



ETIP Bioenergy – Support to a stronger bioenergy industry

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Chair ETIP Bioenergy

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ETIP Bioenergy

- Stakeholder forum for renewable fuels and bioenergy
- Focusing on research, development and deployment
- Recognised by the European Commission as key actor

- Structure
 - Steering Committee
 - WG1 Biomass Availability
 - WG2 Conversion
 - WG3 End-Use
 - WG4 Policy and Sustainability
 - Biomethane Task Force

SRIA update

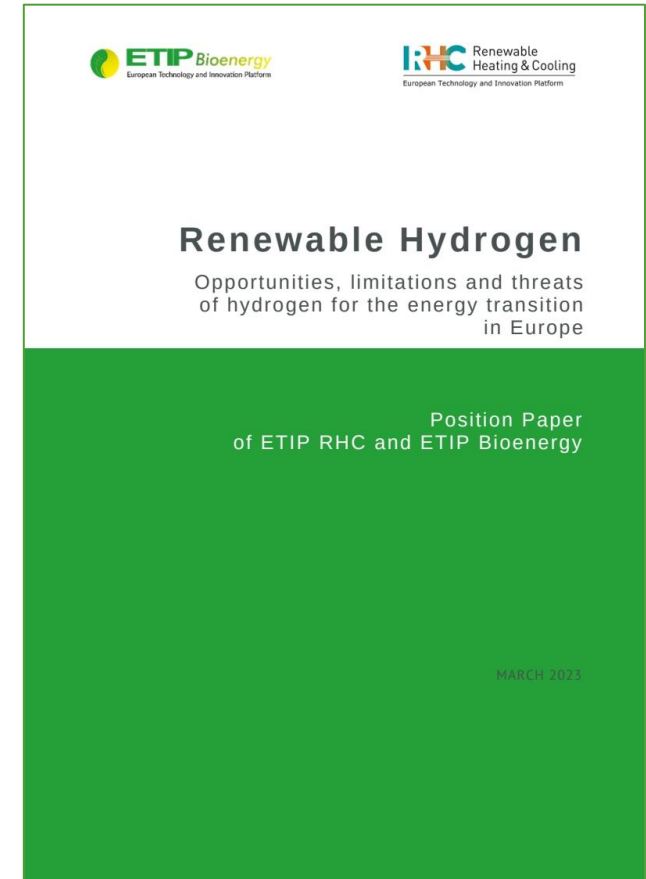
- Goal: Provide the basis for further RD&D on renewable fuels and bioenergy
- Content:
 - Making biomass available sustainably
 - Latest technological developments, challenges of different technologies, recommendations for their development and deployment,
 - Challenges for deployment of renewable fuels and bioenergy
 - Outlook to 2030 and beyond
 - Infoboxes on microalgae, e-fuels, biomethane
 - Separate chapters on focus markets aviation and shipping
- Elaborated through a series of online work meetings with our experts Jan-Mar 2023



https://www.etipbioenergy.eu/images/SRIA_2023.pdf

Position paper on hydrogen (ETIP Bioenergy + ETIP RHC)

- Massive financial support needed for all types of renewable energy sources and systems
- It will be impossible to satisfy all demand for hydrogen, thus focus hydrogen use on hard-to-abate sectors (NOT domestic heating and cooling)
- Hydrogen is not per se renewable – do not support fossil or low-carbon hydrogen
- Biohydrogen and solar hydrogen are forms of renewable hydrogen and should also be addressed in strategic documents
- TRL of such technologies and resulting R&D needs vary
- Any hydrogen production should be coupled to waste heat utilisation



EUBCE 2023 side-event

Bioenergy and renewable fuels projects for the revamping of the SET Plan

- Status of the revamping of the SET Plan with relation to Action 8 Renewable Fuels and Bioenergy
- R&I outcomes and results emerging from a series of ongoing Horizon projects
- Panel discussion on common ground and opportunities for synergies and contribution of those projects and their underlying technologies to the objectives of the SET Plan Action 8
- Organised by ETIP Bioenergy together with EU projects SET4BIO, EBIO, ABC Salt, HIGFLY, FlexSNG, BiosferA, CarbonneutralLNG, GOLD, CERESiS, PHY2CLIMATE



Scenarios for Bioenergy 2050

Part of ETIP-B, 2023

Marie Amann

Johan Granberg

Purpose and objective

- The purpose is to create an overview of potential and likely developments in the bioenergy sector towards 2050.
- As part of the ETIP-B Platform, RISE has conducted interviews and mini workshops to assess the implications of three different future scenarios on identified value chains within the bioenergy and biofuels industry.
- The focus has been on prioritized value chains mentioned in SRIA.

