Newsletter
IEA Bioenergy
Task 40 - Deployment of biobased value chains

Dear recipient

31.03.2022

With this initial newsletter we aspire to provide Danish stakeholders access to knowledge from other IEA Bioenergy Task 40 member countries regarding developments in biomass trade, and the emergence and design of efficient value chains for biomass utilisation, particularly in terms of biomass deployment into new markets and sectors.

The newsletter, which is to be published 2-3 times annually in both Danish and English, will typically report on relevant activities such as Task 40 meetings, workshops, and publications, with focus on areas of particular interest for Danish stakeholders. With this being the first edition, increased focus will be placed on providing a little background on IEA Bioenergy and Task 40.

Overview of content

About IEA Bioenergy and Task 40

IEA Bioenergy was established in 1978 by the International Energy Agency (IEA) with "the aim of improving cooperation and information exchange between countries that have national programmes in bioenergy research, development and deployment."[i] Today there are 25 countries, plus the European Commission that participate in IEA Bioenergy.

Work within IEA Bioenergy is largely undertaken via 11 numbered tasks (32, 33, 34, 36, 37, 39, 40, 42, 43, 44, 45) focusing on specific bioenergy related topics via three-year work programs referred to as Trienniums. Each Triennium typically also has Inter-task and Special projects that involve task collaboration on cross-cutting bioenergy issues.

EUDP supports the work of individual tasks by both paying the IEA Bioenergy task fee, as well as subsidising the work carried out by the Danish country representative, which for Task 40 is Christian Bang of Ea Energy Analyses.

Task 40[ii], now titled "Deployment of biobased value chains", was established in 2003 and has had various names but has always had a core focus on international bioenergy potential, barriers, and trade. For the current triennium (2022-2024), the stated primary objective of Task 40 is to support the deployment of viable, efficient, and profitable biobased value chains and their respective system services and value created in the context of:

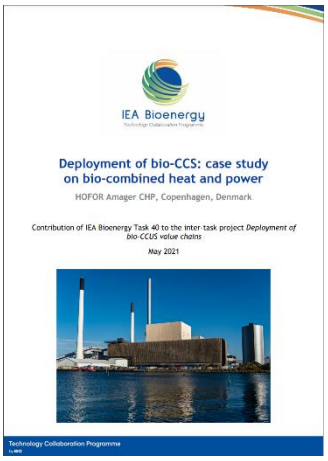
- Sustainable regional, national, and international markets, including trade issues

- Reflecting on policy developments and economic aspects, e.g., carbon markets and financing
- Long-term climate and sustainability requirements

Task 40 work during 2019-2021 triennium

Task 40 contributed to and published numerous reports during the 2019-2021 triennium, with much of the task work being carried out through Intertask and Special Projects, including:

- **BECCUS** - focused on investigating near-to medium term deployment of bioenergy with carbon capture and CO_2 utilisation (BECCU), and with carbon capture and storage (BECCS).
  - In June of 2020, Task 40 published a report[iii] focused on the potential and challenges associated with deploying BECCS systems and value chains in the near to medium term. These findings were then presented[iv] via a webinar[v] that had roughly 1,000 participants.
  - In May of 2021, three case studies on the deployment of Bio-CCS were published:
    - Christian Bang authored a report[vi] about HOFOR's investigations in potential carbon capture at the Amager Power Plant.
    - Task 45 authored a report[vii] on the Drax Power Station in the UK.
    - Task 36 authored a report[viii] on the Fortum Waste-to-Energy plant in Oslo.
  - Tasks 40 and 45 published a report[ix] in December of 2021 that provided an overview of technology options and policy tools for deployment of bio-CCS in the cement sector



- **Renewable Gases** - studied renewable gases and the effect of adding hydrogen in the gas grid.
  - A report[x] was published in January 2022 with contributions from Task 40.
- **WB2/SDG** - focused on the role of bioenergy in scenarios where global temperature increases are kept well below 2°*C.*
  - In July of 2020, a workshop report[xi] was published with input from Task 40.
- **Industrial Heat** - *investigated* the role that biomass could play in decarbonising industrial process heat.
  - The project included 5 case studies[xii] from industries involving potato processing, pulp & paper, dairy production, waste-to-energy, and a bakery.
  - A policy synthesis report[xiii] authored by Task 40 was published in December 2021.

