

Call for papers

Message from the Technical Programme Chair

The implementation of the transition towards a low carbon economy requires measures transforming the energy and transport system. Renewable energies are critical for achieving the climate goals, complemented by a rapid phasing out of fossil fuels. In addition to the climate challenges, we are facing now challenges related to high energy prices and the high risk of supply shortages across the EU. This revealed the need to accelerate the green transition and to ensure a cleaner, more secure and resilient energy system. The EC has put forward the REPowerEU plan to phase out Europe's dependency on Russian fossil fuels imports and fast forward energy transition through measures targeting diversification of energy supplies, accelerated roll-out of renewable energy and energy savings.

Several biomass technologies can play an important role in the decarbonisation of the economy, as part of a circular economy. Biomass offers now several solutions in the energy transition, through a range of technologies to produce energy, sustainable fuels and biobased materials and chemicals. Bioenergy provides flexible and secure low carbon

power generation, enabling high shares of variable renewable energies in the electricity grid, such as wind or solar. Bioenergy and carbon capture and storage can play a key role, on short term, in balancing the greenhouse gas emissions for the sectors of the economy that will inevitably remain carbon dependent, as an available industrial-scale solution for achieving negative emissions. Renewable fuels are major elements of the near future and ready solutions for sectors that are hard to decarbonise, in particular the aviation and maritime transport, relying on local sustainable biomass resources and short supply chains. The REPowerEU plan identifies biomethane as key to diversify the EU gas supplies, to reduce imports of natural gas from Russia and decarbonise the gas sector, putting biomethane on top of renewable energy priorities.

I invite you to join the EUBCE 2023 to present and discuss your latest scientific achievements and developments of industrial biomass applications on these areas, in scientific and industry sessions, in plenary, oral and poster sessions and in several side events. As usual, scientific work will receive recognition

during EUBCE 2023, through the Linneborn Prize for outstanding contributions to the development of energy from biomass, Student Awards to young scientists or Poster Awards rewarding exceptional visual presentations. During EUBCE, the European Biomass Industry Association gives its annual prize to companies for their effort in supporting biomass development at commercial and industrial level. The Giuliano Grassi Excellence in Biomass Industrial Deployment Prize, established in 2022, will honour scientific, technical or managerial accomplishments in the market deployment of biomass industrial processes. It is especially timely that this major event will be held physically in this challenging time, and I look forward to meeting you all in person in Bologna in June 2023, but also online.



Nicolae Scarlat
EUBCE Technical Programme
Chair

Deadline is

25th November 2022

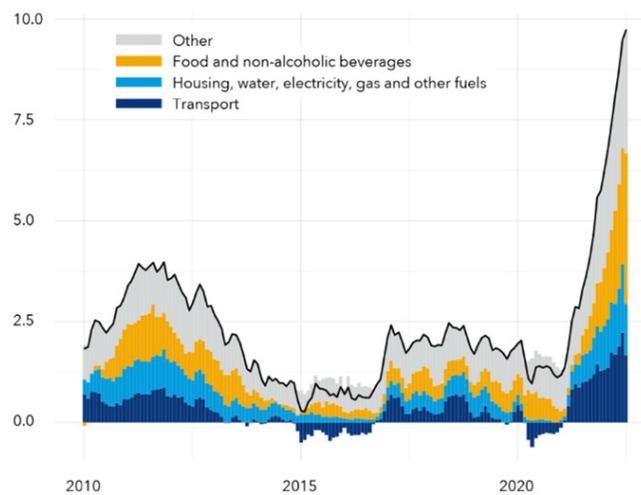
Message from the EUBCE Industry Track Coordinator

Globally, and especially in Europe, we are faced with a series of unexpected calamities that raise the prospect of significantly derailing the targets for decarbonising the global economy and meeting the Paris 2050 obligations. If we sit idle, expecting these mishaps and tribulations to disappear, we will only facilitate increasing the undesirable effects on the economy, energy, climate, and society. I see it as an opportunity to accelerate our efforts on the market deployment of renewables and in particular biomass and its numerous applications in the economy, while providing extensive employment in the numerous sectors of the value chain; from planting to a green service to the European Citizen.

In this spectrum, the biomass economy can play a significant role in maintaining growth momentum while providing stability to all actors across the value chain. The figure below by IMF¹ shows that energy (in particular transport) and food are the main contributors to the increasing inflation.

