IEA Bioenergy
Technology Collaboration Programme

Task 42
Biorefining in a circular economy

Austrian Status Update

IEA Bioenergy Task 42 Online-Progress-Meeting

Michael Mandl, tbw research GmbH
Johannes Lindorfer, Energieinstitut an der Johannes Kepler Universität
Franziska Hesser, Kompetenzzentrum Holz GmbH

2nd March 2023

Austrian Status Update

Update on the political level framework

Currently some important policies are in a discussing and legal feedback loops in Austria before becoming enforced as laws. However, actual legislation is still pending.

Renewable Gas legislation (EGG-Erneuerbare Gase Gesetz)

There is the strategic goal to significantly increase the **feed in of renewable gases** (green hydrogen, biomethane and pyrolysis gases) to a level of **7.5 TWh/a by 2030.**
This represents a proportion of about 10% of renewable gas compared to current Austrian gas market).
source https://info.bml.gv.at/themen/wald/wald-und-klima/erneuerbare-gase-gesetz-in-begutachtung.html

Status March 2023 : The legislative proposal is in discussion and needs a 2/3 quorum to pass Austrian parliament.

It is expected that biomethane form AD installations will have a dominant share of renewable gases portfolio up to 2030. To meet this target biomethane production from AD needs to increase 9-fold.
It is expected that this target can initiate about 200 - 400 NEW AD-plants to be online by 2030.

Austrian Status Update

Update on the political level framework

Renewable Heat Legislation (Erneuerbare Wärme Gesetz)

There is the strategic goal to implement the generation of heat for households and industry in the future entirely without using fossil resources:
Targets for production of heat/ heating systems:

→ NO usage of OIL & COAL by 2035,
→ NO usage of natural GAS for heating in new installations/houses from 2023 onwards,
→ by 2040 all heating systems should run on renewable resources only.
This implies that gas fueled heating systems need to run on renewable gas.

Status March 2023: The legislative proposal needs a 2/3 quorum to pass parliament.
Source: https://www.bmk.gv.at/themen/klima_umwelt/energiewende/waermestrategie/ewg.html

Austrian Status Update

Update on the political level framework

Renewable energy acceleration law
Erneuerbaren-Ausbau-Beschleunigungsgesetz (EABG)

There is the strategic goal to accelerate the implementation of renewable energy production by establishing a leaner and faster implementation process for projects related to renewable energy generation (e.g. from solar, wind, water, …).
It targets on acceleration in UVP procedures (Environmental Feasibility Analysis) to cut down time spans for preparation and approval processes of new renewable energy production sites.

Background
Austria is a federal republic. This implies a split of legal competences into provincial and national laws and regulations. This evidence is seen as a bottleneck for fast installations of renewable energy production.

Austrian Status Update

Project in biorefining

The Austrian biotechnology company, **BRAIN Biotech AG**, partnered with the University of Graz and other research institutions to develop **new biocatalysts for the production of biochemicals and bioplastics** from renewable raw materials. The project received funding from the Austrian Research Promotion Agency (FFG) and the Federal Ministry for Digital and Economic Affairs.

A consortium of companies and research institutions, led by the Austrian Center of Industrial Biotechnology (acib), is working on a project called "**Integrated Biorefinery Carbon2Chem**," which aims to convert biomass into chemicals and materials using carbon capture and utilization technologies. The project received funding from the European Union's Horizon 2020 program.

The Austrian company, **Lenzing Group, is investing in a new biorefinery in Thailand**, which will convert wood into dissolving pulp for textile production. The company is also exploring the use of other renewable raw materials, such as corn and wheat straw, in its biorefinery operations.

Austrian Status Update

Project in biorefining

The company, **Evonik Industries**, is developing a new biorefinery process that uses microorganisms to **convert carbon dioxide** into specialty chemicals. The process is being developed in collaboration with the **Austrian Institute of Technology and the University of Graz.**

the Austrian company **BDI-BioEnergy International AG** announced that it had received a **contract to build a biorefinery in Norway** that will produce advanced biofuels from forestry residues. The facility will use BDI's proprietary RepCat process, which converts **biomass into renewable diesel and jet fuel using catalytic hydroprocessing.**

the **Austrian Institute of Technology** (AIT) announced that it had partnered with the Austrian company **Schoeller-Bleckmann Oilfield Equipment AG (SBO)** to develop a **biorefinery process that converts biomass into sustainable drilling fluids for the oil and gas industry**. The project is being funded by the Austrian Research Promotion Agency (FFG) and the Climate and Energy Fund.

Austrian Status Update

Project in biorefining

The biotech company **Biocrates Life Sciences AG** announced that it had received a grant of €3.9 million from the European Union's Horizon 2020 program to develop a **biorefinery process that uses microalgae to produce high-value compounds for the cosmetics and pharmaceutical industries**. The project is being conducted in collaboration with several research institutions, including the **University of Graz and the Technical University of Vienna.**

The collective of IEA bioenergy is always warmly welcome to provide input!

Johannes Lindorfer

Applied R&D project manager

Energieinstitut an der Johannes Kepler Universität Linz, Austria

Altenbergerstraße 69

4040 Linz

Tel.: +43 (0)732 24685653

lindorfer@energieinstitut-linz.at

IEA Bioenergy

Technology Collaboration Programme

Task 42

Biorefining in a circular economy

www.ieabioenergy.com

http://task42.ieabioenergy.com