" for the German Climate Protection Act, measures in the transport sector and alternative fuels

Dr Hendrik Haßheider, Federal Ministry of Transport and Digital Infrastructure (BMVI)

The "Fit for 55" package — What will its implementation mean for the transport sector and for alternative fuels at European and national level?

N.N: DG Energy, European Commission

# The "Fit for 55" package – Prospects for business and the competitiveness of European industry

Jens Gieseke, European Parliament

# Making "Fit for 55" fit for purpose: The role of ethanol in road transport for an effective EU transport fuel policy

Dr Stephan Meeder, ePURE

### Discussion

After each presentation:

· Replies to your questions from the chat

13:00 - 14:00



Panel discussion: Green Deal and "Fit for 55" – The role of alternative fuels for the internal combustion engine of the future 14:00 – 15:30

### Moderation:

Sonja van Renssen, freelance journalist

### Pekka Pesonen

COPA-COGECA Secretary General

.......

### N.N.

DG Energy, European Commission

### Stefan Schreiber

President of the German Biofuels Industry Association (VDB)

### Subsequently:

· Replies to your questions from the chat

### Dr Monika Griefahn

Spokesperson eFuel Alliance e.V

### Götz Schneider

German Association of the Automotive Industry (VDA)



# Impact of European climate change mitigation legislation on the transport sector 16:00 – 18:00

# Moderation: Stefan Walter, German Bioethanol Industry Association (BDBe) EU climate goals and RED III: The contribution needed from alternative fuels to achieve the goals in 2030 Bernd Küpker, European Commission Greenhouse gas savings from biofuels in Germany Carlo Hamelinck, studio Gear Up What consequences will the introduction of an emissions trading system in the transport sector have for the economic viability of electromobility and alternative fuels? Anne Held, Fraunhofer Institute for Systems and Innovation Research ISI Is the German GHG abatement quota a good example for Europe? - What are the prospects for various compliance options? Dr Franziska Müller-Langer, DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmhH CO<sub>2</sub> pricing? And if so, how many prices? - How can climate-friendly mobility remain affordable? Karsten Schulze, CTO, Allgemeiner Deutscher Automobil-Club e.V. (ADAC) Discussion After each presentation:



# E-fuels | Examples of R&D on the way into practice

# Moderation: Dr Franziska Müller-Langer, German Biomass Research Centre (DBFZ) Green methanol from electricity-based synthesis gas as a fundamental building block for synthesis of synthetic fuels as an important instrument for sector coupling Dr Ulrike Junghans, Fraunhofer Center for Chemical-Biotechnological Processes International cooperation on e-fuels: From lab to road Karl Dums, Porsche AG and Marion Wurzel ExxonMobil Scaling ultra-low-carbon e-fuels from air and water Dr Amy Ruddock, Carbon Engineering Ltd. Renewable synthetic fuels — Energy input and costs Dr Mark Misselhorn, Caphenia GmbH Discussion After each presentation:

Register here



Moderation:
Werner Diwald, German Hydrogen and Fuel Cell Association (DWV)
N.N.
N.N NOW GmbH National Organisation Hydrogen and Fuel Cell Technology
Use of renewable hydrogen and its derivatives in the transport sector – A meta-study
on the evolution of supply and demand in Germany up to 2030
Hannes Salomon / Friederike Altgelt, German Energy Agency GmbH (dena)
Green hydrogen: First facility for production of green hydrogen at Shell Energy and
Chemicals Park Rheinland via hydrogen electrolysis – Project REFHYNE
Dr Jörg Dehmel, Shell Energy & Chemicals Park Rheinland
Green hydrogen from biogas – A pilot project
Dr Andy Gradel, BtX energy GmbH
Discussion
Discussion
After each presentation:

13:30 - 14:30



# Biodiesel research – boosting the potential for higher blending levels now!

14:30 - 16:30

# Moderation:

Prof Dr Jürgen Krahl, President, Ostwestfalen-Lippe University of Applied Sciences and Arts (TH OWL)

# Future fuels - overview and challenges for additives

Dr Svetlana Crusius, ERC Additiv GmbH

# Sensor concept for early detection of deposit behaviour of biofuels for diesel engines

Prof Dr Thomas Schulte, Future Energy Institute (iFE), Ostwestfalen-Lippe University of Applied Sciences and Arts (TH OWL)

# High-performance biodiesel blends with vegetable oils and glycerol derivatives + their stabilisation with natural, hydrophilic antioxidants

Florian Kerkel, University of Regensburg

# Technical aspects concerning use of higher biodiesel/diesel fuel blends (B10, B30)

Dr Richard Wicht, Katharina Friedrich, AGQM Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e. V.