Inflation drivers

Food and energy prices continue to drive the global inflation surge. (percent, median inflation rate)



Source: IMF CPI database and IMF staff calculations.
Note: Chart shows median total inflation and in select categories across 88 countries, including 28 advanced economies and 60 emerging and developing economies.

IMF

Given this situation the role of the biomass community and in particular that of the biomass industry is critical in facilitating the energy transition away from fossil fuels towards a green economy while at the same time ensuring adequate food supplies and employment.

Join me at the Industry Track of the EUBCE to debate the role of the biomass community in the present situation and in the energy transition with central focus on the technological innovations for market deployment of state-of-the-art technologies while addressing the increasing scarcity of financing.



Kyriakos Maniatis
EUBCE Industry Coordinator

¹ <https://www.imf.org/en/Blogs/Articles/2022/09/09/cotw-how-food-and-energy-are-driving-the-global-inflation-surge>





Abstract submission

Authors wishing to contribute to the Conference Programme should submit the abstract latest by **25 November 2022**.

Abstract format & content

- Language: English
- Length: Four A4 pages max. (main page + 3 explanatory pages). We recommend a minimum of 2 pages in total to ensure a comprehensive evaluation of your work. We encourage authors to provide enough information to be evaluated correctly.
- Structure:
 - » Aim and approach used
 - » Scientific innovation and relevance
 - » Results or preliminary results and conclusions.

Note: This structure provides the basis for the evaluation.
- Authors need to provide:
 - » Applicable topic number and sub-topic number (e.g. 1.1) (see Annex 1 for the full list of 2023 conference topics and subtopics)
 - » Full paper title

- » Full name, affiliation, address, e-mail and phone of one author for all correspondence
- » Full name, affiliation, phone/e-mail for all additional authors.
- *Note:* Industry-oriented abstracts must include at least one co-author from the industry.

Using the online portal

1. Register for the online portal [<https://ssl.conference-biomass.com>]

[Click here](#)

Note 1: The person registered in the User Area is automatically set as the primary author and contact person for the submission.

Note 2: Modifications to the submission in the online system are possible at any time until the submission deadline. Please avoid double submissions.

2. Specify the most relevant EUBCE 2023 conference topic and sub-topic. (see Annex 1 for the full list of 2023 conference topics).

3. Upload your abstract in PDF format.

Note: Please make sure that your abstract.pdf is not password protected.

4. Receive an automatic email notification after successful submission. If you do not receive this email within 24 hours of submission, please write to papers@etaflorence.it.

5. If you would like to withdraw your abstract after the submission deadline, please contact papers@etaflorence.it.

Evaluation criteria

Each submission will be reviewed by 3 members of the EUBCE International Programme Committee, which is composed of a scientific-oriented and an industry-oriented subcommittee.

The International Programme Committee is composed of +150 leading scientific and industry experts from the global biomass community, and under the coordination of Dr. Nicolae Scarlat, European Commission's Joint Research Centre's Directorate for Energy, Transport and Climate, with the support of the Members of the Executive Committee.

The main selection criteria are:

Content

- Relevance to the selected conference topic and subtopic specified
- Relevance for stakeholders active in biomass
- Clarity of key messages & substance

Innovation

- Extent to which the key messages & content will advance the understanding, sustainability, applicability, and marketability of biomass.

Quality

- Scientific rigor
- Probability of an engaging conference presentation

Positively evaluated abstracts will be selected for a plenary, oral, or mini-oral-with-visual presentation.

- **Plenary and oral** presentations are reserved for contributions: (1) covering a wider scope, (2) with substance of interest to a broader audience, and (3) highlighting progress and novelties within that topic and subtopic. The plenary and oral presentations will be performed live. Presenters are visible to the audience and can share their screen during the presentation. Audience members can use the live Q&A chat to ask questions.

- **Mini-oral-with-visual** presentations will replace the conventional visual presentation and are predominantly dedicated to submissions of interest to specialists in a particular field. The author can present the poster during a live or pre-recorded mini-oral of three minutes, which can be followed by a live Q&A with audience members, if desired. The visual presentations will then be on display throughout the conference with a brief pre-recorded introductory video, which the author can upload.

For questions please contact:
+39 055 5002174
papers@etaflorence.it





Publications

• Scopus

The world's largest abstract and citation database of peer-reviewed research literature.

• Proceedings

All submitted contributions of plenary, oral and mini-oral-with-visual presentations will be published online on the EUBCE Proceedings website. Full papers will be indexed by SCOPUS. The conference proceedings reflect the latest science and technology for biomass & bioenergy.

