

**Central European
Biomass Conference**
22nd to 24th of January, 2020, Graz, AUSTRIA

Programme

6th Central European Biomass Conference



An event by:



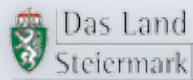
lk Landwirtschaftskammer
Steiermark




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Nachhaltigkeit und
Tourismus

In cooperation with:



Bioenergy on its way to the pole position – EU-member states set their expansion plans



The Austrian Biomass Association, the Agricultural Chamber of Styria and BEST Bioenergy and Sustainable Technologies are hosting the 6th Central European Biomass Conference (CEBC 2020), in cooperation with the Messe Congress Graz from January 22nd to 24th, 2020 in Graz. The agreement of the United Nations Climate Change Conference, held in 2015 in Paris, marked the starting point of the global energy transition. Five years later, the nation states are now presenting their plans until 2030 and 2050, respectively. This further serves as an opportunity to assess the past period. Bioenergy remains to be one of the most important form of renewable energy and strikes with its potential to become the number one source of energy in the future.

Green strategies as the center of attention

The organizers of the CEBC take prior events into account and place their emphasis on the potential contribution of biomass in the areas of hydrogen, green gas, biochar and advanced biofuels, as well as bioeconomy, particularly. The thematic priority lies on

- a 100% petroleum-free agriculture and
- Greening the gas strategies

Traditional topics such as heat and power generation will, of course, not be neglected. The CEBC provides its participants with an overview of the latest political, economic and technological developments with an additional focus on raw material availability, logistics, transformation technologies, integration in the energy system, industrial application, environmental impacts, market developments and policy requirements for the development of renewable energy.

Leading event in the bioenergy sector

The conference has been awarded with the Congress Award Graz several times and has consistently maintained its internationally approved reputation. Connecting more than 1,300 participants from over 50 nations, the triannually held conference belongs to the largest bioenergy industry events worldwide. The simultaneously held "Häuslbauer-trade fair", with its emphasis on the provision of energy in the building sector, reaching out to approximately 40,000 visitors, offers an excellent addition to the conference.

Theme days, Excursions and an extensive supporting programme

The programme of the CEBC 2020 impresses visitors with a selection of more than 250 scientific lectures. In addition, numerous poster presentations will provide further insights into the current state of bioenergy. The Pellet Day, in cooperation with **proPellets Austria**, the presentation of the „Highlights of the bioenergy research“, hosted by **BMVIT**, the Biogas Day, run by the **Kompost und Biogas Verband** and the Forest Day of the Winter Meeting of the **Ökosoziale Forum** expand the qualitative frame of the conference. Numerous excursions to bioenergy destinations and the representation of the leading companies in the sector link the theoretical approach of the conference to practical applications. The traditional conference dinner, held in the **Old University of Graz**, the reception by the mayor of Graz and the daily open „**Bioenergy-Heurigen**“ reception serve as excellent networking opportunities.

We are looking forward to welcoming you at the 6th Central European Biomass Conference (CEBC 2020)!



Franz Titschenbacher
President of the
Austrian Biomass
Association



Maria Patek
Federal Minister for
Sustainability and Tourism



Hermann Hofbauer
TU Wien, Chairman of
the Scientific Committee



Ingmar Höbarth
CEO of the
Klima- und Energiefonds

■ Networking-Opportunities

All conference participants and their companions are cordially invited to participate in one of the many matchmaking-sessions of the conference:

■ **Come-together:** Wednesday, 22nd of January, 2020, from 18:00

At the end of the first conference day, we invite you to a culinary evening with **Goulash & Beer**.

■ **Conference Dinner:** Thursday, 23rd of January, 2020, 20:00

The conference dinner takes place in the auditorium of the **Old University** (Hofgasse 14, 8010 Graz) and is the highlight of the social programme of the conference. Please take the limited number of seats into account. Therefore, we ask you for a prompt registration.

■ **Bioenergy-Heuriger:** open daily from 10:00 am - 19:00

A „Heuriger“ is a traditional Austrian tavern selling wine, beer and cold snacks, and thus, a treasure of Austrian culture. For the first time, we would like to invite you into our continuously open **Bioenergy-Heuriger**. A little snack inbetween supplies you with a boost of energy for the comprehensive conference programme and also serves as an excellent meeting place for networking opportunities.



■ „Häuslbauer“- trade fair 23rd to 26th of January, 2020

The „Häuslbauer“-trade fair (23rd to 26th of January, 2020 in Graz, Styria) is the leading industrial trade fair in the field of house construction and energy. One core theme of the event is the presentation of bioenergy equipment.

Biomass producers, suppliers and distributors, manufacturers of biomass combustion technologies (e.g. wood-pellet, wood-chip and log-wood boilers, wood-pellet and log-wood stoves), and manufacturers of biomass CHP technologies will be represented as exhibitors in large numbers at the fair. Moreover, R&D organisations as well as technical and financial consultancy firms enrich the trade fair's programme. The trade fair is designed for house owners with intentions of installing a new heating system as well as key decision-makers from politics, economy and industry.

INFO: The ticket of the **6th Central European Biomass Conference (CEBC 2020)** enables you to visit all areas of the „Häuslbauer“ trade fair for free!