### Discussion

After each presentation:

· Replies to your questions from the chat



Moderation:
Christine Kroke, German Bioethanol Industry Association (BDBe)
New possibilities for use of bioethanol
Dariusz Żdanuk, Ekobenz Sp. z o. o.
Investigation of material compatibility of petrol substitute fuels with an alcohol content above 15 $\%$ (V/V)
Klaus Lucka / Simon Eiden, TEC4FUELS GmbH
Spark-ignited combustion engines in real-world operation with fuels manufactured using $\text{CO}_2$ -neutral methods
Prof Dr Christian Beidl, TU Darmstadt
Selective Butene Formation in Direct Ethanol-to-C3 Valorization, using in Situ-Generated Hydrogen
Michael J Cordon,Oak Ridge
Discussion
After each presentation:
· Replies to your questions from the chat



# Biomethane in the international context

# Moderation: Dirk Bonse, German Biogas Association €-business case for alternative fuels in road transport Lasse Kari, Accenture Stirling cryocoolers: the key enabling technology for bioLNG Arjan Coenradie, Stirling Cryogenics B.V. From biogas to bio-CNG, an off-grid solution − Best practice in Estonia Lars von Lehmden, EnviTec Anlagenbau GmbH & Co. KG Economic evaluation of globally positioned PtL concepts for short-term provision of synthetic petrol Kevin Günther, Chemieanlagenbau Chemnitz GmbH Discussion After each presentation: • Replies to your questions from the chat



# International biofuel trade 14:30 – 16:30

# Moderation: Torsten Weidemann, German Bioethanol Industry Association (BDB\*) Impact of the EU "Fit for 55" Package on the outlook for biofuels Cornelieus Claeys, Strata Advisors Variable demand as a means to more sustainable biofuels and bio-based materials Dr Wolter Elbersen, Wageningen University & Research Consumer demand drives use of bionaphtha in fuels Evridiki Dimitriadou, S&P Global Assessment of the potential for new feedstocks for the production of advanced biofuels (EU RED II Annex IX) – final results and market implication Sébastien Haye, E4tech Discussion

After each presentation:



# Biofuels from waste and residues 9:00 – 11:00

# Moderation:

Detlef Evers, Mittelstandsverband abfallbasierter Kraftstoffe (MVaK)

# Waste-based feedstocks — Where are the limits for different transport modes? An outlook from Greenea up to 2040

Fabien Hillairet, Greenea

# "Fit for what? Considering the EU proposals for waste-based biodiesel"

Angel Alberdi, European Waste-based & Advanced Biofuels Association (EWABA)

# Solketal as a sustainable advanced fuel component

Julian Türck, Leuphana University Lüneburg

# Sustainable fuels made from biobased residues — demonstration in a plant in long-term operation

Stefan Eder, Fraunhofer Institute for Environmental, Safety and Energy Technology (IJMSICHT)

### Discussion

After each presentation:

· Replies to your questions from the chat



Moderation:
Prof Dr Bert Buchholz, University of Rostock, CIMAC Germany
N.N. N.N.
Market uptake support for intermediate forms of bioenergy – production of marine biofuels from pyrolysis oil
Dr Rainer Janssen, WIP Renewable Energies
Drop-in fuels for maritime shipping — pyrolysis oil intermediates from residues as heavy fuel oil blend components
Dr Fanny Langschwager, University of Rostock
SEA-LNG — a global advocacy organisation focused on accelerating uptake of LNG as a marine fuel
Steve Esau, SEA-LNG
Discussion
After each presentation:

13:30 - 14:30



# Climate-friendly flying? Biofuels in aviation 14:30 – 16:30

# Moderation:

Prof Dr Martin Kaltschmitt, aireg Board I Institute for Environmental Technology and Energy Economics (IUE), Hamburg University of Technology (TUHH)

