



**IEA Bioenergy**  
Technology Collaboration Programme



## Expert workshop

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

IEA Bioenergy inter-task project (ITP) ‘Synergies of green hydrogen and bio-based value chains deployment’

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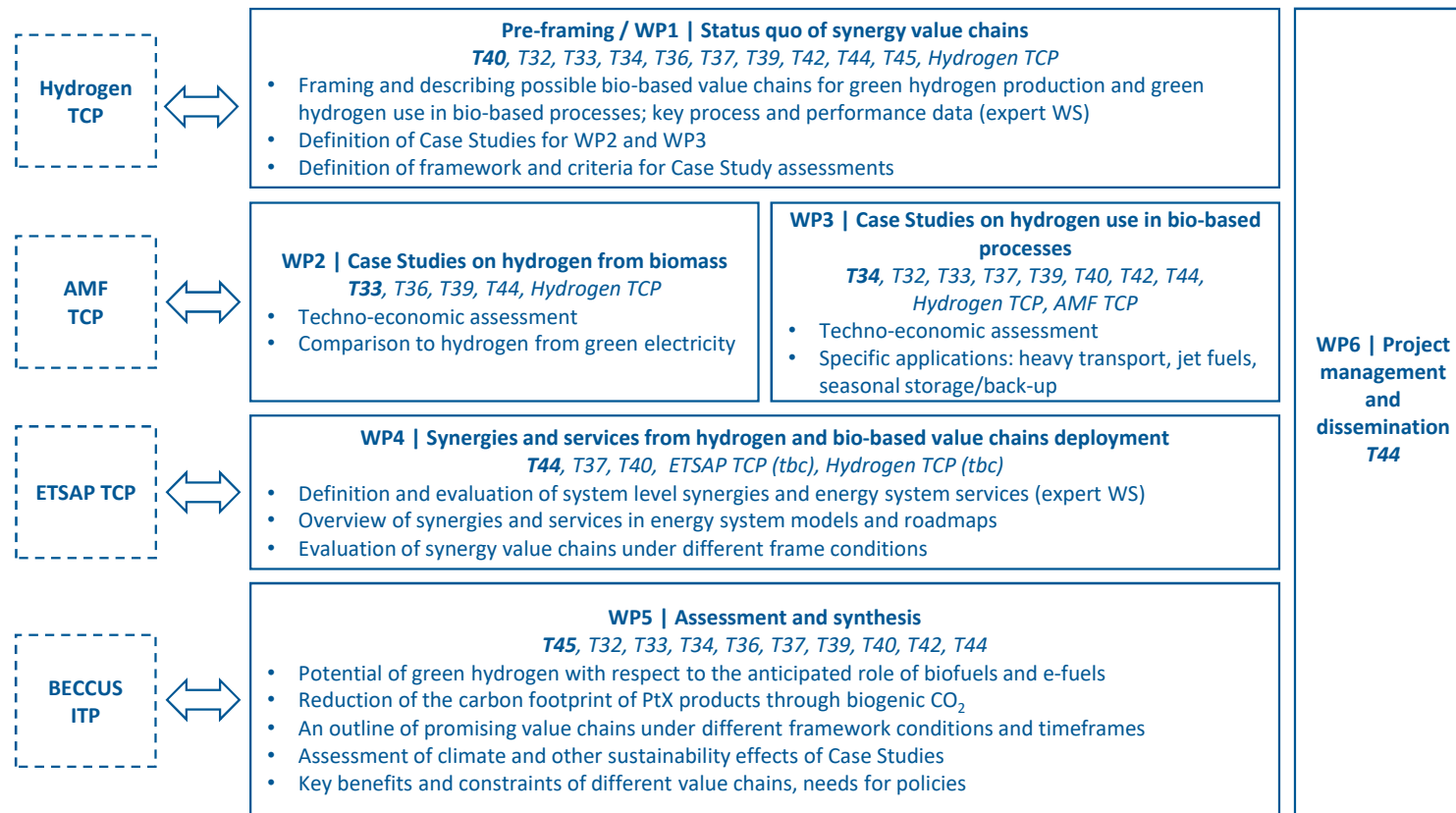
# Agenda