Review of 2017

Leading event
of the bioenergy sector

270
scientific
presentations

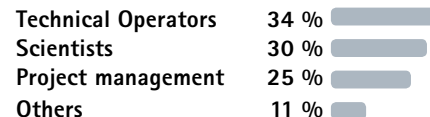
1.400
participants

40.000
visitors at the simultaneously held
„Häuslbauer“-trade fair

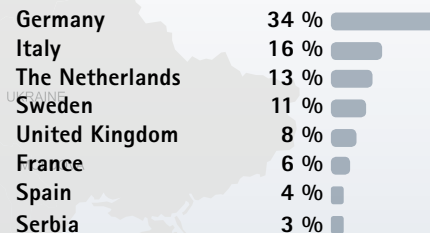
6
excursions

18
workshops

Visitors' profile



Participants from more than 56 nations

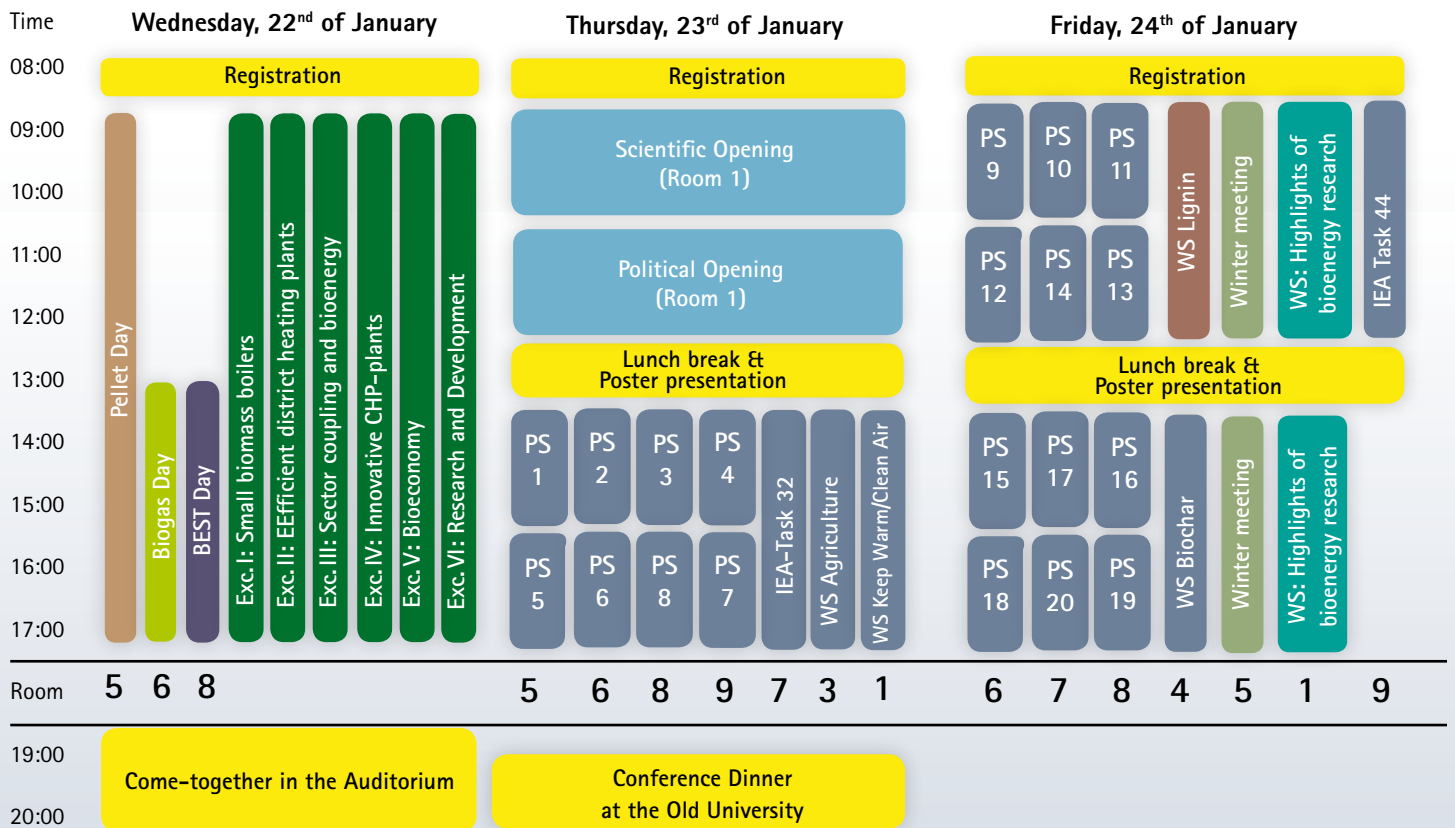


Visitors-Feedback 2017

96 % highly recommend the conference

83 % very satisfied participants

Programme of the 6th Central European Biomass Conference CEBC 2020



Programme Overview



Wednesday, 22nd of January, 2020

08:00–09:00 **Registration**

07:45–18:30 **Excursions I–VI**, p. 12–13

09:00–17:00 **Pellet Day, Room 5**, p. 15

13:30–17:00 **Biogas Day, Room 6**, p. 17

13:30–17:00 **BEST Day, Saal 8**, S. 19

from 18:00 on: **Come-together**

Thursday, 23rd of January 2020

08:00–09:00 **Registration**

09:00–12:30 **Plenary sessions, Room 1**, p. 21

12:30–13:30 **Lunch break and Poster presentation**

13:30 – 17:00 **WS: Clean Air and efficient district heating plants, Room 1**, p. 27

13:30 – 17:00 **WS: IEA-Task 32, Room 7**, p. 31

13:30 – 17:10 **WS: Petroleum-free agriculture and forestry, Room 3**, p. 29

13:30–15:00 **PS 1, Room 5**, p. 22
Polygeneration & Green Fuels

13:30–15:00 **PS 2, Room 6**, p. 22
Upgrading & Characterization of solid biomass fuels I

13:30–15:00 **PS 3, Room 8**, p. 23
Concepts and value chains of a biobased economy

13:30–15:00 **PS 4, Room 9**, p. 23
Advances in fixed bed gasification and in biochar utilization

15:00–15:30 **Coffee break & Poster presentation**

15:30–17:00 **PS 5, Room 5**, p. 24
Green Gas (powered by Energie Steiermark)

15:30–17:00 **PS 6, Room 6**, p. 24
Upgrading & Characterization of solid biomass fuels II

15:30–17:00 **PS 7, Room 9**, p. 25
Thermochemical and thermocatalytic processes

15:30–17:00 **PS 8, Room 8**, p. 25
Integrated biorefinery and biogas concepts

20:00 **Conference dinner**

Friday, 24th of January, 2020

08:00–09:00 **Registration**

09:00 – 17:00 **Winter meeting of the Ökosoziale Forum, Room 5**, p. 39

09:00 – 15:00 **Highlights of bioenergy research 2020 (powered by BMVIT), Room 1**, p. 41

09:00–12:30 **WS Lignin, Room 4**, p. 33

09:30 – 13:30 **WS: IEA Task 44, Room 9**, p. 35

09:00–10:30 **PS 9, Room 6**, p. 32
Secondary measures for the reduction of emissions from biomass combustion and gasification

09:00–10:30 **PS 10, Room 7**, p. 32
Decarbonization of industrial processes and energy supply

09:00–10:30 **PS 11, Room 8**, p. 33
The future of green transportation fuels and of green gas

10:30–11:00 **Coffee break & Poster presentation**

11:00–12:30 **PS 12, Room 6**, p. 36
Challenges for multi-fuel and lowest emissions combustion systems

11:00–12:30 **PS 13, Room 8**, p. 36
Bioenergy and biobased bioeconomy in Europe

11:00–12:30 **PS 14, Room 7**, p. 37
Supply, storage and distribution of bioheat

12:30–13:30 **Lunch break & Poster presentation**

13:30 – 17:30 **WS Biochar, Room 4**, p. 45

13:30–15:00 **PS 15, Room 6**, p. 42
Advanced methods meet traditional technologies

13:30–15:00 **PS 16, Room 8**, p. 42
Sustainability of bioenergy and bioeconomy value chains I

13:30–15:00 **PS 17, Room 7**, p. 43
Logistics

15:00–15:30 **Coffee break & Poster presentation**

15:30–17:00 **PS 18, Room 6**, p. 46
Technologies for decentral bioelectricity production

15:30–17:00 **PS 19, Room 8**, p. 46
Sustainability of bioenergy and bioeconomy value chains II

15:30–17:00 **PS 20, Room 7**, p. 47
Bioenergy in practice

What awaits you at the 6th Central European Biomass Conference...



„The Central European Biomass Conference is the triannually highlight of the European biomass industry. It is the place, where representatives from politics, business and industry meet and discuss the topics of the future.“

Jean-Marc Jossart,
Bioenergy Europe, Belgium



„The conference offers a great opportunity for scientists, industry and government representatives to get informed on recent achievements in the biomass sectors, share ideas and form new collaborations.“

Dr. Calliope Panoutsou,
Imperial College London, Great Britain



„The CEBC is a meeting place, where the combination of technical and scientific knowledge leads to the development of outstanding ideas.“

Ass. Prof. Stefano Grigolato PhD,
University of Padua, Italy



„Biomass is an essential part of the energy transition to 100% renewable energies. The CEBC 2020 is an excellent opportunity to exchange views with representatives of science and industry.“

Hofrat DI Dr. Josef Rathbauer,
HBLFA Francisco Josephinum, Austria



„Mankind can only win the battle against climate change, if the sustainable use of biomass for energy grows fast. The conference takes place at a decisive moment in the history of renewables and creates a strong momentum for the future development.“

DI Dr. Heinz Kopetz,
Former Chairman of the World Bioenergy Association, Sweden



„The CEBC provides an excellent overview of the opportunities and challenges for bioenergy. As an important part of a sustainable energy system and a part of the bioeconomy, the discussion of bioenergy is inevitable.“

Birger Kerckow,
Agency for Renewable Resources, Germany



„The CEBC provides researchers with an unique opportunity to interact with industry, business and government stakeholders in bioenergy and bioeconomy at an international level.“

DI Dr. Christoph Strasser,
BEST Bioenergy and Sustainable Technologies, Austria



„I am delighted to be joining so many esteemed colleagues at this conference. The CEBC gives you the opportunity to exchange the latest insights in the field of bioenergy.“

Prof. Patricia Thornley,
University of Manchester, Great Britain



Scientific Committee

- Univ.-Prof. Dipl.-Ing. Dr. Hermann Hofbauer, *Technical University of Vienna, Austria (Chairman)*
- Prof. Dr. Adánez Elorza Juan, *Instituto de Carboquímica (ICB), Spain*
- Dr. Andreas Apfelbacher, *Fraunhofer UMSICHT, Germany*
- Prof. Marco Baratieri, *Free University of Bolzano, Italy*
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- Prof. Juan Esteban Carrasco García, *Ciemat, Spain*
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- DI Dr. Gerfried Jungmeier, *Joanneum Research, Austria*
- Herr Prof. Dr.-Ing. Martin Kaltschmitt, *Technical University of Hamburg (TUHH), Germany*
- Dipl. Dr. Heinz Kopetz MSc, *World Bioenergy Association, Sweden*
- Dr. Jaap Koppejan, *Pro Biomass BV, The Netherlands*
- Birger Kerckow, *Agency for Renewable Resources, Germany*
- DI Dr. Lukas Kranzl, *Technical University of Vienna, Austria*
- Prof. Mag. Herbert Lechner, *Austrian Energy Agency, Austria*
- DI Dr. Peter Mayer, *BFW Vienna, Austria*
- Prof. Andrea Monti, *University of Bologna, Italy*
- Prof. Solange I. Mussatto, *Technical University of Denmark, Denmark*
- Prof. Anders Nordin, *University of Umea, Sweden*
- Prof. Dr. Thomas Nussbaumer, *Lucerne University of Applied Sciences and Arts, Switzerland*
- Dr. Calliope Panoutsou PhD, *Imperial College London, Great Britain*
- Luc Pelkmans, *IEA Bioenergy, Belgium*
- Univ.-Prof. DI Dr. techn. Christoph Pfeifer, *University of Natural Resources and Applied Life Sciences, Austria*
- Prof. Dr. Wolter Prins, *University of Ghent, Belgium*
- Univ.-Prof. DI Dr. techn. Pröll Tobias, *University of Natural Resources and Applied Life Sciences, Austria*
- Dr. Tapio Ranta, *Technological University of Lahti, Finland*
- DI Dr. Josef Rathbauer, *Francisco Josephinum, Austria*
- Prof. Lasse Rosendahl, *University of Aalborg, Denmark*
- Prof. Dr. Hubert Röder, *TUM Campus Straubing, Germany*
- DI Dr. Christoph Schmidl, *BEST Bioenergy and Sustainable Technologies, Austria*
- Ao. Univ.-Prof. DI Dr. Peter Schwarzbauer, *University of Natural Resources and Applied Life Sciences, Österreich*
- Univ.-Prof. Dr. Tobias Stern, *University of Graz, Österreich*
- DI Dr. Christoph Strasser, *BEST Bioenergy and Sustainable Technologies, Austria*
- Prof. Patricia Thornley, *University of Manchester, Great Britain*
- DI Dr. Martin Weigl, *Holzforschung Austria, Austria*
- Dr. sc.nat. ETH Arthur Wellinger, *Triple E&M, Switzerland*

**Biomass – energy for the future.
We supply the technology.**



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Messe Congress Graz: Floor map

The rooms for the 6th Central European Biomass Conference (CEBC 2020) are located on the 1st floor of the Messe Congress Graz. After passing the registration at the main entrance you can access the conference rooms via the escalator next to the registration.