Highlights from 2022-2024 triennium work plan

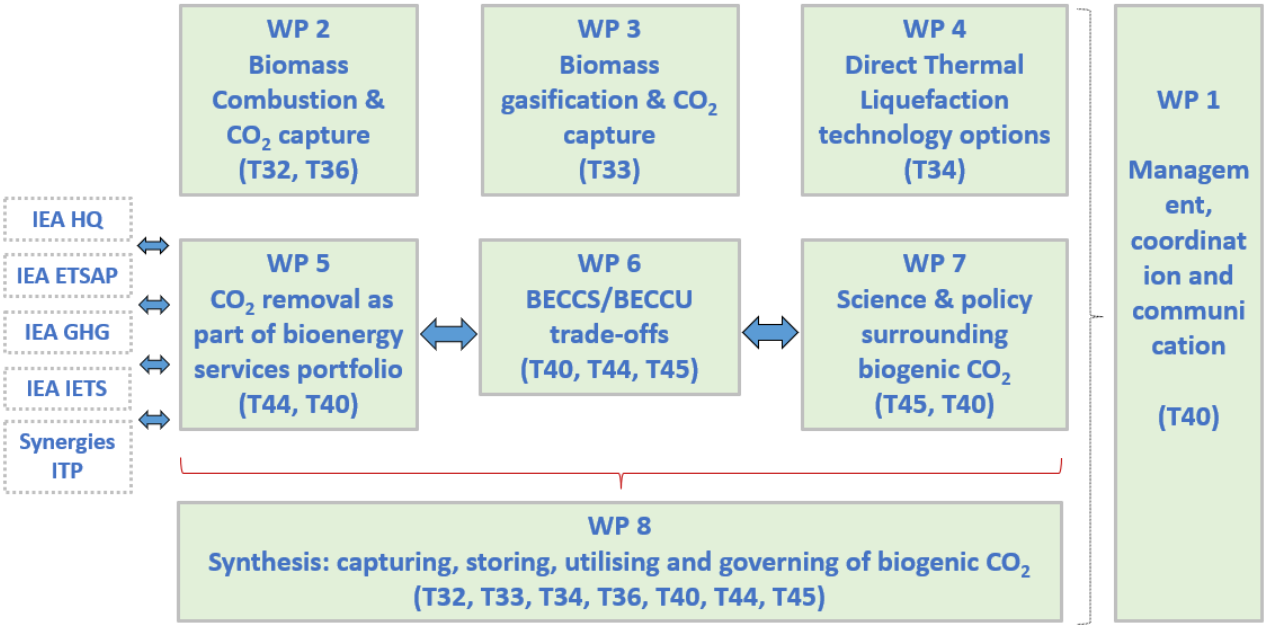
The overarching task work will focus on deploying sustainable biomass for energy in the context of the larger bioeconomy and a future renewable carbon economy. To this end, the Task 40 work programme for the current triennium consists of three main focus areas:

- Market developments
  - Regional bioenergy markets and transitions
  - Sustainable biobased value chains in the circular bioeconomy context

- BECCUS & carbon markets/valorisation
  - Industrial processes: technologies, markets, and deployment. I.e., bioenergy pathways that could be alternatives or complements to CC(U)S
  - Follow-op **BECCUS Inter-task project**
- Deployment Strategies
  - Guidance on sustainable financing
  - **Inter-task project** on Synergies of green hydrogen and bio-based value chains deployment

The deployment of BECCUS technologies and green hydrogen production are identified as key interest areas from a Danish perspective. Danish representation in Task 40 will therefore be particularly focused on the two large Inter-task projects covering these topics.

Scheduled to run from mid-2022 until the end of 2024, the proposed phase 2 BECCUS Inter-task project will involve contributions from seven IEA Bioenergy Tasks according to the work packages (WPs) outlined below. In addition to being responsible for overall project management (lead by the Danish country representative, Christian Bang), Task 40 will lead two additional WPs, and contribute to five WPs in total.



The other major Inter-task proposal currently being submitted is on Synergies of green hydrogen and bio-based value chains deployment. According to the proposal, the project aims to:

- *"Identify value chains that could deploy synergies*
- *Raise the awareness by providing representative exemplary cases,*
- *Define the role of value chains as a part of bio-based economy*
- *Create a clearer overall picture of the promising value chains and their potential and future needs."*

Task 40 will once again play a prominent role as co-leader of the overall project, leader of one WP, and contributor to five of six WPs. Danish country representation will contribute to this work.

Newsletter subscription and feedback

One of the main responsibilities for the Danish country representative is to disseminate relevant Task 40 news to Danish stakeholders. Stakeholders are also encouraged to provide feedback to Christian Bang in terms of desired focus areas or developments in the Danish deployment of biobased value chains (see contact details below).

Should you have colleagues or partners who might be interested in receiving this newsletter, you are very welcome to forward this link, where they can sign up.

If you no longer wish to receive this newsletter, please contact Christian Bang at cb@eaea.dk, or via +45 60 39 17 17.

References:

[i] https://www.ieabioenergy.com/about/
[ii] https://task40.ieabioenergy.com/
[iii] https://task40.ieabioenergy.com/wp-content/uploads/sites/6/2020/06/IEA-Bioenergy-Task-40-Deployment-of-BECCS-Value-Chains.pdf
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[v] https://www.youtube.com/watch?v=r9dtU9JmbSA
[vi] https://task40.ieabioenergy.com/wp-content/uploads/sites/6/2022/01/Bang-2021-IEA-Bioenergy_Deployment-of-bio-CCS-case-study.pdf
[vii] https://task40.ieabioenergy.com/wp-content/uploads/sites/6/2022/01/Harris-2021-FINAL-IEA-Bio-BECCS-Drax-Case-study.pdf
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