FUELS OF THE FUTURE

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#fuels2025 INTO THE FUTURE -

DRIVEN BY CLIMATE PROTECTION

Call for Papers

Fuels of the Future 2025 22nd International Conference on Renewable Mobility

20 – 21 January 2025 in Berlin

Submit now: www.fuels-of-the-future.com/en/cfp

Deadline 19 June 2024

BBE









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THE CONFERENCE

For over 20 years, the "Fuels of the Future" conference has brought together the international biofuels industry, key players involved in renewable fuels and renewable mobility, as well as scientists, researchers, and others with an interest in the field to discuss the current EU and international regulatory framework, as well as how these provisions are transposed into national law. National and international requirements on climate action are increasingly determining the thrust of funding policy and constraints. These have an impact on the future of commercially available biofuels and other renewable fuels, along with those currently in the process engineering pipeline. At the same time, engine drives, including exhaust gas aftertreatment, must comply with statutory emission requirements by utilising renewable fuels. The fuel tank can thus impact powertrain design, as well as being the "interface" for fuel quality. After all, fuel blends will become more diverse in the future. Pro-actively analysing fuel-chemical interactions is a vital prerequisite to ensure user satisfaction and offer scope for potential applications. All these factors give rise to complex challenges for the industry sectors involved, most particularly for research and development.

The various expert forums at the conference seek to respond to these challenges. Once again, the organisers aim to offer participants a comprehensive and up-to-date range of topics, as well as providing opportunities for in-depth technical discussions during and after the expert forums on each theme. The conference's strength stems from involving the full spectrum of key players in renewable mobility, spanning vehicle manufacturers, mineral oil companies, the chemical industry, the transport and logistics sector, specifically road transport, heavy goods freight, shipping, and aviation, as well as consulting and certification companies, and last but not least the worlds of science and politics, with a view to focusing on current or future needs and challenges for use of renewable fuels. The conference and its topics are emblematic of how "sector coupling" and "system integration" look in practice. Thanks to this particular thrust, the conference organisers are once again expecting over 600 international participants in January 2025. In content terms, the focus will remain the entire spectrum of topics linked to renewable mobility and drive development. Germany and the European Union have established a phased approach for compliance by 2030 with ambitious climate protection targets for all sectors, including the mobility sector, with a view to achieving more or less complete defossilisation for the transport sector in the long term. The future of combustion engines, a sometimes emotive topic, also plays a role in this context. Given the huge importance of these issues for production sites for renewable fuels in German and Europe, as well as for the automotive industry, how should this "evolutionary process" be designed to factor in both climate action imperatives and mobility as an economic factor? When addressing renewable energy sources, it is also vital to consider the future of engine technology, exhaust gas aftertreatment, and drive systems in general. Which structural challenges must the automotive industry face and which arise for the petroleum industry as a traditional energy supplier? Will new business and funding models to promote synthetic fuels from renewable electricity expand the range of products on offer? Is the energy transition in the transport sector also an opportunity to tap into new valueadded potential and safeguard jobs, in Germany, the European Union, and beyond?

CONFERENCE ORGANIZERS

German Bioenergy Association (Bundesverband Bioenergie e.V. - BBE) Union for the Promotion of Oil and Protein Plants (Union zur Förderung von Oel- und Proteinpflanzen e.V. - UFOP) German Bioethanol Industry Association (Bundesverband der deutschen Bioethanolwirtschaft e.V. - BDBe) German Biogas Association (Fachverband Biogas e.V. - FvB) German Biofuels Industry Association (Verband der Deutschen Biokraftstoffindustrie e.V. - VDB)



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CALL FOR PAPERS

The organisers cordially invite you to participate in the programme for this event and to submit proposals for presentations that tally with the conference's hallmark profile. Is there a topic you would like to present and discuss? Or are you involved in a project with results that would interest conference participants?