Excursions

Wednesday
22
January

Excursion I Small biomass boilers

08:00 Departure from Messe Congress Graz parking lot

09:00 – 11:00 **Posch GmbH**

■ Innovations in wood splitters and circular saws

12:45 **Lunch** at KWB

14:00 – 17:00 **KWB – Power and warmth from biomass**

■ Production of biomass boilers

18:30 Arrival at Messe Congress Graz

Excursion II Efficient district heating plants

08:00 Departure Messe Congress Graz parking lot

09:30 – 11:00 **Nahwärme Eibiswald eGen**

■ 2,7 MW heating plant
2.500 m² thermic solar collector
700 kW flue gas condensation

12:00 **Lunch**

14:00 – 16:00 **Fernwärme Leibnitz 100% Carbon free**

■ 4,8 MW heating plant
0,4 MW Flue gas cleaning and heat recovery
waste heat integration, demonstrator for Austria as a part of the Green Energy Labs

16:30 – 18:00 **Nahwärme Fernitz GmbH**

■ 1,5 MW heating plant
flue gas condensation
BHKW biogas

18:30 Arrival at Messe Congress Graz



Excursion III Sector coupling and bioenergy

08:00 Departure from Messe Congress Graz parking lot

09:30 – 11:30 **Mayr-Melnhof-Holz Holding AG**

■ CHP, pellets, saw

13:00 **Lunch**

14:30 – 15:30 **Wood chipper demonstration Eschböck GmbH**

16:00 – 18:00 **Sappi Austria Produktions-GmbH & Co KG**

■ integrated energy concept and district heating extraction

18:30 Arrival at Messe Congress Graz

Exkursion IV Innovative CHP-plants

08:00 Departure from Messe Congress Graz parking lot

09:45 – 11:45 **Bioenergiezentrum GmbH**

■ CHP Klagenfurt Ost
10 MW el., 50 MW th

12:00 **Lunch** at Mochoritsch Griffen

13:45 – 15:45 **Glock Ökoenergie GmbH**

■ Wood gas, CHP-plant construction
Fernwärme Griffen

18:00 Arrival at Messe Congress Graz



Excursions

Excursion V Bioeconomy

08:00 Departure from Messe Congress Graz parking lot

09:30 - 10:30 **Tschiggerl Agrar, Halbenrain**

- Corn cob harvest technology, legal issues, thermic and und material corn cob use

10:30 - 11:30 **Südoststeirische Pelletierungsgenossenschaft eGen**

- Pelleting of agricultural biomass

11:30 - 12:15 **Burning of agraric fuels with screw burner technology**

12:30 **Lunch**

14:00 - 15:00 **Material uses of agricultural residues in practice**

- Use of husks, grape marc, etc.

15:45 - 17:00 **Biomethane - Infeed plant Strass**

- Strass „Greening the Gas“ - Sewage plant with methanation

18:30 Arrival at Messe Congress Graz



Wednesday
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January

Excursion VI Research and Development

08:00 Departure from Messe Congress Graz parking lot

08:30 - 10:00 **Energie Graz**

- Solar storage project Helios Graz

10:30 - 12:00 **KELAG Wärme GmbH**

- Biogenic fermentation heat for the brewing district Puntigam

12:00 **Lunch** at Brauhaus Puntigam

14:00 - 15:00 **BEST - Bioenergy and Sustainable Technologies GmbH**

15:15 - 16:15 **LEC - Large Engines Competence Center**

16:30 - 17:30 **CEET - Institut für Chemische Verfahrenstechnik und Umwelttechnik**

18:00 Arrival at Messe Congress Graz

Organisation: The meeting point is at 07:45 at the conference registration. Departure starts from the parking lot at the Messe Congress Graz.

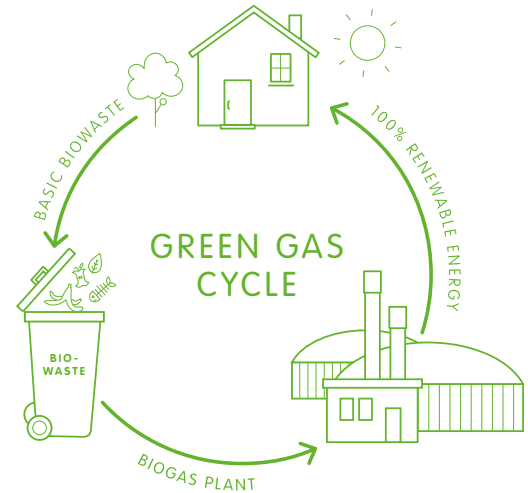
Language: German speaking guides with English speaking support

FACT-CHECKING GREEN GAS

Green gas = Biomethane = 100 % renewable

Green gas: your partner in the energy revolution

CO₂-neutral green gas, free of respirable dust, can replace environmentally friendly natural gas equally protecting the climate and providing the ideal renewable energy partner. Authorised offices monitor the quantity supplied on an annual basis, similar to green electricity. Energy suppliers can offer these quantities of renewable gas to their customers. This green gas can also be stored in large quantities.



**ENERGIE
NETZE**
STEIERMARK

Step on renewable gas!


Natural gas customers can switch easily without the need for any conversion, continuing to use existing heating systems as usual. For further information go to www.e-netze.at or dial +43 (0)316 90555

Ein Unternehmen der
ENERGIE STEIERMARK



Central European Pellet Day, Room 5, 9:00 – 17:00

Pellet production & usage in Central and Eastern Europe – current developments and future outlook

Language English 

Wednesday
22
January



„With the urgency of reducing CO₂, international interest in pellets as a climate-friendly energy source is increasing. The Pellet Day gives an overview of the current developments in Central and Eastern Europe.“

Chairman: Christian Rakos, CEO of proPellets Austria

09:00 Opening

■ Session 1: Market development

09:20 **The development of international pellet markets**

Gilles Gauthier, *European Biomass Association (AEBIOM), Belgium*

09:40 **The Polish pellet market**

Agnieszka Keczowska*, *Biomass Media Group, Poland*

10:00 **Pellet production and pellet usage on the Balkan**

Branko Glavonjic, *University of Belgrad, Serbia*

10:30 **Coffee break**

11:00 **The Russian pellet market**

Alexander Afanasyev, *Peltrade, Great Britain*

11:20 **Recent trends in the Italian pellet and stove market**

Annalisa Paniz, *AIEL, Italy*

11:40 **The German pellet market**

Martin Bentele, *DEPV Deutscher Energieholz- und Pellet-Verband, Germany*

12:00 **The Austrian pellet market**

Christian Rakos, *proPellets Austria, Österreich*

12:30 **Lunch break & Poster presentation**

■ Session 2: Changing Environments

13:30 **European Energy Policy – current developments and possible effects**

Nathalie Hemeleers, *Bioenergy Europe, Belgium*

13:50 **NGO-Campaigns against pellets**

Nino Aveni, *Bioenergy Europe, Belgium*

14:10 **Quality control of pellets – Revision of ENplus certification and effects on pellet production and trade**

N.N.

15:00 **Coffee break**

■ Session 3: Technology advances and quality management

15:30 **N.N.**

15:50 **Extreme combustion staging: the new technology for medium scale boilers by Polytechnik**

Lukas Schirnhofner, *Polytechnik, Austria*

16:10 **Pellet use in Africa: Optimization of a cooking stove for the low-emission sustainable use of pellets from agricultural residues**

Robert Scharler, *Technical University of Graz, Austria*

16:30 **ENplus revision – recent improvements of the world leading pellet certification system**

Elena Dimitru, *European Pellet Council, Belgium*

17:00 **End**



pro»pellets

Austria

*requested



New Directions for Climate Protection and Energy Efficiency – Zero Emission Austria

Biogas Day, Room 6, 13:30 – 17:00

The role of biogas within a decade



„Bioeconomy and the circular economy are closely linked with biogas technology as the most efficient form of waste recycling for energy and fertilizer production.“

Chairman: Bernhard Stürmer, CEO of the Kompost & Biogas Verband Österreich

13:30 Opening

Organic waste from tourism for biogas production – characterization, potential and challenges

Marco Johannes Wehner, University of Innsbruck, Austria

BioFlock – Use of biological and sustainable flocculants for preparing digestate

Wolfgang Gabauer et al., University of Natural Resources and Life Sciences, Austria


Modelling and control of biogas plants for a demand-driven biogas production

Lena Peters et al., University of Emden/Leer, Germany

Biogas Upgrading by Chemical absorption with amino acid salt solutions

Nelson Soto et al., University Stuttgart, Germany

15:00 Coffee break

Language German 

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Register system for the administration of movements of renewable gases

Stefanie Königsberger, AGCS, Austria

The tank system as a compact system – leasing model such as a press container

Michael Meirer*, MEIKO GREEN Waste Solutions, Austria

Biogas economy – new concepts for organic waste collection fermentation,

Guntram Bock*, Pöttinger, Austria

Findings from 10 years of work group

Bernhard Stürmer, Kompost & Biogas Verband Österreich, Austria

17:00 End

* requested



kompost
& biogas
verband



EBA
European Biogas Association

HOME IS, WHERE THE ENERGY IS.