The proceedings have a full free access policy and are searchable online as soon as published.

• Biomass & Bioenergy Special Issue of EUBCE

Impact Factor: 5.774
CiteScore: 8.8.

Biomass and Bioenergy is an international journal publishing original research papers and short communications, review articles and case studies on biological resources, chemical and biological processes, and biomass products for new renewable sources of energy, food and materials.

The scope of the journal extends to the environmental, management and economic aspects of biomass and bioenergy. Our publishing partnership, established in 2012, gives a prestigious opportunity to the authors of abstracts submitted for EUBCE: each year a selected number of the highest scored abstracts is invited to be peer reviewed and published in a recurring special issue of Biomass & Bioenergy.

• Energies

Impact Factor: 3.252
CiteScore (2020 Scopus data): 5.0

A peer-reviewed open access journal of related scientific research, technology development, engineering, and the studies in policy and management and is published semi-monthly online by MDPI. Many presenters from previous editions of EUBCE have been featured in Energies.

• Sustainability

Impact Factor: 3.889
CiteScore (2020 Scopus data): 5.0

Sustainability is an international, cross-disciplinary, scholarly, peer-reviewed and open access journal of environmental, cultural, economic, and social sustainability of human beings. It provides an advanced forum for studies related to sustainability and sustainable development, and is published semimonthly online by MDPI. The Canadian Urban Transit Research & Innovation Consortium (CUTRIC) and International Council for Research and Innovation in Building and Construction (CIB) are affiliated with Sustainability and their members receive discounts of the article processing charge.

• BE Sustainable Magazine

A source of news, information, and resources on biomass, bioenergy and the bioeconomy. BE-Sustainable is published by ETA-Florence Renewable Energies. An annual BE Sustainable Special Issue contains a selection of some of the most relevant and cutting-edge contributions presented during each EUBCE.

Full List of EUBCE 2023 Topics

Authors are invited to carefully read the topic descriptions and select the subtopic which most closely matches the key novelty of their work.

1. Sustainable resources for decarbonising the economy

1.1 Biomass resources and potentials

- Assessments of biomass potentials and land availability at regional, national and international levels;
- Assessment of recoverable biomass potential;
- Biomass mobilisation and logistics;
- Spatial modelling and remote sensing;
- Resources mapping.

1.2 Innovative biomass production for energy integrated into traditional agri-forestry systems

- Innovative agri-forestry systems including biomass production for energy and materials;
- Bioenergy production integrated into agriculture and forestry;

- Biomass plantations increasing sustainability and ecosystem services;
- Novel crops, multi-purpose crops, intercropping and alternative cropping systems;
- Low ILUC impact feedstocks;
- Crops from marginal and degraded lands;
- Soil quality and soil fertility improvement – compost, digestate, biochar;
- Phytoremediation solutions for contaminated lands.

1.3 Algae and aquatic biomass production systems

- Identification, assessment and optimisation of algae strains;
- Technologies and systems for micro and macro algae cultivation, nutrition and harvesting;
- Integration of wastewater treatment into algae systems;
- Algae production systems, marine farming systems;
- Aquatic waste streams;
- Aquaculture and aquatic waste streams;
- Algae harvesting, drying, oil and chemical extraction.

1.4 Agroforestry residues and by-products

- Supply of biomass and biomass by-products and residues from agriculture and forestry;
- Biomass mobilisation: characterisation, harvest technologies, logistics and storage;
- Resource efficient agriculture and forestry;



- Agro-food waste;
- Agro-industrial feedstocks and side streams.

1.5 Municipal and industrial wastes

- Potential of Municipal Solid Waste (MSW) for bioenergy, biofuels and bioproducts;
- Availability of biowaste from MSW;
- Techniques for source separation;
- Industrial wastes;
- Downstream use of pulp and paper waste;
- Sewage sludge, slaughterhouse waste;
- Integrated waste management systems.

2. Sustainability, impacts and policies

2.1 Sustainability, socio-economic aspects and public acceptance

- Sustainability aspects of biomass production and use;
- Sustainability schemes, sustainability standards and products certification;
- Socio-economic aspects, benefits and socio-economic opportunities;
- Competition and risk mitigation of the increased use of biomass;
- Bioenergy, food security and local, traditional use of biomass;
- Actions for sustainable economic growth;
- Bioenergy contribution to the Sustainable Development Goals (SDG);
- Improving citizen awareness and acceptance;
- Promoting good practices for bioenergy.