If you would like to give a presentation in one of the numerous expert forums, please submit your **proposal** and a short synopsis online to the Bundesverband Bioenergie (German Bioenergy Association) by **19th June 2024**. The Conference Programme Committee will take the decision on which proposals to include.

Submit now: www.fuels-of-the-future.com/en/cfp

"MARKETPLACE OF THE FUTURE" EXHIBITION AND PARTNERSHIP PROGRAMME

We also offer companies or organisations an opportunity to present their work to an international trade audience via an exhibition stand, as well as for partners to showcase their activities as Diamond, Gold or Silver Partners. Further information is available on our conference website.

TOPICS

Climate action, the energy transition in the transport sector, and the complex transformation process this entails, as well as security of supply number among the major challenges facing society. Despite all efforts to date, the transport sector in Germany, Europe, and worldwide has so far made virtually no contribution to measures to mitigate climate change. Higher power-to-weight ratios in the vehicle fleet and an upsurge in road-based freight transport have more than cancelled out the progress made thanks to improved technological efficiency and greenhouse gas savings.

The European Union has taken an important and far-reaching decision by increasing the climate action target to at least a 55 per cent cut in CO_2 emissions by 2030. Achieving the 2030 climate action target requires significant reductions in greenhouse gas emissions for all sectors, including transport. Openness to all technologies is the most effective way to achieve this objective. Sustainable biofuels will remain crucial for the climate action policy toolbox in coming decades, as further promising measures such as e-mobility, hydrogen, and other electricity-based fuels will only have a noticeable impact on climate change mitigation after 2030. A greater focus on the existing vehicle fleet with combustion engines will be vital in the meantime.

The conference aims to identify and discuss specific measures, technology options, and areas where political action is required, with a view to attaining European and national sector-specific targets. Please find below a list of potential topics and questions.

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IMPRESSIONS 2024



































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BACKGROUND TO THE "REGULATORY AND POLITICAL FRAMEWORK" THEMATIC CLUSTER

The EU's "Fit for 55", Green Deal and 2030 Goals in the Renewable Energy Directives (RED II and RED III)

- The Green Deal, "Fit for 55", and the contribution of renewable fuels to attaining European climate action targets.
- The impact of European climate action legislation on the transport sector
- The role and economic prospects of biofuels from renewable raw materials up to 2030
 - The role of biofuels in the context of renewable energy and climate change mitigation policy in the transport sector up to 2030
 - The role of waste and residues in further expanding biofuels by 2030
 - Supply policy aspects of biofuels and renewable fuels
- Various process engineering perspectives for production of PtX fuels (e-fuels)
- Development of innovative drive technologies and renewable fuels
- Development and evaluation of innovative process engineering for production of sustainable biofuels Which feedstocks and processes will play a role in future in a competitive market?
- Sustainable finance

Requirement to Cut Greenhouse Gas Emissions in the Transport Sector as a Consequence of the Paris COP 21 Decisions – Prospects and Implementation Options

- State of play on practical implementation and prospects in Germany
- Implementation of a GHG reduction requirement in other EU Member States and worldwide
- Concepts for GHG reduction strategies in agriculture
- Approaches adopted by signatory states to the Paris Agreement on Climate Change to introduce and further develop first-generation biofuels and advanced biofuels as a targeted measure for GHG reduction

TOPIC CLUSTERS

The Future of Commercially Available Biofuels – Biodiesel and Biomethane in Road Transport, Aviation, and Shipping

Biofuels from cultivated biomass make a vital contribution to securing sustainable and renewable mobility by steadily reducing greenhouse gas emissions in the transport sector. Their future depends on political decisions and how much reliability such decisions offer to protect existing projects and safeguard investments in new processing technologies. One obstacle is uncertainty as to the potential future thrust of biofuel policy, which must also continue to take appropriate account at the EU level of commercially available biofuels up to 2030 and beyond. Which provisions in the new RED III and other European legislation will determine technological and market developments for biodiesel and bioethanol from cultivated biomass in coming years?

