

IEA Bioenergy Triannual Online Conference 2021



IEA Bioenergy
Technology Collaboration Programme

Bioenergy - A critical part of the path to carbon neutrality

29 November - 9 December 2021

IEA Bioenergy Triannual Online Conference 2021

29 November - 9 December 2021 | online

The role of biomass in the transition towards a carbon neutral society

The IEA Roadmap 'Net Zero Emissions by 2050' recognizes bioenergy as an important option, representing 18% of total energy supply in 2050, and playing a major role to reach carbon neutrality of the global energy system, either through the direct replacement of fossil fuels, or to offset emissions indirectly through the combined use of bioenergy with carbon capture and storage/utilisation.

An increasing role of biomass/biofuels would be needed in industry, transport as well as heat and power production. The conference sessions will consider latest developments and prospects of biomass/bioenergy in different sectors, as well as sustainable feedstock mobilisation and the role of biomass in a circular bio-economy.

There will be one or two sessions of 2 hours per day. Each day will be dedicated to a central topic, see the agenda below.

On-line participation is free of charge, but **pre-registration is required.**

[Register here](#)

Timings of the sessions are spread over the day to facilitate participation from all over the globe. Recordings will also be made available on this webpage. In addition there will be room for Q&A for people who haven't been able to follow the live sessions.

MONDAY, 29 NOVEMBER 2021

🕒 2:00 - 4:00 pm UTC

Opening Panel

Implications of COP26 for future bioenergy & bioeconomy

Welcome & Introduction



Paul Bennett

Chair IEA Bioenergy TCP, SCION
New Zealand

Keynote presentations



Andy Reisinger

IPCC Vice-chair WG III, IPCC Intergovernmental Panel on Climate Change
New Zealand



Paolo Frankl

Head Renewable Energy Division, IEA International Energy Agency
France

Panel Debate

Moderator



Paolo Frankl

Head Renewable Energy Division, IEA International Energy Agency
France

Panelists



Maria Georgiadou

Senior Expert – Renewable energy R&I policy, European Commission,
DG Research and Innovation
Belgium



Dolf Gielen

Director of the IRENA Innovation and Technology Centre, IRENA
International Renewable Energy Agency
Germany



Jim Spaeth

Chair Biofuture Platform, US Department of Energy
United States



Jossy Thomas

Industrial Development Officer, UNIDO United Nations Industrial
Development Organization
Austria

TUESDAY, 30 NOVEMBER 2021

🕒 7:00 - 9:00 am UTC

Feedstock mobilisation /
Sustainability governance

Setting up regional biohubs to enhance biomass mobilisation

Moderator



Mark Brown

Director Forest Industries Research Centre,
University of the Sunshine Coast
Australia

Presentations

Biomass feedstock supply chains and future markets

Ric Hoefnagels

Assistant Professor at the Copernicus Institute of Sustainable
Development, Utrecht University
The Netherlands



Biomass supply mobilisation strategies

Fabian Schipfer

Senior Researcher, Energy Economics Group,
Technical University Vienna
Austria



Biomass to Commodities – Extending biomass supply chains using biohubs

Wolter Elbersen

Senior Researcher Biomass and Bioenergy,
Wageningen University & Research
The Netherlands



Agrarian biohubs: a model for expanding post-harvest facilities on biomass supply

Biljana Kulisic

Key Expert – Circular and Sustainable Bioeconomy,
Energy Institute Hrvoje Pozar
Croatia



Case Studies of sustainable biomass supply chains and biohubs: a global map-based knowledge sharing platform

Mohammad R. Ghaffariyan

Research fellow, FIRC/AFORA, University of the Sunshine Coast
Australia



TUESDAY, 30 NOVEMBER 2021

🕒 8:00 - 10:00 pm UTC

Feedstock mobilisation /
Sustainability governance

Realising sustainable bioenergy pathways towards climate goals

Moderator



Glaucia Mendes Souza

Full Professor at the Institute of Chemistry, President of the FAPESP Bioenergy Research Program, University of São Paulo
Brazil

Presentations



Contribution of bioenergy systems to sustainable development goals

Bruno Gagnon

Senior Science and Policy Analyst in the Canadian Forest Service, Natural Resources Canada
Canada