For us home is more than just a place or a feeling.



Green
power



Green
home



ENERGIE STEIERMARK

For us home means being close and responsible. This is where we produce green energy for the country. From water, wind and sun. This is where our 1700 employees live and work. They know its every corner and region. They make sure that safety, service and ideas have a face. And a name. Because our energy is where we're at home. www.e-steiermark.com

www.facebook.com/energiesteiermark

BEST Day

Room 8, 13:30 – 17:00



„The COMET-Center BEST (formerly BIOENERGY 2020+) presents selected highlights from current research projects.“

Chairman: Walter Haslinger, BEST, Austria

13:30 Session 1: Overcoming barriers in biomass combustion and gasification

Individual heat management in the living room,
Manuel Schwabl, *Area Fixed Bed Conversion Systems*

Modification of ash properties in fixed bed combustion systems,
Stefan Retschitzegger, *Area Fixed Bed Conversion Systems*

NO_x modelling and emission reduction,
Michael Essl, *Area CFD Modelling and Simulation*

Virtual biomass combustion plant,
Kai Schulze, *Area CFD Modelling and Simulation*

Influence of ash forming elements of biogenic residues on the performance of fluidized bed conversion,
Katharina Fürsatz, *Area Fluidized Bed Conversion Systems*

Session 2: Contributions to the biobased bioeconomy

Product flexibility from biomass steam gasification applying gas upgrading and synthesis processes,
Matthias Binder, *Area Fluidized Conversion Systems*

Language English

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Integrating steam gasification into established infrastructure in the pulp and paper industry,
Thomas Karel, *Area Fluidized Bed Conversion Systems*

Valorisation of untapped industrial waste streams from the pulp & paper and rendering industry – production of technical enzymes,
Markus Ortner, *Area Bioconversion and Biogas Systems*

Challenges and recent results in microalgae research,
Katharina Meixner, *Area Bioconversion and Biogas Systems*

Biofuels for transport decarbonisation – Country specific assessments for Finland, Sweden, Germany, USA, and Brazil,
Doris Matschegg, *Area Sustainable Supply and Value Chains*

Session 3: Advanced methods for the establishment and control of value chains, technologies and energy systems

How to create value chains from different feedstocks,
Monika Enigl, *Area Sustainable Supply and Value Chains*

Optimization based planning of energy systems,
Michael Zellinger, *Area Smart and Microgrids*

Test bed for the development of control algorithms for cellular energy systems/microgrids,
Stefan Aigenbauer, *Area Smart and Microgrids*

A modular energy management system for multi-energy systems,
Daniel Muschik, *Area Automation and Control*

Model-based estimation of the flue gas mass flow in biomass furnaces,
Helmut Niederwieser, *Area Automation and Control*

**ENERGY
IS A
CIRCLE.**

We close it.

Plenary Sessions

Climate protection & bioenergy

Room 1, 9:00 – 12:30

Chairman: Ingmar Höbarth, *Klima- & Energiefonds, Austria*



„Bioenergy is an essential milestone for coping with the climate crisis. It supports forest management, provides the lion share of renewable energy and enables a fossil-free production of wood products.“

Franz Titschenbacher,
President of the Austrian Biomass Association

Thursday
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09:00 am Scientific Opening

- **Simone Schmiedtbauer***, *EU-Representative, Austria*
- **Siegfried Nagl**, *Mayor of Graz, Austria*
- **Hannes Tuohinitty***, *Präsident Bioenergy Europe, Belgiums*

Words of welcome by **Armin Egger**, *CEO of the MCG, Austria*

11:00 am Political Opening

Simultaneous translation  

- **Franz Titschenbacher**, *President Austrian Biomass Association*
- **Hermann Schützenhofer***, *Governor of Styria, Austria*
- **Maria Patek**, *Federal Minister for Sustainability and Tourism*

Words of welcome by the **Energie Steiermark, Austria**

The lectures of the **scientific and political opening** will be announced at a later time.

10:30 Coffee break

12:30 – 14:00 Lunch break & Poster presentation

*requested



Parallel Session 1

Polygeneration und Green fuels

Room 5, 13:30 – 15:00

Chairman: Reinhard Haas, *Technical University of Vienna, Austria*

13:30 Opening

Thermodynamic modelling and analysis of a biomass based polygeneration plant producing bio-oil, electricity, heat and fertilizer

René Kofler, *Technical University of Denmark, Denmark*

To-Syn-Fuels: The demonstration of advanced fuels from sustainable biomass

Nils Jäger, *Fraunhofer Umsicht, Germany*

EN-Fuels from solid waste biomass by catalytic hydrogenation of bio-oil produced by thermo-catalytic reforming TCR®

Jan Grunwald, *Fraunhofer Umsicht, Germany*

Chemical Looping Gasification – A novel process for the sustainable production of biofuels

Paul Dieringer, *Technical University of Darmstadt, Germany*

15:00 Coffee break

Parallel Session 2

Upgrading and characterization of solid biomass fuels I

Room 6, 13:30 – 15:00

Chairman: Tapio Ranta, *Technological University Lahti, Finland*

13:30 Opening

Torrefaction/Carbonization, what are today's offers to the markets

Michael Wild, *Wild Et Partner KG, Austria*

Mobile pellet production – innovation driven revolution of the biomass process chain

Martin Weigl, *Holzforschung Austria, Austria*

Valorization of forestry residues as solid fuels using slow pyrolysis

Marta Martins, *University of Lissabon, Portugal*

Process simulations of vacuum drying technologies for woodchips

Vaclav Marek, *University of West Bohemia, Czech Republic*

15:00 Coffee break



Parallel Session 3

Concepts and value chains of a biobased bioeconomy

Room 8, 13:30 – 15:00

Chairman: Gerfried Jungmeier, *Joanneum Research, Austria*

13:30 **Opening**

Advanced biofuel from waste wood integrated in the steel industry

Ingrid Kaltenecker, *Joanneum Research, Austria*

Techno-economic modelling of bioeconomy value chains

Christa DiBauer, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

Circular economy by compost & digestate application

Sandra Uschnig, *Kompost & Biogas Verband Österreich, Austria*

Platform chemicals from biogenic residues by hydrothermal processes

Jakob Köchermann, *DBFZ Deutsches Biomasseforschungszentrum und gemeinnützige GmbH, Germany*

15:00 **Coffee break**

Parallel Session 4

Advances in fixed bed biomass gasification and in biochar utilization

Room 9, 13:30 – 15:00

Chairman: Juan Adanez, *Instituto de Carboquímica, Spain*

13:30 **Opening**

Updraft gasification of TCR® biochar – a smart way to generate tar-free synthesis gas

Stefan Eder, *Fraunhofer Umsicht, Germany*

Advances in biomass conversion based on gasification for overcoming barriers in bioenergy use for bioheat, bioelectricity and biofuels

Andres Anca-Couce, *Technical University of Graz, Austria*

Char recirculation in fixed bed gasification systems: effects on conversion yields and process efficiency


Francesco Patuzzi, *Free University of Bolzano, Italy*


Investigation of the adsorption potential of char residues derived from small-scale biomass gasifiers

Vittoria Benedetti, *Free University of Bolzano, Italy*

15:00 **Coffee break**

Thursday
23
January

Language **English** 

Language **English** 

Parallel Session 5
Green Gas
powered by Energienetze Steiermark
Room 5, 15:30 – 17:00



Chairman: Iris Kral*, *University of Natural Resources and Life Sciences, Austria*

15:30 Opening

Renewable gases from hydrogen and biomethane as a major contribution to the energy transition in Austria

Manfred Pachernegg, *CEO of the Energienetze Steiermark GmbH, Austria*

Optimizing of a hydrogen production plant by optimization of the CO₂ removal step

Jürgen Loipersböck, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

Decentralized high-purity hydrogen generation and energy storage from biomass and biogas with fixed-bed chemical looping processes

Sebastian Bock, *Technical University of Graz, Austria*

Combined production of hydrogen and CO₂ from biogas via sorption-enhanced reforming (SER)

Antonio Oliveira, *IFE Institute for Energy Technology, Norway*

Opportunities and Challenges for Biomethane

Franz Kirchmeyer, *Kompost & Biogas Verband, Austria*

17:00 End

Parallel Session 6
Upgrading and characterization of solid biomass fuels II
Room 6, 15:30 – 17:00



Chairman: Martin Weigl*, *Holzforschung Austria, Austria*

15:30 Opening

Upgraded biomass to BIOCOAL pellets production for small scale heat applications

Pedro Abelha, *ECN part of TNO, The Netherlands*

Contamination of wood chips with mineral soils – effects on fuel quality and combustion behavior


Carina Kuchler, *Technologie- und Förderzentrum Straubing, Germany*


Reliability of TGA data for characterization of alternative biomass feedstocks

Stefan Retschitzegger, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

N.N.