# Prospects for international sustainable aviation markets and prices

Alfonso Berrocal, Argus Media

Fit for aviation? Potentials of sustainable aviation fuels in the light of "Fit for 55"

Thorsten Lange, NESTE

Maximizing carbon efficiency through electrolysis for an advanced biomass-to-liquid process producing sustainable aviation fuels

Marcel Dossow, Technical University of Munich, Garching

The jet fuel of the future - raw materials, production, techno-economic assessment - paths and challenges for sustainable aviation

Dr Ralf-Uwe Dietrich, German Aerospace Center

### Discussion

After each presentation:

· Replies to your questions from the chat



# Advanced alternative fuels – The pathway to implementation

9:00 - 11:00

# Moderation:

Prof Dr Thomas Willner, University of Applied Sciences (HAW Hamburg)

# What is the potential impact on e-fuels of the European Commission's "Fit-for-55" package?

Tobias Block, eFuel Alliance

# Alternative liquid fuels from renewable resources: State of the art and outlook

Dr Ulrich Arnold, Karlsruhe Institute of Technology (KIT)

### From biomass to chemicals

Dr Simon Hafner, Thyssenkrupp Industrial Solutions AG

# Renewable fuels, hydrogen and chemicals for the transport & industry sector; Energy transition – an industry perspective and own developments

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

### Discussion

### After each presentation:



# Biomethane as a fuel 11:30 – 13:30

### Moderation:

Wolf-Dietrich Kindt, Bundesverband Bioenergie e. V. (BBE)

# Bio-LNG - Green gases move the future

Maximilian Kurth, bmp greengas GmbH

# Biomethane: a green alternative if hydrogen is too expensive and electricity is not an option

Zoltan Elek, Landwärme GmbH

# Development of an innovative process chain to generate resource-efficient methanebased biofuel

Elena Holl, State Institute of Agricultural Engineering and Bioenergy, University of Hohenheim

# Technological and economic aspects of bio-LNG production in agricultural biogas plants

Alexey Mozgovoy, PlanET Biogastechnik GmbH

### Discussion

After each presentation:

· Replies to your questions from the chat



# Biofuels in agriculture and forestry 14:30 – 16:30

Moderation: Prof Dr Peter Pickel, John Deere GmbH & Co. KG
"Fit for 55" — Paving the way now for increased use of biofuels in agriculture and forestry  Stephan Arens, Union for the Promotion of Oil and Protein Plants (UFOP e.V.)
${ m CO_2}$ -neutral mobility: Potential of alternative and renewable fuels and electrification in off-highway applications Markus Winkler, DEUTZ AG
One engine, one tank, many fuels – The MuSt5 project Andreas Schröder / Prof Dr Peter Pickel, John Deere GmbH & Co. KG
Sensor-based detection of rapeseed oil, biodiesel, diesel and blends thereof for multi- fuel engines  Dr-Ing Peter Emberger, Technologie- und Förderzentrum (TFZ)
Discussion
Official closing session
After each presentation: Replies to your questions from the chat

Companies and organisations who would like to engage in effective marketing of their commitment to the biofuel sector and renewable mobility, with a precise focus on the relevant target groups, have an opportunity to support the conference as partners and present their activities at the conference.

# Your presentation serves inter alia to:

- Create public awareness of your company/organisation and position it as an important player at one of the world's largest industry gettogethers for renewable fuels and alternative drives
- Ensure broad reach and impact vis-à-vis a professional international audience and in the trade press
- Present exclusive advertising through direct mailing, logo imprint in the conference programme, and on the conference website
- · Initiate business contacts

# We offer you the following participation possibilities:

# **Diamond Partner**

7.500 € (plus value added tax)

# **Gold Partner**

5.000 € (plus value added tax)

# **Silver Partner**

2.500 € (plus value added tax)

# Your conference partnership



Further detailed information as well as contact persons and booking form:

Participation offer



# **Your Contact**



# Susanne Büchner

Speaker for Event and Conference Management German Bioenergy Association (BBE) EUREF-Campus 16 D-10829 Berlin

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