Land use for bioenergy: synergies and trade-offs

Floor van der Hilst

Associate Professor at the Copernicus Institute of Sustainable Development, Utrecht University
The Netherlands



How sustainable forest bioenergy contributes to climate goals

Annette Cowie

Senior Principal Research Scientist Climate, NSW Department of Primary Industries | Agriculture
Australia



New Biofuture Platform workstream on sustainability governance and biomass quantification

Gerard Ostheimer

Founder & CEO, Biofuture Workshop
United States



Governing sustainable bioenergy pathways towards climate goals

Michela Morese

Executive Secretary, Global Bioenergy Partnership (GBEP)
Italy



Uwe Fritsche

Scientific Director, IINAS
Germany

WEDNESDAY, 1 DECEMBER 2021

🕒 2:00 - 4:00 pm UTC

Transport biofuels

Emerging biofuels markets and the importance of LCA and certification

Moderator



Jim McMillan

Principal Engineer | Catalytic Carbon Transformation and Scale-up Center, National Renewable Energy Laboratory (NREL)
United States

Presentations



Progress towards biofuels for marine shipping: status and identification of barriers for utilization of advanced biofuels in the marine sector

Sune Tjalfe Thomsen

Assistant professor Forest, Nature and Biomass,
University of Copenhagen
Denmark



Advanced biofuels from fast pyrolysis bio-oil

Tijs Lammens

Senior Process Engineer, BTG Bioliquids
The Netherlands



Emerging biofuels markets – South America

Glaucia Mendes Souza

Full Professor at the Institute of Chemistry, President of the FAPESP Bioenergy Research Program, University of São Paulo
Brazil



The importance of certification in the development of biofuels markets

Paul Sinnige

Senior Advisor biofuels and bioenergy, NL Enterprise Agency (RVO),
The Netherlands



José Muisers

Advisor Sustainable Energy, NL Enterprise Agency (RVO),
The Netherlands



Life Cycle Analysis (LCA) and its increasing importance in quantifying the carbon intensity of transportation fuels

Don O'Connor

President, S&T2 Consultants Inc
Canada

WEDNESDAY, 1 DECEMBER 2021

🕒 8:00 - 10:00 pm UTC

Transport biofuels

The potential of drop-in biofuels to decarbonise aviation

Moderator



Jack Saddler
Professor of Bioenergy/Biofuels, Faculty of Forestry,
University of British Columbia (UBC)
Canada

Presentations



Boeing's progress and support of decarbonising aviation
Sean Newsum
Director of Environmental Strategy, Boeing
United States



Progress in the production and use of biojet/SAF globally and in the US
Steve Csonka
Executive Director, Commercial Aviation Alternative Fuels Initiative
(CAAFI)
United States



The development of C-SAF and progress in establishing a Canadian biojet/SAF supply chain
Geoff Tauvette
Vice President, Operations and Sustainability,
FSM Management Group Inc.
Canada



Progress in the commercialization of biojet/SAF: technologies, potential and challenges
Susan van Dyk
Scientist and Independent Researcher in Biofuels, Bioenergy and
Renewable energy, University of British Columbia (UBC)
Canada

THURSDAY, 2 DECEMBER 2021

🕒 7:00 - 9:00 am UTC

Green Gas

State of the art and innovation in Green Gas

Moderator



Jerry Murphy

Director SFI MaREI Centre for Energy, Climate and Marine,
University College Cork
Ireland

Presentations

State of the art in Green Gas



Jerry Murphy

Director SFI MaREI Centre for Energy, Climate and Marine,
University College Cork
Ireland

Integration and flexibilization of biogas systems



Jan Liebetrau

Head of the Department Consulting and Research, Ryttec GmbH
Germany

Increasing the green gas resource with gasification technologies



Berend Vreugdenhil

Senior Scientist Specialist Biomass and Circular Technologies, TNO
The Netherlands

Green Hydrogen developments – Australia



Amy Philbrook

Future Fuels and Renewables, ATCO Group
Australia

Innovation from an industry perspective



Ole Hvelplund

CEO, Nature Energy
Denmark

THURSDAY, 2 DECEMBER 2021

🕒 2:00 - 4:00 pm UTC

Green Gas

Green Gas perspectives

Moderator



Uwe Fritsche
Scientific Director, IINAS
Germany

Presentations

Sustainability of green gas

David Chiaramonti

Professor of Systems for Energy and Environment and Energy
Economics, Polytechnic of Turin
Italy