17:00 End

Language English 

Language English 

Parallel Session 7

Thermochemical and thermocatalytical processes
Room 9, 15:30 – 17:00

Chairman: Marco Baratieri, *Free University of Bolzano, Italy*

15:30 **Opening**

Conversion of biogenic residues into fuels and green hydrogen by Thermo-Catalytic Reforming TCR®

Johannes Neidel, *Fraunhofer Umsicht, Germany*

Biomass chemical looping gasification (BCLG) using ilmenite as oxygen carrier

Francisco García-Libiano, *Instituto de Carboquímica, Spain*


Dual fluidized bed steam gasification of biomass – the basic technology for a broad product portfolio

Matthias Kuba, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

Torrefaction of waste biomass – process parameters and quality assesment

Marcin Jewiarz, *Agricultural University of Krakow, Poland*

17:00 **End**

Language **English** 

Parallel Session 8

Integrated biorefinery and
biogas concepts
Room 8, 15:30 – 17:00

Chairman: Arthur Wellinger, *Triple E&M, Switzerland*

15:30 **Opening**

Global cooperation on biogas technologies

Dominik Rutz et al., *WIP Renewable Energies, Germany*

Prospective life cycle assessment of a microalgae biorefinery concept integrated in regional biogas plants

Maresa Bussa*, *TUM Campus Straubing, Germany*

Biorefinery model for the use of the straw base horse manure in different co-digestion technologies and biofuel production

Sandor Bartha et al.*, *Research-Cercetare Silox LTD, Romania*


New perspectives on soybean molasses utilization in Brazil

Bruna Mello et al.*, *University of Sao Paolo, Brazil*

17:00 **End**

Thursday
23
January

*requested

Language **English** 



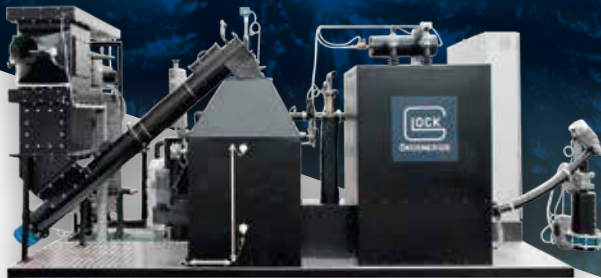
Ecological heat and electricity from wood

Wood gasification plants in the low power range - highly profitable solutions for the modern heat supply



Conformity assessment according to Directive 2006/42/EC for GGV wood gas combined heat and power plant

- Electrical power rating: 18 kW | 50 kW
- Areas of application: industry, local and district heating, hotels, spas and agriculture
- CO₂-neutral energy production from sustainable resources
- Wood chips/pellets with 30 % moisture content without sieving
- Fully automatic operation
- Short payback times



Workshop: Clean Air and efficient district heating plants, Room 1, 13:30 - 17:00

Powered by Keep Warm and Clean Air II Project

Thursday
23
January



„The increased involvement of renewable energy sources and waste heat, as well as steady optimization measures contribute significantly to climate protection and to reducing emissions.“

Chairman: Klaus Engelmann, Agricultural Chamber of Styria, Austria



„Although biomass combustion is sustainable, it still contributes to the fine dust load. This workshop will show you measures and ways of implementation for the reduction of air pollutants and thus, present their impact on air quality.“


Chairman: Rita Sturmlechner, BEST Bioenergy and Sustainable Technologies, Austria

The following topics await you:

- Optimization of biomass district heating plants
- Reduction of the return flow temperatures
- Emission reduction in biomass firings
- Use of biomass in urban district heating systems
- Biomass quality as a success factor for clean combustion
- Emission reduction due to correct usage behavior
- Improving air quality with biomass heatings
- Technological progress in the international context in biomass combustion

Afterwards, participants have the possibility to visit the interesting „Clean Air II Trailer“. This trailer with 3 ovens installed including extensive measuring technology is used in the project Clean Air II for user training. A video shows how the trailer is used. Users can test their personal heating behavior, learn their emission levels and are trained to ensure low-emission and efficient operation.

17:00 End

Simultaneous translation  

13:30 Opening

The workshop will highlight solutions such as ensuring clean combustion boilers and stoves and how to operate biomass district heating plants efficiently. Part one of the workshop shows how district heating plants can be modernized, optimized and how emissions can be reduced. Practical examples and their implementations will be presented. The second part of the workshop deals with measures of improving air quality with biomass heatings. For this purpose, national and international projects and their results as well as technical and non-technical measures are presented.



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Workshop: Petroleum-free agriculture and forestry

Room 3, 13:30 – 17:10

Language German 

Thursday
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„Agriculture and forestry guarantee the food supply and the preservation of the cultural landscape in Austria.“

Chairman: Josef Rathbauer, HBLFA Francisco Josephinum, BLT Wieselburg, Austria

The production progress of the last decades also relies heavily on the increasing use of agricultural engineering solutions. The driving processes for this, however, are still based exclusively on fossil fuels. In order to meet the climate protection targets for 2030 and 2050, the replacement of fossil fuels by renewable energy is a necessary choice for the future of our planet.

Investments in agricultural engineering made today usually stand for a long durability and thus, can be partially still used in 2050. Therefore, it is time to promote renewable solutions for this form of mobility that are purchaseable at the market and then, actively used in the agriculture. Along with the contribution to the improvement of the climate situation, this practice secures the food production in times of crisis, as the renewable raw materials for the fuel production can stem from the region.

This workshop aims at displaying the current state of development and showing approved solutions. Visitors are invited to perceive an up-to-date overview of the current situation, in order to be prepared for future buying decisions

13:30 Opening by Josef Rathbauer

13:40 **Greenhouse gas reduction potential in biofuels in agricultural machinery**

Daniela Dressler, *Technologie- und Förderzentrum Straubing, Germany*

14:00 **Requirements for the future agricultural and forestry machinery,** Andreas Gronauer, *University of Natural Resources and Life Sciences, Austria*

14:20 **Alternative drives for the agricultural and forestry machinery park,** Jürgen Karner, *HBLFA Francisco Josephinum, Austria*

14:40 **New rapeseed oil tractors are ready for use – experience from a Bavarian long-term field trial** Johannes Ettl, *TFZ Straubing, Germany*

15:00 **Coffee break**

15:30 **Material flows for renewable energies in agriculture and forestry,** Franz Sinabell, *WIFO Vienna, Austria*

15:50 **Operating behavior and emissions of a forestry harvester in operation with rapeseed oil fuel**

Peter Emberger, *Technologie- und Förderzentrum Straubing, Germany*

16:10 **Plant oil and energy transition – potential of agricultural technology with plant oil fuel,** Andreas Schröder, *John Deere, Germany*

16:30 **The Gastraktor – an alternative,** N.N.

16:50 **Unanswered questions in the area of conflict „Current situation and future requirements for achieving the climate goals“**

Alexander Bachler, *Agricultural Chamber of Austria, Germany*

17:10 **End**

KLAGENFURT - Biomass

Capital of Europe!

- Two strong partners – Stadtwerke Klagenfurt AG and Bioenergie Kärnten.
- Stadtwerke Klagenfurt AG is one of Carinthia's most important infrastructure companies in the areas of electricity, heat, gas and water.
- Bioenergie Kärnten supplies 27,000 households with CO₂-free district heating at its locations in the east, south and north of Klagenfurt.
- 40,000 households are supplied with green electricity from biomass.

- 50% reduction in CO₂ in Klagenfurt due to green electricity and district heating from biomass.
- The common goal is to further improve the quality of life and the air quality in Klagenfurt and to make Klagenfurt a model city in bioenergy production through the use of cutting-edge technology.

„The city with a **carbon-free** future“

Our energy is
supplied by nature



DI Erwin Smole
STW Vorstand

Mag. Harald Tschurnig
STW Vorstand

DI(FH) Markus Poppe
GF Bioenergie Kärnten

Ing. Johann Moser
GF Bioenergie Kärnten

IEA-Workshop: TASK 32, Room 7, 13:30 - 17:00

Residential wood combustion

Language English 

Thursday
23
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„Technological progress has established residential wood combustion as leading form of renewable energy in Europe. It is essential to continue this development consequently to maintain this position.“

Chairman: Christoph Schmidl, *BEST Bioenergy and Sustainable Technologies, Austria*

This workshop organized by IEA Bioenergy Task 32 covers highly relevant topics for residential wood combustion: Direct-heating and central-heating technologies as well as operational performance and certification methods for high quality products. Additionally the invited experts are highlighting recent developments and future perspectives of advanced control concepts and secondary emission abatement technologies.

