

Task 40 - Deployment of biobased value chains



June 2020

TASK 40 ACTIVITIES OCTOBER 2019- JUNE 2020

IEA Bioenergy Task 40 Webinar - “Future Prospects for Wood Pellet Markets” (13th November 2019)

IEA Bioenergy
WEBINAR SERIES

Future Prospects for Wood Pellet Markets
November 13, 2019

4:00 pm - 5:00 pm Central European Time
10:00 am - 11:00 am North American Eastern Standard Time
3:00 pm - 4:00 pm Greenwich Mean Time

Moderator Uwe R. Fritsche Task Leader, IEA Bioenergy Task 40 Co-Leader, IEA Bioenergy Task 45 Scientific Director International Institute for Sustainability Analysis and Strategy Germany	Presenter Chenlin Li Senior Research Scientist Idaho National Laboratory United States of America	Presenter Ric Hoefnagels Assistant Professor Copernicus Institute of Sustainable Development Utrecht University Netherlands	Presenter Fabian Schipfer Senior Researcher Energy Economics Group Technische Universität Wien Austria	Presenter Olle Olsson Research Fellow Stockholm Environment Institute Sweden



This well-attended webinar presented the key findings of the Task 40 study “Margin potential for a long-term sustainable wood pellet supply chain” (see Publication section at the end of this newsletter). A recording and presentations are available here:

<https://www.ieabioenergy.com/publications/iea-bioenergy-webinar-future-prospects-for-wood-pellet-markets/>

During the discussion part, interest was raised on decentral small-scale pelletisation options (for e.g. rural areas, developing countries) – Task 40 will explore if this issue can be part of future task work.



Intertask Project engaged experts in assessing bioenergy's possible roles in WB2/SDG scenarios - workshop held in Berlin, Germany in November 2019

A group of 44 experts and stakeholders gathered in Berlin, Germany to share knowledge on the topic of the “roles of bioenergy technologies in energy system pathways towards a WB2/SDG world”. Recent studies from regional to global scope with focus on single or multiple energy sectors were presented and discussed regarding the potential of bioenergy for fulfilment of the Paris Agreement’s well below 2 degree Celsius target. The participants reflected on common features and divergent assumptions. It was shown that inherent differences in society and local context, e.g. climate and land availability, lead to site specific relevance of the various bioenergy implementations.

An overview of the submitted studies and integration into the overall context is currently being consolidated in a workshop report by the organisation team and the workshop participants. The summary is framed by background information on different bioenergy pathways in future scenarios and discussion on potentials and challenges of integrated assessment models (IAM). Furthermore, research needs are identified and key qualities for a successful translation of modelling results into practice are defined.

More [current information](#) and the published report (expected in July 2020) can be accessed on the [Task 44 homepage](#).



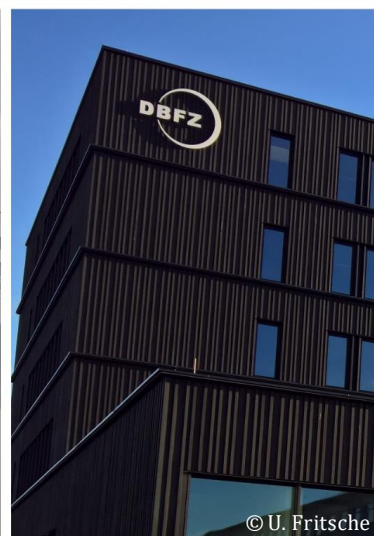
The IEA Bioenergy Tasks are working together in this project regarding deployment (Task 40), resource potential and supply chains (Task 43), flexibility and systems integration (Task 44) as well as sustainability (Task 45 – project lead).

For further information please contact [Daniela Thrän](#).

Task 40 meeting Leipzig

Task members meet twice a year to discuss joint projects, communication within the group and to develop ideas for further research both within the group and with other IEA Bioenergy Tasks, IEA Technical Boards and external institutes.

The second meeting in 2019 took place on 28 and 29 November in Leipzig, in the southeast of Germany. The German Bioenergy Research Center ([DBFZ](#)) invited the 12 international members to its newly completed conference building. As a special guest, Dr. Takanobu Aikawa from the [Japanese Renewable Energy Institute](#) gave a presentation on the state of bioenergy in his country. Colleagues from DBFZ were invited to discuss individual projects, and Franziska Müller-Langer (IEA Bioenergy Task 39 and DBFZ) presented an idea for a joint project with Task 39 and 45. Since another Japanese delegation was just staying at DBFZ, further successful network connections could be established (see photo). Finally, on Friday afternoon, an excursion to a waste wood power plant in Delitzsch (20 km away) took place.