A global perspective on green gas

Maria Michela Morese

Executive Secretary, Global Bioenergy Partnership (GBEP)
Italy



Perspective of China

Renjie Dong

Head, Bioenergy and Environment Science & Technology
Laboratory/Biomass Stoves Test Laboratory/Carbon-Neutral
Agriculture Research Center, China Agricultural University (CAU)
China



Perspective of the United States

Sam Lehr

Manager of Sustainability and Markets Policy, RNG Coalition
United States



Perspective of the EU

Malcolm McDowell

Team Leader – Methane strategy, European Commission – DG Energy
Belgium



FRIDAY, 3 DECEMBER 2021

🕒 8:00 - 10:00 am UTC

Industry Panel

Long term markets for biomass and biofuels

Panel Debate

Moderator



Dina Bacovsky

Unit Head Biofuels, BEST – Bioenergy and Sustainable Technologies
Austria



Gerard Ostheimer

Founder & CEO, Biofuture Workshop
United States

Panelists



The Bio-based Substitution Challenge

Gerard Ostheimer

Founder & CEO, Biofuture Workshop
United States



Prospects of SAF in the aviation sector

Robert Boyd

Assistant Director, IATA International Air Transport Association
Switzerland



Prospects of renewable fuels in the maritime sector

Jacob Zeuthen

Senior Future Fuels Manager, Maersk
Denmark



Business leaders towards net zero operations

Rasmus Valanko

Managing Director, Systems Transformation, We Mean Business
Finland



Prospects of low-carbon fuels in the transport sector

Alessandro Bartelloni

Director, FuelsEurope
Belgium



Moving away from coal in Asia

Andrew Minchener

General Manager, International Centre for Sustainable Carbon
United Kingdom

MONDAY, 6 DECEMBER 2021

🕒 2:00 - 4:00 pm UTC

Circular economy
and industry

Waste and residue valorisation in a circular economy

Moderator



Inge Johansson
Researcher, RISE Research Institutes of Sweden
Sweden

Presentations



The role of bioenergy from waste & residues in a circular economy
Daniel Roberts
Research Director, Energy Technologies, CSIRO
Australia



Syngas to biofuels and circular chemicals
Michel Chornet
Executive Vice President Engineering, Innovation & Operations,
Enerkem
Canada



Waste & residue based gasification routes
Jitka Hrbek
Senior Scientist, University of Natural Resources and Life
Sciences Vienna
Austria



Copenhill – An example on how to work with social acceptance of waste processing
Mar Edo
Researcher waste management, RISE Research Institutes of Sweden
Sweden

MONDAY, 6 DECEMBER 2021

🕒 8:00 - 10:00 pm UTC

Circular economy
and industry

Industrial symbiosis and biorefineries in a circular economy

Moderator



Michael Mandl

Managing Director & Environment and Energy Expert, tbw research
Austria

Presentations

Green innovations through industrial symbiosis

Mats Eklund

Director of the transdisciplinary Biogas Research Centre,
Linköping University
Sweden



The status of biorefineries in a circular economy

Bert Annevelink

Senior scientist biomass chains, Wageningen Food & Biobased
Research
The Netherlands



Barriers and incentives for the market diffusion of biorefineries in a circular economy

Franziska Hesser

Team leader Market Analysis and Innovation Research Team,
WoodKplus
Austria



Planning the Canadian bioeconomy in the context of industrial symbiosis, the circular bioeconomy, and Net-Zero GHG emissions (IETS TCP – Task XI Biorefineries)

Marzouk Benali

Senior Research Scientist, Manager of Biorefinery R&D Program,
Natural Resources Canada
Canada



Paul Stuart

Full Professor, Department of Chemical Engineering,
Polytechnique Montreal
Canada



TUESDAY, 7 DECEMBER 2021

🕒 7:00 - 9:00 am UTC

Bioenergy in the
energy system

Biomass and renewable heat

Moderator



Morten Tony Hansen
Senior Consultant, Ea energy Analysis
Denmark

Presentations



Biomass combustion in a Northern European food industry – A case from the Netherlands

