

Deployment perspective of green hydrogen from biomass and green hydrogen use in bio-based processes

WP1 workshop of IEA Bioenergy inter-Task project 'Synergies of green hydrogen and bio-based value chains deployment'

29 03 2023, 9:30 am-3:30 pm CET

Location: Berlin (hybrid)

Date: 29/03/23

Organised by IEA Bioenergy TCP (the workshop is coordinated by IEA Bioenergy Task 40 in collaboration with IEA Bioenergy Tasks 32, 33, 34, 36, 37, 39, 42, 44, and 45)
"Inter-Task project on Synergies of green hydrogen and bio-based value chains deployment"

Participation will be by invitation only. Invited organizations/TCPs: related academia & industry, IEA Hydrogen TCP, IEA AMF (Task 64) and IEA Headquarters

Background & goal of the workshop

- Framing and describing possible value chains combining hydrogen production and deployment of hydrogen and bio-based processes for different bio-based end-products, including technologies at different development stages with different Tasks and stakeholders.
- Overview on the status and deployment perspective of concepts on **1) green hydrogen from biomass and 2) green hydrogen use in bio-based processes**
- Discussion and definition of an assessment framework for evaluating the deployment of **1) green hydrogen from biomass and 2) green hydrogen use in bio-based processes.**
 - Case study selection for in-depth presentation and analysis
 - Definition of boundaries, timeframe etc. (framing of the project)
 - Indicators for technical, economic, environmental, system and "H2-link" criteria
- Set of specific case studies and concepts for further assessment within the Inter-Task project on Synergies of green hydrogen and bio-based value chains deployment.

Agenda (CEST)

9:30

Welcome & intro to the workshop

- Welcome from the German Federal Ministry of Food and Agriculture (invited)
- Presentation of the background and goal of the workshop, *Christiane Hennig, DBFZ, IEA Bioenergy Task 40*
- Presentation of the TCPs, IEA headquarters
Speakers from IEA Bioenergy TCP (Luc Pelkmans), IEA AMF (Zoe Stadler), IEA Hydrogen TCP (Paul Lucchese, Marina Holgado, Luca Turchetti tbc), IEA headquarters (Ilkka Hannula)

Industry Session

10:15	<p>Presentation of case studies on green hydrogen from biomass <i>Speakers from Industry and IEA Bioenergy TCP</i> <i>Speaker 1 Pathways for biobased hydrogen production, Joakim Lundgren, LTU, Task 33 (SE)</i> <i>Speaker 2 Gasification of torrefied biomass, Robin Post van der Burg, Torrgas (NL)</i> <i>Speaker 3 Ethanol reforming, Representative from Hytron (BR) (tbc)</i> <i>Speaker 4 Methane pyrolysis, Representative from Hycamite (FI) (tbc)</i></p> <ul style="list-style-type: none"> - Description of the technology/concept - From which/country region? - What is the TRL? Is the technology commercial available? - Any specifics of the concept: flexible bioenergy, link to CCS/CCU, etc.?
11:30	<p>Presentation of case studies on green hydrogen use in bio-based processes <i>Speaker 1 from IEA Bioenergy TCP, Axel Funke, KIT, Task 34 (DE)</i> <i>Speaker 2 from IEA Bioenergy TCP, Representative form KIT (DE) (tbc)</i></p> <ul style="list-style-type: none"> - Description of the concepts - From which/country region? - What is the TRL? Is the concept commercial available? - Any specifics of the concept: flexible bioenergy, link to CCS/CCU, etc.?
12:00	<p>Moderated open discussion on case studies on green hydrogen from biomass and on green hydrogen use in bio-based processes. Commenting speeches from IEA Hydrogen TCP, IEA AMF and IEA headquarters <i>Speakers from IEA Hydrogen TCP (Paul Lucchese, Marina Holgado, Luca Turchetti tbc), IEA AMF (Zoe Stadler) and IEA headquarters (Ilkka Hannula)</i></p>
12:30	Break
Science Session	
13:30	<p>Presentation of an assessment framework for evaluating the deployment of 1) green hydrogen from biomass and 2) green hydrogen use in bio-based processes. <i>Speaker from IEA Bioenergy TCP, Christiane Hennig, DBFZ, Task 40 (DE)</i></p> <ul style="list-style-type: none"> - Understanding of framing and criteria, and their role - Specifics of green hydrogen and bio-based value chains system assessment - Overview on assessment criteria (table)
14:00	<p>Presentation of carbon footprint assessment for evaluating the deployment of 1) green hydrogen from biomass and 2) green hydrogen use in bio-based processes. <i>Speaker from IEA Bioenergy TCP, Martin Junginger, UU, Task 45 (NL)</i></p> <ul style="list-style-type: none"> - Carbon footprint assessment
14:30	<p>Moderated open discussion on assessment framework</p> <ul style="list-style-type: none"> - Round table discussion for case study assessment >> definition and selection of boundaries, timeframe, set of criteria for evaluating the deployment green hydrogen from biomass and green hydrogen use in bio-based processes concepts
15:15	<p>Workshop summary and way forward</p> <ul style="list-style-type: none"> - Based on outcome Session 1 and Session 2
15:30	End of the workshop

Contact information:

If you wish to register for this workshop, please write to christiane.hennig@dbfz.de. Participation is free of charge, but registration is required. It is a hybrid event, an online participation is possible.

If you have any questions about the event, please do not hesitate to contact us: Christiane Hennig (christiane.hennig@dbfz.de), Elina Mäki (elina.maki@vtt.fi), Joakim Lundgren (joakim.lundgren@ltu.se), Axel Funke (axel.funke@kit.edu) and Martin Junginger (H.M.Junginger@uu.nl).