- 09:30 Welcome & intro to the workshop (*Christiane Hennig, 60 min*)
- German Federal Ministry of Food and Agriculture (Hannes Krüger)
  - IEA Bioenergy TCP (Luc Pelkmans), IEA AMF (Sandra Hermle), IEA Hydrogen TCP (Marina Holgado), IEA Paris (Ilkka Hannula)
- 10:30 Case studies on green hydrogen from biomass (*Joakim Lundgren, 70 min*)
- Pathways for biobased hydrogen production, Joakim Lundgren
  - Gasification of torrefied biomass, Robin Post van der Burg, Torrgas
  - Ethanol reforming, Daniel Lopes, Hytron
  - Methane pyrolysis, Ulla Lassi, Oulu University
- 11:40 Break (*5 min*)
- 11:45 Case studies on green hydrogen use in bio-based processes (*Axel Funke, 30 min*)
- Pathways for green hydrogen use in bio-based processes, Axel Funke
  - Synergies between biofuel production and hydrogen, Nicolaus Dahmen
- 12:15 Commenting speeches and discussion on case studies (*Joakim Lundgren & Axel Funke, 45 min*)
- IEA Hydrogen TCP (Alberto Giaconia) and IEA AMF (Zoe Stadler)
- 13:00 Break (*60 min*)
- 14:00 Assessment framework (*Christiane Hennig, 30 min*)
- 14:30 Carbon footprint assessment (*Martin Junginger, 30 min*)
- 15:00 Discussion on assessment framework (*Christiane Hennig & Martin Junginger, 40 min*)
- 15:40 Workshop summary (*5 min*)
- 15:45 End of the workshop

# Background of the Workshop

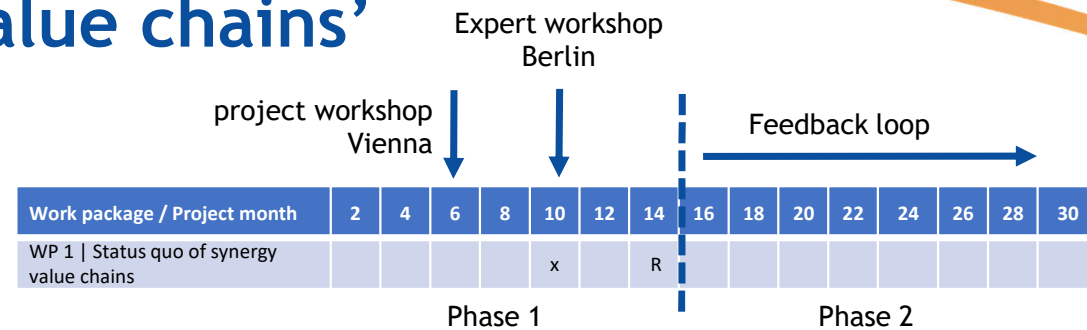
- Part of WP1 ‘Status quo of synergy value chains’ coordinated by IEA Bioenergy Task 40 inter-task project (ITP) ‘Synergies of green hydrogen and bio-based value chains deployment’
- The key objective of the ITP is to identify and assess synergies in the deployment of green hydrogen and bio-based value chains, to...
  - Identify potential synergetic value chains in different sectors and at different timeframes (assessment framework)
  - Increase visibility and knowledge of promising solutions through case studies covering economics, climate and other sustainability effects, supply chain and energy system aspects
  - Provide a synthesized view on key barriers and enablers to realize the potential, and on future policy needs
- Project is coordinated by IEA Bioenergy Task 44 and participated by 10 IEA Bioenergy Tasks
- Timeline: From June 2022 to November 2024

# Overview of the project



The focus is on **the value chains directly linked to bioenergy**, i.e. biomass as a source of hydrogen and bio-based processes consuming electrolytic hydrogen.

# WP1 ‘Status quo of synergy value chains’



- WP1 understood as framing Work Package of the project
- Activities:

Phase 1. Defining an assessment framework for case studies and a set of specific case studies and concepts for further assessment within the ITP jointly with WP2 and WP3 >> **expert workshop**

Phase 2. Coordinating feedback loop with other WPs and revising criteria/assessment framework

- Expert workshop: expert opinion from different stakeholders from academia and industry, as related TCPs IEA Hydrogen TCP, IEA AMF (Task 64) and IEA Paris
- Output: assessment framework and collection of example synergy value chains with short value chain description

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