2.2 Environmental impacts

- Biomass and land use, agricultural

- intensification, water and air emissions from biomass production and conversion;
- Biomass production preserving biodiversity and ecosystem services;
- Land use change impacts, monitoring and addressing indirect land use changes;
- Land use and land governance;
- Biomass production and water use, energy, land and water interactions;
- Trade-offs between different impacts;
- Environmental Life Cycle Assessments.

2.3 Climate impacts and GHG performance

- Climate impacts of biomass, biofuels, bioenergy and bio-based products production;
- Assessment of climate change mitigation potential;
- GHG emissions, LULUCF and sustainable forest management;
- Assessing direct and indirect land use change impacts;
- Carbon storage on land and materials;
- Innovative carbon utilisation options;
- Assessing GHG of biomass pathways;
- GHG Life Cycle Assessment.

2.4 Biomass strategies and policies

- Policies for the sustainable and circular economy;
- Agriculture, forestry and rural development;
- Bioenergy policies and targets for 2030 and beyond;
- Bioenergy and bio-based products contribution to a low carbon economy, LULUCF emissions and Emissions Trading Scheme;
- The role of bio-based products for the 2030 and 2050 targets;
- Biomass and rural development, opportunities in the sustainable and

- circular economy;
- Strategies for international cooperation;
- Strategies for the integration of bioenergy into a low-carbon economy;
- Strategies for the integration of bio-based products into the chemical industry.

2.5 Resource efficient economy

- Approaches for efficient management of natural resources (land and water);
- Promoting resource efficient value chains;
- Sustainable circular economy and cascading use of biomass;
- Competition and risks of the increased use of biomass;
- Opportunities of biomass use for food, feed, fuels, bio-based products;
- Innovation, growth and job creation;
- Exploiting the value of co-products;
- Cross-sectorial synergies to avoid over-exploitation.

3. Biomass, bio-based products and bioenergy integration

3.1 Biomass integration into energy systems

- Innovative solutions for small communities, integrating bioenergy and other renewables;
- Integrated bioenergy RES hybrid systems and technologies;
- Bioenergy for electricity grid stability and gas grid balancing concepts;
- Bioenergy in renewable energy communities and buildings;
- Bioenergy solutions for rural electrification concepts and off-grid systems;
- Biomass in district heating and cooling, poly-generation energy networks;

- Greening the gas grids (biomethane, hydrogen etc).

3.2 Biomass use in biorefineries

- Biorefinery platforms for bio-based products, energy and fuels;
- Integrated and innovative biorefineries concepts;
- Process design and business development;
- Integration of biochemical and thermochemical processes into biorefineries;
- Biochemical and thermochemical conversion processes of biomass to fuels, energy, bio-based products;
- Multi-purpose and versatile schemes;
- Renewable energy utilisation;
- Assessment tools for biorefineries.

3.3 Strategies for bio-based products in the chemical industry

- National, regional, local strategies;
- Market uptake initiatives and policies;
- Perspectives for bio-based chemicals and materials and contribution to the climate neutrality goals;
- Strategic decisions for bio-based products and chemicals;
- Assessing most promising value chains, processes and concepts;
- Economics, incentives and subsidies towards developing a bio-based economy.

3.4 Market implementation, investments & financing

- Market uptake initiatives and policies;
- Initiatives for decarbonisation of the economy;
- Challenges of scale-up and market implementation of new technologies;
- Support schemes;
- Economics and financing of bioenergy projects;
- Economics and financial bio-based projects;



- Risk assessment of financing;
- Global bioenergy and bio-based products markets;
- Biomass trade, contracting and logistics;
- Innovative business models.

4. Biomass conversion for bioenergy

4.1 Biomass pretreatment for solid fuels and production of intermediates

- Biomass pretreatment and densification;
- Physical, chemical, physico-chemical and biological methods for biomass pretreatment;
- Process development and optimisation;
- Characterisation and utilisation of solid fuels and intermediates;
- Logistics, storage and distribution.

4.2 Advanced biomass combustion

- Innovative concepts for small scale and medium scale combustion;
- Advanced and innovative small scale and medium scale systems;
- Large scale advanced combustion systems;
- Process modelling and monitoring;
- Advanced process and emission control systems;
- Tri-generation (power, heat and cooling);
- Innovative concepts and thermodynamic cycles;
- High efficiency, increased steam parameters plants;
- Bioenergy and Carbon Capture and Storage (BECCS) enabling negative GHG emissions.