13:30: Opening

- Morten Toni Hansen, *Ea Energy Analyses, Denmark (Task Leader)*
- Christoph Schmidl, *BEST Bioenergy and Sustainable Technologies, Austria*

Introduction to biomass combustion and pollutant reduction in wood stoves and boilers

Thomas Nussbaumer, *Verenum, Switzerland*

Technical guidelines for design of low emission stoves

Morten Gottlieb Jespersen, *Danish Technological Institute, Denmark*

Influence of user behavior on emissions from firewood stoves

Robert Mack, *Technologie- und Förderzentrum Straubing, Germany*

The new Blue Angel ecolabel certification method for firewood stoves

Ingo Hartmann, *Deutsches Biomasseforschungszentrum, Germany*

15:00 Coffee break

GrateAdvance – Advanced adjustable grate solutions for future fuel flexible biomass combustion technologies

Elisabeth Wopienka, *BEST Bioenergy and Sustainable Technologies, Austria*

The potential of advanced flue gas condensation in residential biomass boilers

N.N.

Electrostatic precipitators for residential combustion technology – State of the art and future perspectives

Daniel Jud, *ÖkoSolve AG, Switzerland*

Advanced control concepts for wood heating in residential buildings

Markus Gölles, *BEST Bioenergy and Sustainable Technologies, Austria*

17:00 End



IEA Bioenergy

Parallel Session 9

Secondary measures for the reduction of emissions from biomass combustion and gasification

Room 6, 09:00 – 10:30

Chairman: Morten Gottlieb Jespersen, *Danish Institute of Technology, Denmark*

09:00 Opening

Innovative high efficiency filter for particulate matter from biomass flue gases

Augusto Bianchini, *University of Bologna, Italy*

New filter technology for combined NO_x and dust emission reduction – from laboratory to practice

Julian Walberer, *Fraunhofer Umsicht, Germany*


Online monitoring of electrostatic precipitators at biomass heating plants

Bastian Alt, *TUM Campus Straubing, Germany*

Evaluation of gas cleaning processes for the coupling of biomass gasification with Solid Oxide Fuel Cells (SOFC)

Stefan Martini, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

10:30 Coffee break

Language English 

Parallel Session 10

Decarbonization of industrial processes and energy supply

Room 7, 09:00 – 10:30

Chairman: Matthias Kuba, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

09:00 Opening

Chemical looping combustion of biomass for negative CO₂ emissions

Juan Adanez, *Instituto de Carboquimica, Spain*

Importance of biomass for the decarbonization of industrial process heat supply

Martin Meiller, *Fraunhofer Umsicht, Germany*


Overview and Status of Bioenergy Retrofits in Europe's Industry – First results of the BIOFIT project (HORIZON2020)

Patrick Reumerman, *BTG Biomass Technology Group BV, The Netherlands*

Experimental investigation of biomass based reducing agents for blast furnace ironmaking

Norbert Kienzl, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

10:30 Coffee break

Language English 



Parallel Session 11

The future of green transportation fuels and of green gas

Room 8, 09:00 – 10:30

Chairman: Josef Rathbauer, *HBLFA Francisco Josephinum, Austria*

09:00 Opening

The economics of greening gases

Reinhard Haas, *Technical University of Vienna, Austria*

Lessons learned from alternative fuels experience

Andrea Sonnleitner, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

Economics of the extension of production capacities of renewable gases and their feed-in to the gas grid

Martin Höher, *Austrian Energy Agency, Austria*

On the development of biofuel policies in the EU

Amela Ajanovic, *Technical University of Vienna, Austria*

10:30 Coffee break

Workshop: Impact assessment of the use of Lignin in plastics

Room 4, 09:00 – 12:30


Chairman: Tobias Stern, *University of Graz, Austria*
Raphael Asada, *University of Graz, Austria*

Resource efficiency plays a central role in the debate of sustainability and is a main objective in a number of national resource-oriented action plans. An important element is the value-adding material use of bio-based resources, by-products and waste. The material use of technical lignin, a by-product of the pulp and paper industry, has been intensively researched for decades. Lignin could, for example, partially replace petrochemical phenolic compounds in plastics.

20 students of environmental systems sciences* (University of Technology, Graz) spent a semester on researching, how such a substitution could be modeled prospectively in order to assess their impact on aspects of environmental and socioeconomic sustainability. In the workshop, the possibilities and limits of the interdisciplinary modeling project outlined are presented by the student group.

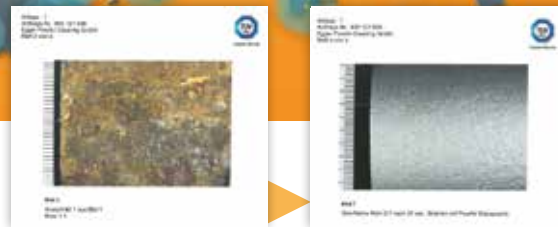


Friday
24
January

Language English 

Language German 

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IEA-Workshop: TASK 44, Room 9, 09:00 - 13:30

Flexible bioenergy and system integration



„The share of wind and solar is increasing rapidly in the energy system. To accommodate these growing amounts of variable energy generation, the energy system needs to become more flexible.

Illka Hannula, VTT Technical Research Center, Finland

Chairs:

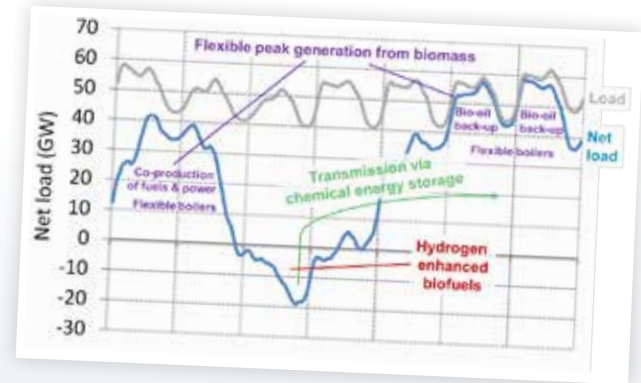
- Ernst Höftberger, BEST Bioenergy and Sustainable Technologies, Austria
- Daniela Thrän, DBFZ Deutsches Biomasseforschungszentrum, Germany

09:00: Opening

Bioenergy is a storable and versatile source of renewable energy that could be an important part of the solution in the energy transition. Task 44 "Flexible bioenergy and system integration" is a new activity within IEA Bioenergy. It pursues to develop and analyse biomass-based solutions that can provide flexible resources for a low-carbon energy system. Task 44 is supported by national team leaders from Austria, Australia, Finland, Germany, the Netherlands, Ireland, Sweden, Switzerland, and the US.

In this workshop, experts from different Tasks of IEA Bioenergy will share their insights on how bioenergy could provide flexibility to the energy system. During the final discussion, the audience is welcomed to join the discussion.

13:30: End



Parallel Session 12

Challenges for multi-fuel and lowest emissions combustion systems

Room 6, 11:00 – 12:30

Chairman: Anne-Mette Frey, *Danish Institute of Technology, Denmark*

11:00 Opening

Eco+ ready boilers – striving towards ultralow emissions

Marten Gottlieb Jespersen, *Technological Institute Denmark, Denmark*

Evaluation of ash melting behavior of rice husk and rice straw during thermochemical conversion

Hossein Belghady, *DBFZ Deutsches Biomasseforschungszentrum und gemeinnützige GmbH, Germany*


Mitigation of particulate matter emissions from the combustion of corn cobs in a small scale multi-fuel boiler

Natasia Dragutinovic, *Technical University of Hamburg, Germany*

Experimental analysis and optimization of a 30 kW lab reactor of a multi-fuel-low-emission furnace

Georg Archan, *Technical University of Graz, Austria*

12:30 Lunch break and poster presentation

Language English 

Parallel Session 13

Bioenergy and biobased bioeconomy in Europe

Room 8, 11:00 – 12:30

Chairman: Amela Ajanovic, *Technical University of Vienna, Austria*

11:00 Opening

Fostering bioeconomy in Central, East and Southeast Europe – The experience of CELEBIO project in the Czech Republic, Slovakia, Hungary, Slovenia, Croatia and Bulgaria

Peter Canciani, *CEI Central European Initiative, Italy*

Development of the bioenergy as a part of renewable energy in the Nordic Countries – a comparative analysis

Tapio Ranta, *Technological University of Lahti, Finland*


Bioenergy Development Strategy and Investment Plan: A regional approach to accelerate diffusion of modern bioenergy technologies in East Africa

Michael Kiza, *EACREEE East African Centre of Excellence for Renewable Energy and Efficiency, Uganda*

Strategies for the development of regional bioeconomies – the Be-Rural project

Felix Colmorgen, *WIP Renewable Energies, Germany*

12:30 Lunch break and poster presentation

Language English 



Parallel Session 14

Supply, storage and distribution of bioheat
Room 7, 11:00 – 12:30

Chairman: Richard Zweiler, *GET Güssing Energy Technologies, Austria*

11:00 **Opening**

Evaluation of Austrian biomass district heating

Sabrina Metz, *AEE Intec Institut für Nachhaltige Technologien, Austria*

Integration and smart management of energy storages at historical urban sites

Michael Heidenreich, *Innovationszentrum Weiz, Austria*


System integration and dimensioning of heat storage tanks in heating plants with automated wood furnaces

Felix Schumacher, *University of Lucerne, Switzerland*

Efficient building technology and energy contracting with integrated biomass district heating on the example of Mautern, Styria

Daniel Schinnerl, *Siemens AG, Austria*

12:30 **Lunch break & Poster presentation**

Language English 

Matchmaking in the „Bioenergy-Heurigen“ Room 14, Wednesday, 22nd to Friday, 24th, 10:00 – 17:00

Throughout the 6th **Central European Biomass Conference (CEBC 2020)** visitors have the opportunity to discover common business opportunities and build synergies, while enjoying a glass of wine or beer next to a traditional bite of Austrian cuisine. In a welcoming environment you can meet business partners and investors from all over the world. The unique matchmaking event can be used before or after interesting scientific lectures and workshops and thus, serves as an ideal snack in-between. Use the opportunity and benefit from the international range of the conference. Prost!