Ongoing Projects

Task Project “Regional transitions in existing bioenergy markets”

This project focuses on biomass mobilization strategies of low value and high diversity biomass streams. These resources are currently provided and deployed regionally, effects from the development of international markets but also the possible internationalization of respective supply chains as well as the transferability of such strategies still need to be discussed. With a focus on the EU and the US as well as solid biomass resource, current and proposed mobilization strategies are analysed throughout three Project Activities:

Activity 1 outlines economic and technical barriers through analysing existing infrastructures (e.g. logistics, processing industry, storage) and supporting mechanism via providing an overview of current and future markets for solid biomass based on statistics and an up-to-date review of projections of renewable energy deployment in the EU to 2030 (and beyond) to identify the potential of new markets. In this regard, the competitiveness of regional feedstocks versus imported ‘commodities’ (e.g. pellets, wood chips) in different solid biomass markets is discussed to identify the degree of contestability of domestic/regional supply chains based on their cost structures.

Activity 2 aims to identify potential strategies that can increase regional deployment of low value heterogenous solid biomass resources. Regional supply chains for Northern, Central and Southern Europe are discussed addressing a diverse set of resources and sourcing techniques including innovative and established deployment options. Based on a selection of key-performance indicators, the collection of case studies is compared to highlight differences in the overall supply chain, regional specifics, drivers/barriers and contestability. This activity will focus on the overall significance, scale-up/internationalisation potentials and regional/sectoral transferability of the selected case studies.

Activity 3 deals with specific case studies and potential opportunities for agricultural and forest lands in the USA. The drivers for individuals to participate in bioenergy supply chains and to dedicate land for the cultivation of perennial energy crops is analysed. Explicitly potential contract structures for dedicated biorefineries and the importance of midstream markets in the context of the enabling production practices are discussed. Furthermore, the economic potential of removing excess residues to benefit current agricultural and forestry operations is assessed.

Participating representatives:

Activity 1 – Netherlands & project lead: [Ric Hoefnagels](#) (UU) to contact for further information, Germany: Niels Kirstein (DBFZ);

Activity 2 - Austria: Fabian Schipfer (TUV), Germany: Alexandra Pfeiffer (DBFZ);

Activity 3 - United States: Chenlin Li & Damon Hartley (INL)

Strategic Intertask Project "Renewable Gas - Deployment, Markets and Sustainable Trade "

The "Renewable Gas" (RG in short) had its kick-off already in March 2019, and participants agreed to analyse prospects of implementing RG in the energy markets of IEA countries, and beyond. It is led by Task 40, with participation from Tasks 37, 44 and 45. After that, the RG project was put "on hold" to clarify its collaboration with a "Task 41 special project" proposed by the European Commission in April 2019 on "hydrogen in the grid" (see project info below). After achieving agreement on the interaction of both projects, work in the RG project is resumed, and more info will be available later in 2020.

For further information please contact [Uwe Fritsche](#).

IEA BIOENERGY NEWS BULLETIN – MARCH 2020

<https://www.ieabioenergy.com/publications/>

IEA Bioenergy Annual Report 2019 is now available for download:

<https://www.ieabioenergy.com/publications/new-publication-iea-bioenergy-annual-report-2019/>

New Task 41 Special Project "Renewable Gas - Hydrogen in the grid"

The new Task 41 special project "Renewable Gas – Hydrogen in the grid" (RG-H2) runs in parallel to the RG project, and is also led by Task 40, with participation of Tasks 37, 44 and 45, and expects contributions from [IEC Hydrogen TCP](#). It had its kick-off in February 2020 in Brussels (and partly online), and will focus on the technical and policy issues of H2 additions to existing natural gas infrastructure and dedicated new H2 pipelines in the energy markets of IEA countries. It will collect information of the expected role of renewable ("green") H2 for decarbonizing energy systems, and data on operation and safety of H2 in gas grids. The project will provide decision makers and the research community with a comprehensive overview and will present findings in a public workshop in Brussels by the end of 2020.

Further information please contact [Uwe Fritsche](#).

Intertask Project "Deployment of Bioenergy with Carbon Capture and Storage/Utilization"

The aim of the collaborative IEA Bioenergy intertask project on Deployment of Bioenergy with Carbon Capture and Storage/Utilization is to review and analyze the prospects for near- to medium term implementation of BECCS.

As part of one of the work packages a new report will be published soon: *"Deployment of BECCS value chains: technological pathways, policy options and business models"*.