4.3 Gasification for power, CHP and polygeneration

- Fundamental studies;
- Technology development;
- Process modelling and monitoring;
- Gas cleaning and upgrading;
- Syngas utilisation in engines, turbines and fuel cells;
- Advanced process control systems;
- By-products utilisation.

4.4 Gasification for synthesis gas production

- Fundamental studies;
- Technology development;
- Advanced gasification systems;
- Gas cleaning, reforming and upgrading for BTL and SNG applications;
- Process control systems;
- By-products utilisation.

4.5 Anaerobic digestion for biogas and biomethane production

- Anaerobic digestion process improvement;
- Advanced plant and fermenter concepts;
- Optimising conversion, improving design and process integration;
- Dry fermentation and thermophilic processes;
- Anaerobic digestion of innovative feedstocks (straw, waste, algae, etc.);
- Biogas utilisation for power, CHP and poly-generation;
- Biogas upgrading to biomethane;
- Biomethane injection into the grid.

5. Biomass conversion to intermediate bioenergy carriers and sustainable biofuels

5.1 Pyrolysis

- Production of liquid bioenergy carriers from solid biomass;
- Fundamental studies;
- Technology advances;
- Process modelling, improvement and optimisation;
- Bio-oil purification, upgrading and utilisation (combustion, chemical extraction, gasification, etc.);
- By-product utilisation;
- Wastewater treatment;
- Energy balance and techno-economic analysis.

5.2 Hydrothermal processing

- Advances in hydrothermal liquefaction, gasification and hydrothermal carbonisation;
- Process fundamentals and studies;
- Technology and process improvement;
- Biocrude production, purification, upgrading;
- Value-added compounds extraction;
- Energy balance and techno-economic analysis.

5.3 Oil-based and renewable hydrocarbon biofuels

- Oil-based fuels and renewable hydrocarbon biofuels from lipids and lignocellulosic biomass;
- Bio-Synthetic Natural Gas (Bio-SNG);
- Algae biofuels production, technology advances;
- Bioprocesses for microbial oils production;
- Innovative processes for synthetic fuels production from lignocellulosic biomass (biomass based electrofuels);

- Co-processing biomass feedstock with fossil fuels in common processes;
- Technology and process improvements;
- Energy balance and techno-economic analysis.

5.4 Bio-alcohols from sugars, starch and lignocellulosic biomass

- Biochemical routes for lignocellulosic ethanol, other alcohols production;
- Pretreatment of lignocellulosic biomass;
- Enzymatic hydrolysis and microorganism fermentation into alcohols;
- Novel C6 and C5 fermentation techniques;
- Progress on ethanol production from sugar and starch;
- Innovations in bio-alcohol production from lignocellulosic biomass;
- Process advances;
- Downstream wastewater treatment;

5.5 Synthetic fuels from biomass and hydrogen

- Synthetic fuel production processes;
- Technological innovations of Power-to-X (Power-to-gas, Power-to-liquids, etc.);
- Renewable fuels of non-biological origin (RFNBO), Recycled Carbon Fuels (RCF);
- Hydrogen production pathways: thermochemical, electrolytic, photolytic, biological processes;
- Hydrogen and fuel cells for stationary and mobile applications;
- Alternative fuels and hydrogen logistics and infrastructure;
- Technico-economic assessments.



6. Biomass conversion to bio-based products and chemicals

6.1 Processes for bio-based chemicals and materials

- Advances in renewable chemicals;
- Production of high-added value organic compounds;
- New products from biomass: bio-based chemicals and polymers, bio-catalysts, additives; bioplastics, etc.;
- Production of organic fertilizers and compost;
- Nutrients cycles and recovery (nitrogen, phosphorus, potassium).

6.2 Biorefinery platforms for bio-based chemicals and polymers

- Fuels and chemical building blocks from synthesis gas;
- Production of value added chemicals and macromolecules from lignin;
- Production of fine chemicals from sugar and oil platforms;
- Process development, maximising conversion efficiency;
- Technical and biological barriers and economic considerations.

6.3 Co-production of biofuels and biochemicals

- Combined production of fuels, chemicals and materials from biomass;
- Innovative processes integrating fuel production into bio-based refineries;
- Process integration;
- Co-production options and economics;
- Technical and economic assessments.



EUBCE
31st European Biomass
Conference & Exhibition

IN PERSON
from ———
Bologna
Italy

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Coordination of the Technical Programme



Coordination of the Industry Track



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