Jaap Koppejan
Managing Director, Pro Biomass BV
The Netherlands



Biomass providing process heat in an industrial bakery

Thomas Nussbaumer
Professor, Verenum / Lucerne University of Applied Sciences and Arts,
Switzerland



Decarbonizing industrial process heat: the role of biomass

Olle Olsson
Team Leader: Energy and Industry Transitions, Stockholm Environment
Institute
Sweden



Raising awareness and changing behaviour with the traveling combustion education – The CleanAir II project

Manuel Schwabl
Area Manager, Fixed Bed Conversion Systems, BEST Bioenergy and
Sustainable Technologies
Austria



Strategies for reducing the impact on air quality from residential and commercial wood combustion

Hans Hartmann
Head of the Solid Biofuels Department,
TFZ Technologie- und Förderzentrum
Germany

TUESDAY, 7 DECEMBER 2021

🕒 2:00 - 4:00 pm UTC

Bioenergy in the
energy system

Bioenergy's contribution to low-carbon energy systems

Moderator



Elina Mäki
Senior Scientist, VTT
Finland



Jaap Kiel
Manager of Biomass Programme, TNO
The Netherlands

Presentations



Expectation from energy system transition on bioenergy
Ilkka Hannula
Senior Energy Analyst, IEA International Energy Agency
France



Bioenergy options to serve renewable energy system
Tilman Schildhauer
Senior Scientist, Thermochemical Processes, Paul Scherrer Institut
Switzerland



Bioenergy in a Virtual Power Plant – Dispatch and ancillary services to stabilise the power grid
Alexander Krautz
Head of Business Development, Next Kraftwerke
Germany



ADM CCS projects experience
Scott McDonald
Director of Biofuels Development, ADM Archer Daniels Midland
United States



Bio-CCUS and bioenergy flexibility – Finding the balance
Christiane Hennig
Biomass in the Energy System Department, DBFZ German Biomass
Research Centre
Germany



Bioenergy in a well below 2 degree world: expectations and success factors for long-term evolution
Daniela Thrän
Professor, Bioenergy and Bioeconomics, DBFZ German Biomass
Research Centre
Germany

THURSDAY, 9 DECEMBER 2021

🕒 12:00 - 2:00 am UTC

Closing Panel 1
(with focus on East Asia/
Oceania & North America)

How can biomass/bioenergy aid the transition towards carbon neutrality

Panel Debate

Moderator



Paul Bennett

Portfolio Leader – Integrated Bioenergy, SCION
New Zealand

Introductory presentation: Key conclusions from the technical sessions of the conference



Luc Pelkmans

Technical Coordinator, IEA Bioenergy TCP
Belgium

Panelists



Dongmin Ren

Director, ERI Renewable Energy Center
China



Shahana McKenzie

CEO, Bioenergy Australia
Australia



Oshada Mendis

Deputy Director, Clean Fuels Portfolio, Natural Resources Canada
Canada



Jim Spaeth

Program Manager, Systems Development and Integration, Bioenergy
Technologies Office, U.S. Department of Energy (DOE)
United States

THURSDAY, 9 DECEMBER 2021

🕒 12:00 - 2:00 pm UTC

Closing Panel 2
(with focus on Europe, Africa,
South-America & India)

How can biomass/bioenergy aid the transformation towards carbon neutrality and what actions are needed?

Panel Debate

Moderator



Kees Kwant

Senior Expert Bioenergy and Biobased Economy, NL Enterprise Agency (RVO)
The Netherlands

Introductory presentation: Key conclusions from the technical sessions of the conference



Luc Pelkmans

Technical Coordinator, IEA Bioenergy TCP
Belgium

Panelists



Renato Godinho

Head Division for New and Renewable Energy Resources, Ministry of Foreign Affairs
Brazil



Barry Bredenkamp

General Manager, Energy Efficiency, SANEDI South African National Energy Development Institute
South Africa



Sangita Kasture

Department of Biotechnology, Ministry of Science & Technology
India



Birger Kerckow

Head of Department EU/International Affairs,
FNR Fachagentur Nachwachsende Rohstoffe
Germany



Jonas Lindmark

Program Manager, Swedish Energy Agency
Sweden



Francisco José Domínguez Pérez

Bioenergy and Waste Department, IDAE Institute for the Diversification and Saving of Energy
Spain