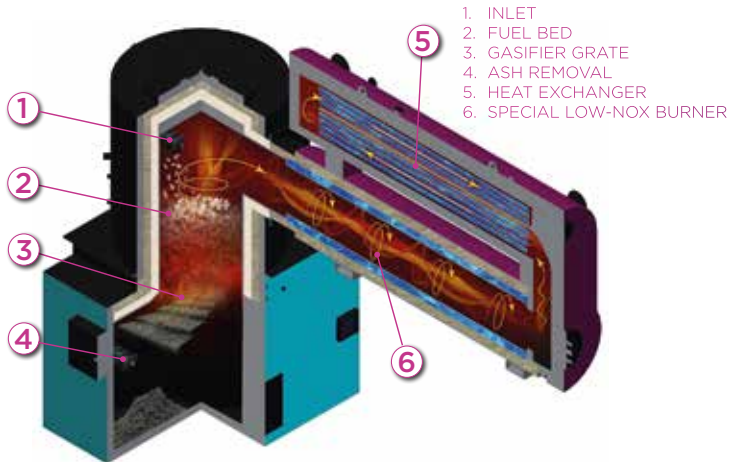
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Proven Technology

- Counterflow system with integrated grate
- Performance capacities of 400 / 600 / 1000 / 1500 kW

Flexible Use of Raw Materials

- Forest chips, waste wood, waste wood from landscape conservation, agricultural waste, briquettes, pellets, fuel water content of up to 45% by weight

Efficient and Clean

- Efficiency $\geq 92\%$
- Low internal energy consumption
- Low NOx and dust emissions even without filter

Flexible Application

- Process heat
- Heating
- Energy
- Warm water
- Hot water
- Steam
- Thermal oil

Flexible Operation

- Quick controls, control range of 25% - 100%



WINTER
TAGUNG
2020

21. Jänner bis 30. Jänner

Saal 5, 09:00 – 17:00

Language German



Fachtag Waldwirtschaft



OKO
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FORUM

Block I: Der Wald im Wandel

- 09.30** Eröffnung und Begrüßung
Veränderungen rund um Forst und Holz
- 09.40** ... ein Blick aus dem All: Wie sich Waldflächen im Klimawandel verschieben
- 10.00** ... ein Blick auf die Wertschöpfungskette
- 10.20** ... ein Blick auf die Ökosystemdienstleistungen des Waldes
- 10.40** Podiums- und Publikumsdiskussion:
Wald im Wandel – was bedeutet das für die Branche?

Block II: Der Wald der Zukunft

- 11.25** Zwischen Klimaschutz- und Einkommensgrundlage:
Die Waldbewirtschaftung von morgen
- 11.45** Was die WaldbewirtschafterInnen von morgen können müssen
- 12.05** Die Waldbiodiversität der Zukunft
- 12.25** Podiums- und Publikumsdiskussion:
Und wie kann ich meinen Wald zukunftsfit machen?

Block III: Die multifunktionale Zukunft für Holz

- 14.20** Holz kann mehr – ein Überblick
- 14.40** Diskussionsrunde: Holz – vom Bauwerkstoff bis hin zur Medizin
- 15.55** Wie mein Betrieb von den neuen Nutzungsmöglichkeiten profitieren kann
- 16.15** Fragerunde: Bioökonomie aus meinem Wald – was braucht es dazu?
- 16.30** Ende

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AustroPUR district heating systems

Minimal heat loss, maximum flexibility



Workshop: Highlights of bioenergy research 2020, Room 1, 09:00 - 15:00

National and international results from the IEA Bioenergy Tasks and the ERA-NET Bioenergy

Simultaneous translation  

Friday
24
January

09:00 Opening

The series of events "Bioenergy Research Highlights" was launched by the Federal Ministry of Transport, Innovation and Technology (BMVIT) with the aim of creating a platform for all experts and stakeholders.

Austria is participating intensively in the TCP (Technology Collaboration Programme) Bioenergy within the framework of the IEA Research Cooperation. The IEA Bioenergy aims to accelerate the production and use of sustainable and cost-competitive technologies for bioenergy.

In the ERA-NET Bioenergy, national ministries and agencies that own or manage bioenergy research programmes – in Austria, the Climate and Energy Fund as well as the Federal Ministry for Transport, Innovation and Technology – work together in order to improve cost-effectiveness and ensure the maximum research impacts for bioenergy.

The event "Highlights of Bioenergy Research 2020" presents current developments and results from the IEA Bioenergy tasks as well as transnational research and development projects for the sustainable use of bioenergy from the ERA-NET Bioenergy. Exciting lectures on topics such as gasification of biomass and waste, energy from biogas, biorefineries and much more are awaiting you.



In addition to directional research and development results, the event provides enough space for exchange and networking in the field of bioenergy research.

The event "Highlights of Bioenergy Research" 2020 will be part of the **6th Central European Biomass Conference CEBC 2020** which will take place from the 22nd to 24th of January 2020 in Graz.

You will find the continuously updated programme online at <https://nachhaltigwirtschaften.at/de/iea/veranstaltungen/2019/20190124-highlights-bioenergieforschung.php>

15:00 End



 Bundesministerium
Verkehr, Innovation
und Technologie



Parallel Session 15

Advanced methods meet traditional technologies

Room 6, 13:30 – 15:00

Chairman: Christoph Schmidl, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

13:30 Opening

The tiled stove – a product proven over centuries modelled and simulated by CFD

Johannes Mantler, *Österreichischer Kachelofenverband, Austria*

Advanced test methods for pellet stoves and consequences on real life performance

Gabriel Reichert, *BEST Bioenergy and Sustainable Technologies GmbH, Austria*

"EN-PME" – a new European method for particle matter (PM) measurement for local space heaters and boilers burning solid fuel

Frank Kienle, *HKI Industrieverband Haus-, Heiz- und Küchentechnik, Germany*

N.N.

15:00 Coffee break & Poster presentation

Parallel Session 16

Sustainability of bioenergy and bioeconomy value chains I

Room 8, 13:30 – 15:00

Chairman: Luc Pelkmans, *IEA Bioenergy, Belgium*

13:30 Opening

Waste wood recycling in Europe – selected issues

Martin Wellacher, *Montanuniversität Leoben, Austria*

Promotion of European underutilised lands for sustainable bioenergy production using Web-GIS tools

Manuela Hirschmugl, *Joanneum Research, Austria*

The PARIS-Lifestyle – The role of biomass for a climate-friendly lifestyles in the bioeconomy fulfilling climate targets in 2050

Gerfried Jungmeier, *Joanneum Research, Austria*

N.N.

15:00 Coffee break & Poster presentation



Parallel Session 17

Logistics

Room 7, 13:30 – 15:00

Chairman: N.N.

13:30 Opening

For bioenergy, logistics is a decisive cost factor. Because of the negative impacts of the climate change, the cross-regional compensation is becoming increasingly important. The workshop is intended to provide the audience with an overview of existing logistic chains, dealing with the extraction, process and preparation of the biomass and also deals with its transport via

- agricultural motor tractors
- trucks
- trains
- inland vessels
- high-sea transport

Insights into various areas display a comprehensive overview of the current challenges.

15:00 Coffee break & Poster presentation

Friday
24
January



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Language **German** 

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Workshop: Biochar, Room 4, 13:30 - 17:30



Language English

Friday
24
January

Potentials & Risks



„For achieving climate targets, the proper utilisation of biochar contributes significantly and can be economically feasible.“

Chairman: Stefan Martini, BEST Bioenergy and Sustainable Technologies, Austria

Due to variable feedstock and production processes, the diversity of biomass-derived carbon rich solids is tremendous, and so is the potential of a worthwhile utilisation. But also on the customer side, a huge spectrum of quality needs can be observed which is required by different application: from soil conditioning, animal food additives and barbecue charcoal to industrial and pharmaceutical applications. An incorrect utilisation can cause a sustainable damage to public biochar's image, which has to be avoided in any case.

The workshop is to create a clear overview of the current biochar situation. Ecological and economical potentials are to be discussed with experts from the production and application side. In conclusion further steps to use the full potential of biogenic carbon-rich solids as well as aberrations are to be identified.