BECCS is often discussed in terms of its potentials and drawbacks over a very long timeframe. In this report, we instead focus on the potentials and challenges when it comes to deploying BECCS systems and value chains in the near- to medium term. To this end, we give a brief overview of different technological options for capture, transport and storage of CO₂ and also provide some insights into how BECCS business models could be set up. We further discuss the role of public policy in this setting and how bioenergy with carbon capture and utilization (BECCU) could play a role in enabling BECCS deployment. In conclusion, the technological obstacles to near- to medium term deployment of BECCS systems are in most sectors not prohibitive. However, the policy measures required to incentivize the demonstration, deployment and operation of BECCS value chains are currently largely absent. It is imperative that policy makers begin an earnest discussion about this as soon as possible if the potential of BECCS as a negative emissions technology is to be realized.

IEA Bioenergy Task 40 leads the project with Task 36 and Task 45 as key partners and contributors. The project runs March 2019-October 2020.

For further information please contact [Olle Olsson](#).

What's going on in 2020?

Task 40 activities and events

Due to the current situation, further meetings, webinars and workshops are planned once the corona crisis is overcome.

- **MAY:** virtual Task 40 meeting for 2 days
The Task 32 and Task 40 workshops on wood chips and on pulverised fuel that were planned to be held in Copenhagen in May 2020 have been postponed with dates to be advised in due course.
- **June:** BECCS scoping report to be published and corresponding webinar on 16 June 2020
- **JULY:** Participation of Task 40 members at EUBCE; next virtual Task 40 meeting
- **September:** Task 40 meeting (organized by Idaho National Institute-INL (US))
- **October:** ExCo 86 meeting and annual report Task 40
- **December:** IEA Task 40 newsletter no.3

NEXT WEBINAR TASK 40

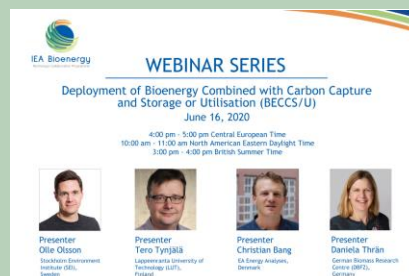
“DEPLOYMENT OF BIOENERGY COMBINED WITH CARBON CAPTURE AND STORAGE OR UTILISATION (BECCS/U)”

The webinar will highlight the main findings of the soon published study.

Date: 16 June 2020

Time: 4:00- 5:00 pm CEST

For further info please contact us [by email](#).



WEBINAR SERIES IEA BIOENERGY

“IEA BIOENERGY, GLOBAL COLLABORATION ON SUSTAINABLE BIOENERGY, A LOOK FORWARD”

This webinar highlights IEA Bioenergy's strategic focus for the next five years as well as our planned key enabling research areas.

Presenter: Jim Spaeth, Chair of IEA Bioenergy



Lecture is recorded and archived for later viewing, [available here](#).

Selected Publications of Task 40 in 2019 and 2020

Margin potential for a long-term sustainable wood pellet supply chain

June 2019, [download](#)

Authors: Uwe R. Fritsche (IINAS), Christiane Hennig (DBFZ), J. Richard Hess (INL), Ric Hoefnagels (UU), Patrick Lamers (INL), Chenlin Li (INL), Olle Olsson (SEI), Fabian Schipfer (EEG), Daniela Thrän (DBFZ/UFZ), Jaya Shankar Tumuluru (INL), Lotte Visser (UU), Michael Wild (Wild & Partner) & Henryk Haufe (DBFZ)

The future of biomass and bioenergy deployment and trade: a synthesis of 15 years IEA Bioenergy Task 40 on sustainable bioenergy trade

Authors: Hans Martin Junginger, Thuy Mai-Moulin, Vassilis Daioglou, Uwe Fritsche, Ruben Guisson, Christiane Hennig, Daniela Thrän, Jussi Heinimö, J Richard Hess, Patrick Lamers, Chenlin Li, Kees Kwant, Olle Olsson, Svetlana Proskurina, Tapio Ranta, Fabian Schipfer, Michael Wild

The paper is published as a feature article in a special issue of the Journal Biofuels, Bioproducts & Biorefining (BioPFR), Volume 13, Issue 2 (March 2019) <https://onlinelibrary.wiley.com/doi/10.1002/bbb.1993>

Extern Publication

PHD Thesis Javier Parrilla-Martinez

“Optimisation of the value chain of the existing free potentials of wood resources for power generation in Baden-Württemberg” (Germany)

<https://publikationen.bibliothek.kit.edu/1000099390/v2>

YOU WANT MORE INFO

NEWSLETTER FROM IEA
BIOENERGY

Would you like to find out more about bioenergy topics, the work of other Tasks or the Executive Committees?

Twice a year the newsletter of the IEA Bioenergy is created and informs about dates and news: <https://www.ieabioenergy.com/>



IEA Bioenergy
Technology Collaboration Programme

Task 40- Deployment of biobased value chains

<http://task40.ieabioenergy.com/>