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IEA Bioenergy
Technology Collaboration Programme

Workshop

Bioenergy in a Net Zero Future

Lyon (France), Thursday 19 October 2023

Workshop organized by IEA Bioenergy in collaboration with ADEME, the French Agency for Ecological Transition

INTRODUCTION

Reaching net-zero emissions globally by 2050 requires an unprecedented transformation in how energy is produced, transported and used. In the IEA Net Zero by 2050 scenario, modern bioenergy use rises to 100 EJ in 2050, meeting almost 20% of total energy supply. In an energy mix dominated by wind and solar, sustainable bioenergy features prominently in flexible energy generation, industry and transport, and is increasingly used in connection with carbon capture and utilisation or sequestration (CCUS). The captured biogenic CO_2 can either be stored to achieve a net extraction of CO_2 from the atmosphere (reaching so-called 'negative emissions') or it can be combined with green hydrogen to produce carbon-containing e-fuels and e-products.

This workshop, organised by IEA Bioenergy in collaboration with ADEME, aims to discuss the role of bioenergy in the transition to a carbon neutral energy system. In the morning sessions, the focus will be on policies and strategies to support the role of bioenergy in the energy transition. The afternoon sessions will consider the flexibility of bioenergy in the energy system, the use of biogenic CO_2 and promising developments in bioenergy concepts.

PROGRAMME

8.45 Registration

9.00 **The role of bioenergy in energy transition strategies**

Moderators: **Dina Bacovsky**, BEST (Austria), chair of IEA Bioenergy & **Emilie Machefaux**, ADEME (France)

- Welcome and short introduction by the moderators and **Emmanuel Goy** (regional office ADEME)
- **Jeremy Moorhouse**, IEA: Bioenergy in IEA's recent update of the Net Zero by 2050 roadmap
- **Christophe Kassiotis**, Directorate General Energy and Climate, France: French perspective on the role of bioenergy
- **Oshada Mendis**, Natural Resources Canada: Bioenergy in Canada's Net-Zero Future
- **Jim Spaeth**, US Department of Energy: US Bioenergy Opportunities

10.30 Tea/Coffee

11.00 **Panel debate on drivers and barriers & effective policies and strategies to support the role of bioenergy**

Moderators: **Paul Bennett**, Scion (New Zealand) & **Birger Kerckow**, FNR (Germany)

With the speakers of the first session + **Maria Georgiadou** (European Commission) and **Marlon Arraes Jardim** (Ministry of Mines and Energy in Brazil - online).

12.15 Lunch break

13.30 **Flexible bioenergy and the use of biogenic CO_2 in future energy systems**

Moderators: **Daniela Thrän**, DBFZ (Germany) & **Zoe Harris**, Univ. of Surrey (UK)

- **Markus Millinger**, Chalmers Univ. (Sweden): Considerations on the priority of biomass use in future energy systems
- **Tilman Schildhauer**, Paul Scherrer Institute (Switzerland): How flexible bioenergy and other system services from sustainable bioenergy can support the transition to a renewable energy system
- **Christiane Hennig**, DBFZ (Germany): Managing biogenic CO_2 in Bio-CCUS concepts
- **Christopher Galik**, North Caroline State University (USA): Carbon accounting in Bio-CCUS value chains - online
- **Aïcha El Khamlichi**, ADEME (France): Will there be enough biogenic CO_2 for projected e-fuel demand in France?

15.00 Tea/Coffee

15.30 **Promising developments in bioenergy concepts**

Moderators: **Chourouk Nait Saidi**, ATEE (France) & **Berend Vreugdenhil**, TNO (Netherlands)

- **Marion Maheut**, ENGIE (France): Diversification of applications downstream of pyrogasification
- **Joakim Lundgren**, Luleå University of Technology (Sweden): Carbon-negative production of hydrogen through biomass gasification
- **Frédéric Thiollier**, IDEA (France) & **Chourouk Nait Saidi**, ATEE (France): Eco-Parc de La Barillais Project - synergy between anaerobic digestion and gasification
- **Christian Bang**, EA Energy Analysis (Denmark): Capturing and storing biogenic CO_2 from biomass CHP plants in Denmark – online
- **Jean-Philippe Héraud**, IFPEN (France): CO_2 potential of advanced biofuels

17.00 **Summary and conclusions**

Luc Pelkmans, Technical Coordinator IEA Bioenergy

17.15 Closing drinks

PRACTICAL INFORMATION

Date:

Thursday 19 October 2023, 8.45-17.15 CEST

Meeting location:

The event will take place at Hôtel Mercure - Lyon Centre Charpennes.

Address: 7 place Charles Hernu, 69100 Villeurbanne - Lyon, France

5 minutes by metro (stop Charpennes Charles Hernu) and 10 minutes by foot from the Lyon Part Dieu train station (stop of international trains)

The workshop will be hybrid, so online participation will also be possible.

Participation:

Participation in the workshop is free of charge, but pre-registration is required.

Registration link: https://response.questback.com/ademe/5eptjhhhe8

Please indicate if you will participate on-site in Lyon, or if you would like to connect online and follow the live stream. There is room for around 100 participants in Lyon.

Hotel suggestions:

- Mercure Lyon Centre Charpennes Hotel: https://all.accor.com
- Lyon Marriott Hotel Cité Internationale: https://www.marriott.fr
- Novotel Lyon Gerland Musée des Confluences: https://all.accor.com
- Radisson Blu Hotel Lyon. https://www.radissonhotels.com
- InterContinental Lyon - Hotel Dieu: https://www.ihg.com/intercontinental
- Sofitel Lyon Bellecour: https://all.accor.com

More information:

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