13:30 **Opening**

Session 1: Production

14:00 **Heat and biochar from a fuel-flexible biomass boiler**
Thomas Reiterer, *Schmid Energy Solutions, Switzerland*

14:15 **Power, heat and biochar production based on biomass gasification**
Marcel Huber, *SynCraft, Austria*

14:30 **Biochar production from grain husks – 8 years of experience**
Gerald Dunst, *Sonnenerde, Austria*

14:45 **The influence of biochar on the GHG-footprint for heat and electricity production in a biomass gasification plant**
Babette Hebenstreit, *FH Vorarlberg, Austria*

15:00 **Coffee break**

Session 2: Applications

15:30 **Biochar addition to soil as a readily available carbon capture strategy: potential, risks and opportunities**
Rebecca Hood-Nowotny, *University of Natural Resources and Life Sciences, Austria*

15:45 **Legal aspects in the agricultural application of biochar**
Erwin Pfundtner, *AGES Austrian Agency for Health and Food Safety, Austria*

16:00 **Industrial application of biochar and charcoal**
Benjamin Hupfaut, *MCI Management Center Innsbruck, Austria*

16:15 **The modification of biogenic carbon-rich solids opens new possibilities**
Stefan Martini, *BEST Bioenergy and Sustainable Technologies, Austria*

16:30 - 17:30 **Discussion**

Parallel Session 18

Technologies for decentral bioelectricity production

Room 6, 15:30 – 17:00

Chairman: Francesco Patuzzi*, *Free University of Bolzano, Italy*

15:30 Opening

Small Scale CHP from biomass – results from a demonstration project in Sweden

Daniella Johansson, *Energy Agency for Southeast Sweden, Sweden*

Development of a demand-based controller for small biomass fired CHP systems

Daniel Büchner, *DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH, Germany*


Energy self-sufficiency with wood gas CHP – Smart solutions for self-sufficiency

Manuel Moser, *Glock Ökoenergie, Austria*

Power from hidden fuels in the wood processing industry, up to 1 MWe

Sebastian Kießling, *CP i-Invest GmbH, Austria*

17:00 End

Language English 

Parallel Session 19

Sustainability of bioenergy and bioeconomy value chains II

Room 8, 15:30 – 17:00

Chairman: Martin Wellacher*, *Montanuniversität Leoben, Austria*

15:30 Opening

Bioenergy from boreal forests – the Swedish approach to sustainable wood use

Kjell Andersson, *SVEBIO Swedish Bioenergy Association, Sweden*

Measuring, governing and gaining support for sustainable bioenergy supply chains

Luc Pelkmans, *IEA Bioenergy, Belgium*


BB-CLEAN: Strategic tools towards a sustainable use of biomass for low carbon domestic heating

Giacomo Gerosa, *Catholic University of the Sacred Heart, Italy*

Forest residues – Avoiding excessive nutrient removal using nutrient balancing

Stephan Rimmele, *LWF Bayrische Landesanstalt für Wald- und Forstwirtschaft, Germany*

17:00 End

Language English 



Parallel Session 20

Bioenergie in practice

Room 7, 15:30 – 17:00

Friday
24
January

Chairman: N.N.

15:30 **Opening**

Corn spindles – the sustainable alternative to climate damager charcoal

Alfred Kindler, *Agricultural Chamber of Styria, Austria*

Energy efficiency in the HKW Klagenfurt

Markus Poppe, *Bioenergie Kärnten, Austria*

Biomass plant and waste heat extraction from a paper mill with buffer storage optimization

Leo Riebenbauer, *Büro für Erneuerbare Energie Ing. Leo Riebenbauer GmbH, Austria*

N.N.

17:00 **End**

CEBC Exhibition

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Language **German** 

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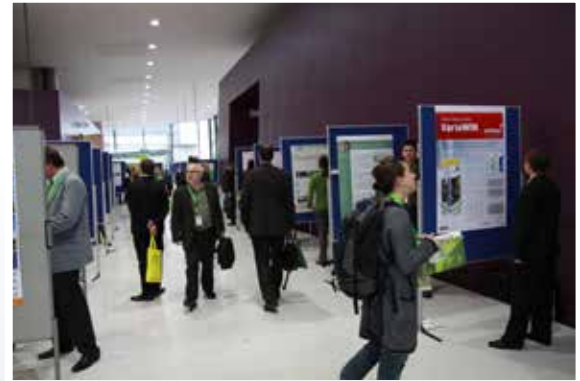
Poster Presentations, Foyer

Selected conference contributions and projects will be presented within the scope of a poster presentation. The following topics will be presented:

- Bioeconomy
- Biogas
- Fuel characterization
- Biomass heat and combustion technologies
- Biomass potentials and markets
- Logistics and storage
- Electricity from solid biomass
- Energy crops and residues
- Fuel and substrate preparation
- Pellets
- Sustainability
- New markets

The poster exhibition takes place in the foyer of the Messe Congress Graz and is accessible throughout the conference days (23rd and 24th of January, 2020).

Furthermore, there will be guided poster sessions during the conference breaks, which enables the visitors of the conference to ask their questions to the scientists directly.



Thursday
23
January
12:30–13:30
15:00–15:30

Friday
24
January
12:30–13:30
15:00–15:30

Gallery Walk: Bioeconomy – get in touch – the interactive Gallery Walk, Foyer

Reducing the dependence on fossil-based production: The herculean task of our time. However, many examples exist which show that an Austrian economy can move towards a more renewable base of production. The aim of the gallery walk is to offer a vivid opportunity to get in touch with real examples of bioeconomic action. In an interactive format, participants will get in touch with real showcases – provided by Austria's pioneers of bioeconomy – followed by a discussion with leading experts of the field.

- **Bioeconomy**
- **Biogas**
- **Fuel characterization**
- **Heat from biomass and combustion technologies**
- **Potentials and markets for biomass**

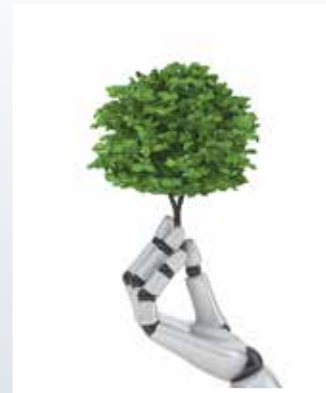
The gallery walk is conducted by the Eco Social Forum Austria & Europe as part of the EU Horizon 2020 project BLOOM, which aims at bringing together partners from across Europe to debate on the potential of bioeconomy and to engage the civil society.

Thursday
23
January

12:30–13:30
16:00–16:30

Friday
24
January

11:00–11:30
14:00–14:30



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Conference information

Date

22nd to 24th of January 2020

Conference languages

Language **German** 

Language **English** 

Simultaneous translation 

Registration

Wednesday, 22nd of January 2020, 08:00–09:00 and 12:00–19:00

Thursday, 23rd of January 2020, 08:00–09:00

Friday, 24th of January 2020, 08:00–09:00

Organization

Austrian Biomass Association

Franz Josefs-Kai 13

A-1010 Wien, Österreich

Tel: +43 (0) 1-533 0797-0

Fax: +43 (0) 1-533 0797-00

E-Mail: office@biomasseverband.at

Website: www.biomasseverband.at



Hotel reservation

Graz Tourismus

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Fax: +43 (0) 316-8075-15

E-Mail: info@graztourismus.at

Website: www.graztourismus.at

Online hotel reservation form:

<https://www.graztourismus.at/kongress/de/6-mitteeuropaeische-bio-massekonferenz-kongressformular-10660>

Place

Messe Congress Graz, Messeplatz 1, 8010 Graz, Austria

Arrival

<https://mcg.at/locations/messe-graz/>



Imprint: Austrian Biomass Association, Franz Josefs-Kai 13, A-1010 Vienna; Programme contents are subject to change.





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Registration form

You can also simply fill in the attached registration form and send it via post to the Austrian Biomass Association, Franz Josefs-Kai 13, 1010 Vienna, or by fax to +43 (0) 1/533 0797-90.

Closing date for the registration

Thursday, 16th of January, 2020

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Conference fee



Conference programme

Conference Day 1 (Pellet Day), 22nd of January 2020 EUR 250

■ **Biogas Day**: 22nd of January 2020, 13:30 - 17:00 EUR 100

■ **BEST Day**: 22nd of January 2020, 13:30 - 17:00 EUR 100

Conference Day 2, 23rd of January 2020 EUR 250

Conference Day 3, 24th of January 2020 EUR 250

Excursion programme

■ **Exkursion I–VI**: 22th of January 2020, 07:45–18:30each EUR 60

Conference Dinner

■ **Conference Dinner**: 23rd of January 2020, 20:00 EUR 60

Discounts*

■ **Students** per conference day EUR 50

■ **Referents** 50%

■ **Group discount from 10 persons on** 10%

All prices in euro and including 20% VAT.

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*In case of a discount, please contact us at office@biomasseverband.at.

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Messe Congress Graz: Route map



Arrival by train: Central Station Graz – Tram 1, 3, 6 or 7 to main square – Tram 4 or 5 to Stadthalle or Jakominigürtel/Messe

Arrival by car: Underground parking entrance via Fröhlichgasse (daily rate: 8 Euro)

Arrival by plane: Airport Graz-Thalerhof (distance of 10km)

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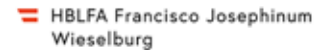
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22nd to 24th of January 2020, Graz

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