

Welcome to the new triennium 2019-2021

A NEW NAME, NEW LEAD AND NEW OBJECTIVE

The core objective of the new Task 40 with the updated title "Deployment of biobased value chains" is to support deploying viable, efficient bioenergy value chains in the context of

- sustainable, national and international markets,
- reflecting on policy developments, and economic aspects, including financing,
- international, national and regional trade of biomass,

recognizing technological development, technology implementation and market diffusion, the diversity in biomass resources, value chains and competitive applications for bioenergy, biobased materials, chemicals, and products.

Task 40 Work scope

The focus in the new triennium is on the development and design of efficient, economically viable and bankable value chains in order to support a larger deployment of sustainable biomass for energy, but also for biobased products, chemicals, and materials, taking into account food, feed and fiber markets.

In short, the Task will work on deploying sustainable biomass for energy in the context of the larger bioeconomy ([further information](#)).

Task Work Programme

Task 40 will have **three core areas of work** (all include intertask projects) which cover the various biobased value chains, markets and applications:

- WP1: Market developments
- WP2: Industrial Heat and Processes
- WP3: Deployment Strategies



New Task Lead Team

The new Task 40 is led by Germany (Uwe R. Fritsche, IINAS & Christiane Hennig, DBFZ) in collaboration with Sweden (Olle Olsson, SEI & NN), with Birger Kerckow (FNR) as Operating Agent, and Nora Lange (DBFZ) as Task Secretary.

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

*Press STRG + click on the picture of the flags –
you will be linked to the Task 40 homepage with
more info about all members of Task 40.*



Country Participation

Task 40 members and observers are Austria, Belgium, Denmark, Germany, Japan, Netherlands, Sweden, and the US. The European Commission (represented by the JRC) is an observer, and we hope that Finland will join soon.

New Project: Regional transitions in existing bioenergy markets

Our project focuses on regional biomass mobilization strategies of low value-high diversity biomass streams and their transition effects on existing bioenergy markets.

Starting from an overview of current and future solid biomass markets in the EU, the competitiveness of regional feedstocks vs. imported 'commodities' (e.g. pellets) is discussed for different markets. Such as; electricity, heat, transport and biomaterials/biorefineries.

Next current regional deployment strategies are investigated to assess the rationale behind their different rates of success, speed of development and impact on market trade. Key qualitative parameters for successful strategy deployment are identified; with special attention for regional specifics. This with the ambition to exchange this know-how on an international level.

Finally, the adoption of bioenergy by existing biomass feedstock suppliers in the US is investigated by examining the adoption of new practices and how this changes in relation to changing market, economic and social forces. An Agent-Based Model will assess producer willingness to adopt scenarios for energy crops production and mobilization of low-value forest resources.

Our project will run from October 2019 till August 2021 and foresees liaison with the Task43 Biohub-project to exchange knowledge and refine project results. Project results will be shared via report (scheduled August 2021), a webinar (scheduled May 2021) and a workshop (to be planned).

Participating representatives: Belgium: [Ruben Guisson](#) (VITO) - project lead, Netherlands: Ric Hoefnagels (UU), United States: Chenlin Li – Damon Hartley (INL), Austria: Fabian Schipfer (TUV), Germany: Niels Kirstein (DBFZ)

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

Negative emissions technologies (NETs) have gained increasing attention in recent years. The main reason for this is the realization that without negative emissions, achieving the goals of the 2015 Paris agreement would require very steep emission reduction curves up to 2050. As global GHG emissions continue to grow despite expanding renewable electricity generation, we are now approaching a situation where drastic emissions reductions and deployment of NETs is no longer an either/or question.

Bioenergy with Carbon Capture and Sequestration, or BECCS, is arguably the most discussed NET. Hitherto, the BECCS debate has mostly focused on issues related to overall global opportunities and challenges pertaining to long-term global biomass deployment. Much less focus has been on different technological solutions, feasibility of BECCS in different sectors and regions and how policy frameworks and business models could be designed so as to enable BECCS deployment.

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. In addition, the project will also analyze the prospects of utilizing captured biogenic carbon for different purposes as a possible strategy to stimulate technological development and business models in carbon capture more generally.

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](#).

NEXT WEBINAR

"MARGIN POTENTIAL FOR A LONG-TERM SUSTAINABLE WOOD PELLET SUPPLY CHAIN"

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

Participating Authors:

Uwe Fritsche, J. Richard Hess, Ric Hoefnagels,
Chenlin Li, Fabian Schipfer, Olle Olsson, Lotte Visser

Date: 13th of November 2019

Time: 4 pm – 5 pm CEST

For further information please contact [by email](#)



New Intertask Project: Bioenergy for High Temperature Heat in Industry

Recent years have seen some very positive trends in deployment and cost reductions in renewable energy technologies, perhaps most notably solar photovoltaics and Li-ion batteries. However, in terms of prospects for reducing the risk of catastrophic climate change, decarbonization of the energy sector is a necessary but not sufficient. One sector where drastic greenhouse gas emission reductions will be particularly challenging is industry, where large amounts of fossil fuels are used for both process energy and as chemical reactants.