Methodology

1

Literature and data gathering

Firstly, we gathered and compiled data on projections and scenarios of bioenergy in the future.

2

Scenario development

Secondly, from the material we developed three different scenarios and reviewed them with an internal bioenergy researcher.

3

Interviews and adjustments

Thirdly, we developed and interview guide and interviewed bioenergy researchers and professionals and made some adjustments to the scenarios.

4

Workshop and conference

Fourthly, we held two workshops at the EUBCE conference discussing the scenarios and drawing lessons for the future of bioenergy.

5

Analysis and report

Lastly, we analysed the material and insights into a report with scenario specific and general conclusions.

General conclusions

Flexible and universally applicable value-chains are preferred.

The preference lies in value chains that are flexible and versatile, capable of functioning with various raw materials and existing infrastructure/fuel systems.

Due to the diversified nature of biomass, multiple technologies will be employed, tailored to different feedstocks such as sewage sludge, wood chips, or grass, depending on geographical availability.

However, developing flexible technologies is more expensive, whereas less flexible ones are cheaper to develop and can be made more efficient. Moreover, the ever-changing list of approved feedstocks poses challenges in developing a cost-effective bioenergy technology.



General conclusions

Investments are directed towards electrofuels despite it might not be the most effective technology.

Some system analysis comparing costs between bio-methanol and electrofuels demonstrates that investing in gasification is much more cost-effective. Gasification and intermediate value chains, will be highly robust and versatile. Gasification's efficiency makes it a valuable candidate for increased dominance in the future.

If electrification progresses as planned, it will bring about electrofuels and hydrogen-based solutions, and by then biomass will be strategically integrated where it makes the most sense.



General conclusions



Future requirements for renewable raw materials in the chemical industry.

Chemical industry currently lack requirements for 'scope 3' emissions, which for example includes the materials purchased and used to manufacture products and goods in the industries. Companies often overlook these emissions in their sustainability goals for 2030, which could account for as much as 80% of their overall impact.

Increased requirements and demand for renewable raw materials would lead to higher competition for biomass but could also result in positive synergies from processing facilities.

General conclusions



Locally sourced biomass and energy can secure national electricity supply.

Uncertainty may favour the "locally sourced" energy sector if large global energy supply chains, where flexibility and breadth provide security, can't be counted on.

Moving towards a more decentralized and locally distributed approach may result in higher costs, but it brings reassurance, reliability and national or regional sovereignty.

General conclusions

Importance of increased acceptance and willingness to pay from society. Many researchers have a positive outlook on the advancement of technology and research within bioenergy. However, they do recognize challenges that might impede its development.

One prominent concern revolves around the acceptance and willingness of society to pay for a transition towards renewable energy sources.



Upcoming/ongoing activities

- Series of topical webinars for stakeholders
- BBIC
- Participatory community consultations to develop visions for bioenergy
 - 1st round of citizen's panels conducted
 - Expert workshop on Thursday
 - 2nd round and finalization of visions early 2024

Summary

- ETIP Bioenergy
 - Provides information exchange on renewable fuels and bioenergy
 - Consolidates the view of the industry and speaks with one voice towards the EC
 - Points out R&I demand across a wide range of topics and technologies
- Failing to support renewable fuels and bioenergy means supporting continued use of fossil fuels
 - Electrification and hydrogen are complementary to renewable fuels and bioenergy not alternatives.

Get involved in ETIP Bioenergy activities and working groups!



ETIP *Bioenergy*

European Technology and Innovation Platform

www.etipbioenergy.eu



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