- Changes to EU biofuels policy and prospects up to 2030
- The role of cultivated biomass as a basis for biofuel production
- Research and development projects for further development of biodiesel, bioethanol, and vegetable oil fuel
- Market development for biodiesel, bioethanol and vegetable oil fuel
- Feedstock potential in Europe and worldwide
- Technology development and research concerning production of biodiesel and bioethanol
- If market access for commercially available biofuels is blocked, how would this affect efforts to attain harmonised international policy on sustainable biomass feedstock and biofuels?
- Policy on funding to promote biofuels is developed in third countries without input from the European Union. How do these countries design their regulatory framework for such funding policy?

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Biomethane as a Fuel

Despite the successful launch of biomethane production in practice, biomethane currently still plays a subordinate role in the transport sector. However, thanks to its high emission reduction potential and feedstock flexibility, biomethane can make a significant contribution to sustainable and renewable mobility. Amended provisions in Germany's Renewable Energy Sources Act (EEG) and changes in the broader political context mean that a stronger general focus on this sector is of the essence, particularly if existing biogas plants are to enjoy positive prospects in future too. How can the economic and regulatory framework be improved and how is it possible to speed up the still sluggish development of the requisite infrastructure?

- Market development of biomethane in the transport sector in Germany, Europe and globally
- Potential in fleet traffic and heavy goods transport
- Regulatory framework and the biogas industry's expectations
- Funding instruments, infrastructure, feedstocks, and quality requirements
- Best practice examples of biomethane in the transport sector nationally and internationally
- Liquefied biomethane as a new option for the mineral oil industry

New Biofuels and Conversion Pathways

Global research is underway into biofuels based on waste and residues, currently unutilised biomass or new chemical processes for biomass production (algae oil). A wide range of technological approaches are being pursued in this context, including bioethanol from lignocellulose, hydrogenation of vegetable oils and animal fats (HVO), biodiesel from algae, and thermochemical conversion of biomass into fuels. Politicians, the mineral oil industry, and vehicle manufacturers have high hopes for the research outcomes and scope to introduce the findings on an industrial scale.

- What role do new biofuels play in the biofuel policy pursued by the German government and in other countries? Which market incentives are in place? How much R&D funding has been made available and how much will be provided in future?
- Biofuels derived from waste and residues What kinds of sustainable potential can be unleashed?
- Hydrogenation of vegetable oils and animal fats (HVO) What kinds of sustainable potential can be unleashed and for which applications are these feedstocks prioritised?
- Strategies and concepts for use of waste and residues (used cooking oils, animal fats, etc.)
- Contribution of waste-based biofuels to decarbonisation of the EU transport sector
- E-fuels/synthetic biofuels: Presentation of pilot projects and current progress on research
- Green hydrogen and hydrogen from biomass: state of the art, current projects, prospects
- Power-to-X and power-to-gas: opportunities and expansion prospects
- Fuel cells, electric and hybrid drives
- Which technologies offer the greatest synergy potential for the most cost-effective and greenhouse-gasefficient biofuel production?
- Which funding concepts have been developed in the EU or elsewhere?
- Which new demonstration plants or R&D projects are planned?
- Which technologies are close to market maturity?

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Sustainability Certification

Given the complex supply chains and environmental impact of biofuels and alternative fuels, sustainability criteria stipulated in statutory provisions (RED III, the German Biofuels Sustainability Regulation (BioKraft-NachV), etc.) offer crucial safeguards. Certification systems help ensure urgently needed compliance with statutory sustainability requirements in areas such as preserving biodiversity, reducing GHG emissions, protecting land rights, and considering the socio-economic impact of biofuel production.