Tests in controlled environments such as labs or pilot facilities have shown that biomass-based fuels have the potential to play important roles as substitutes for traditional fossil-fuel based options. However, implementation of such solution in full-scale commercial facilities is another question and one that presents many new challenges not only in terms of technological performance reliability, but also in logistics and especially cost efficiency. The latter can be especially difficult in the light of how non-fossil options often are more expensive. Furthermore, the risk of carbon leakage can make policy makers unwilling to introduce e.g., carbon pricing in industrial sectors.

In the strategic inter-task IEA Bioenergy project on Bioenergy for High Temperature Heat in Industry, IEA Bioenergy Tasks 32, 33, 34, 36 and 40 collaborate on analysis of the techno-economical and institutional challenges and opportunities when it comes to implementation of biomass-based fuels as alternatives to fossil fuels when it comes to provision of industrial process heat. The role of IEA Bioenergy Task 40 is to analyze the market- and policy environments that can enable or hinder deployment of biomass-based solutions. This analysis will draw both literature review, stakeholder consultations and information gathered in a series of case studies carried out by tasks 32, 33, 34 and 36.

The Bioenergy for High Temperature Heat in Industry project runs from April 2019 to Oct 2021 and is led by Jaap Koppejan from IEA Bioenergy Task 32.

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

JOINED **WORKSHOP** TASK 40 AND TASK 45

*“ROLES OF BIOENERGY TECHNOLOGIES IN ENERGY SYSTEM PATHWAYS
TOWARDS A WB2/SDG WORLD”*

Date: Monday, 25th of November 2019

Berlin, Germany, Contact Daniela Thrän [by email](#)

Further information: [Workshop information](#)

New Intertask Project: The Role of Bioenergy in a WB2/SDG world

Many scenarios that meet the target of limiting global warming to well below 2°C (WB2 target) include a significant – and increasing – contribution of biomass-based energy supply (bioenergy). At the same time, there is disagreement about the role of bioenergy for reaching the WB2 target and studies differ significantly concerning the potential and usage of biomass at global as well as regional levels. On the one hand, bioenergy implementation is associated with trade-offs and challenges. On the other hand, bioenergy has advantages in terms of technological readiness (esp. in the transport sector), storability, flexibility, and the potential for being a negative emission technology (NET). Additionally, bioenergy is aligned with several of the Sustainable Development Goals (SDGs), and bioenergy implementation strategies differ depending on context conditions and prioritization among SDGs. The new intertask project will assess the role of bioenergy in WB2/SDG scenarios, with the objective to identify and disseminate strategies for bioenergy implementation that contribute positively to a societal transition towards the WB2 target, while simultaneously contributing to other SDG objectives. The project will also address trade-offs and concerns about possible negative impacts of bioenergy expansion, with a focus on mitigating these challenges and identifying opportunities for synergies between bioenergy deployment and SDG implementation.

The IEA Bioenergy Tasks will work 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](#).

New Intertask Project: Renewable Gas - Deployment, Markets and Sustainable Trade

The new strategic intertask project “Renewable Gas” (RG) will analyze the 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.

The RG project aims to provide state-of-the-art overviews on prospects, opportunities and challenges for various mechanisms (e.g. green gas certificates, quotas) for deploying biogas, biomethane and other renewable gases. It will discuss technological and sustainability issues of RG from a deployment perspective, and will derive respective recommendations for policy-makers. The project will draw upon a combination of literature reviews, policy analysis, and stakeholder consultations to provide decision makers and the research community with a comprehensive overview of what is currently known regarding RG, and which mechanisms are considered to fulfil the important role of RG in a decarbonized future.

The RG project will also provide input to the strategic intertask projects on “Bioenergy in a WB2/SDG world”, “High-Temperature Industrial Heat” and to the collaborative intertask project on BECCS/U.

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

Publications of Task 40 in 2019

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>

Socio-economic assessment of the pellets supply chain in the USA

February 2019, [download](#)

Authors: Rocio Diaz-Chavez (Imperial College London), Arnaldo Walter (Universidade de Campinas, Brazil) and Pedro Gerber (Universidade de Campinas, Brazil)

Transboundary flows of woody biomass waste streams in Europe

January 2019, [download](#)

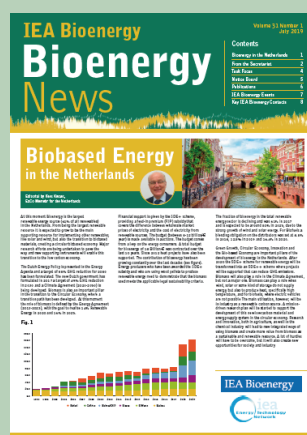
Authors: Prof. Dr. Martin Junginger, Utrecht University; Dr. Mika Järvinen from Aalto University; Dr. Olle Olsson, Swedish Environmental Institute; Christiane Hennig, German Biomass Research Centre; Pranav Dadhich, Aalto University

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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/>

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Task 40- Deployment of biobased value chains

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