- Auditing the sustainability of biofuels and alternative fuels
- European Union database: state of play
- Implementation status of certification systems in the EU Member States
- "A role model": sustainability certification for biofuels for the bioeconomy and the broader economy
- System-oriented comparison of certification systems: North and South America, EU, Asia
- Ensuring sustainability criteria and quality standards in international trade in goods

New Drive and Mobility Concepts

- Renewable mobility at local authority level
 - Best-practice examples in municipalities with a multiplier effect for use of biofuels and alternative fuels
 - Innovative mobility concepts in municipalities
 - Regional and urban mobility concepts and car sharing

As well as complying with extensive sustainability provisions to gain market access, biofuels must also fulfil increasingly stringent statutory requirements on emissions. This has led to a growing demand for biofuel quality. In addition to personal mobility, there are potential applications for biofuels and alternative fuels in aviation, heavy goods transport, and shipping.

- Importance of renewable fuels from the perspective of the automotive industry and its suppliers
- Electromobility: market development, applications, innovations, and prospects
- Drive development
- Fuel blends, quality, and engine compatibility
- Potentials for mobility of the future
- Commercial vehicles and logistics
- Biofuels and alternative fuels in aviation
- Biofuels and alternative fuels in heavy goods and freight transport



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Feedstocks for Biofuel Production and Trade

Key issues include the availability and origin of biomass, as well as ways to develop its potential. Biomass for biofuel production and biofuels is traded globally. Keeping markets supplied or rather security of supply plays a decisive role in this context. Agricultural markets are characterised by structural surpluses. Countries outside the EU are raising the level of mandatory inclusion in blends to ease market pressure.

- Optimising cultivation of agricultural feedstocks
- · Biofuels and feedstocks in the context of agricultural trade and markets
- Certification and potential of low-ILUC feedstocks
- Influence of customs duties on international agricultural trade and national biofuel production crowdingout effects?
- · Cheap imports in global trade and the impact on local production
- Price trends for commodities
- Role of biofuel markets in third countries
- Assessment of the feedstock potential of Annex IX Parts A and B
- Need for action and measures to prevent fraud involving imports of biofuels from waste oils and fats

Renewable Drive Energy in Agriculture and Forestry (Biofuels, Hydrogen etc.)

Renewable drive energy in agriculture and forestry (biofuels, hydrogen, etc.) can make a rapid and verifiable contribution to climate action when it comes to sectoral GHG reduction targets for agriculture and forestry. Manufacturers of agricultural machinery are also keen to ensure GHG reductions, creating a "win-win situation" for agriculture and agricultural machinery manufacturers. The prerequisite is increased use across-the-board of renewable drive energies in agriculture and forestry

- Use of renewable drive energies in agriculture and forestry nationally and worldwide
- Potential for climate change mitigation through use of renewable drive energies in agriculture and forestry
- Market-entry and product strategies of agricultural machinery manufacturers
- Technological developments and research activities
- Best-practice case studies for use of renewable drive energies in agriculture and forestry
- Sustainable solutions for new and existing vehicles (e.g. using biodiesel, vegetable oil, biomethane, hydrogenated vegetable oils (HVO))



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Call for Entries for the Fuels of the Future 2025 Young Talents Competition

Curious? Submit your entry now.

Present your research findings, projects, and studies at the "Fuels of the Future" international conference on renewable mobility on 20th and 21st January 2025.

The competition is open to young scientists researching or working on topics related to renewable mobility. They are invited to share their work with experts from all over the world at the top event for the German, European, and international biofuels industry, which also serves as a forum for discussions on developing renewable mobility.

Present your research project in 160 seconds using the dynamic Pecha Kucha method. You can show eight slides, each displayed for 20 seconds. Would you rather present your results in German? Please go ahead! You will have access to an international audience of experts from the world of renewable mobility who will see your presentation during the plenary session.

Once all the presentations have been shown, the audience will pick a winner from the young researchers who have introduced their work. The live vote will use Slido for voting. The winner will be invited to present their research in a 20-minute talk followed by a Q&A session in one of the main forums at the "Fuels of the Future 2026" conference. Travel and accommodation for the 2026 conference will be covered for the award-winning young talent.

More information: <u>www.fuels-of-the-future.com/en</u>

CONTACT



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