BEST
Bioenergy and
Sustainable Technologies

Die Rolle der Bioenergie in der Energiewende und wie IEA Bioenergy dazu beiträgt

Nationales IEA Vernetzungstreffen
19. Jänner 2026

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FFG Promoting Innovation.
Federal Ministry Innovation, Mobility and Infrastructure Republic of Austria
Federal Ministry Economy, Energy and Tourism Republic of Austria
vienna business agency | For the City of Vienna
Das Land Steiermark
Economy, Labour, Finance, Science and Research
SFG
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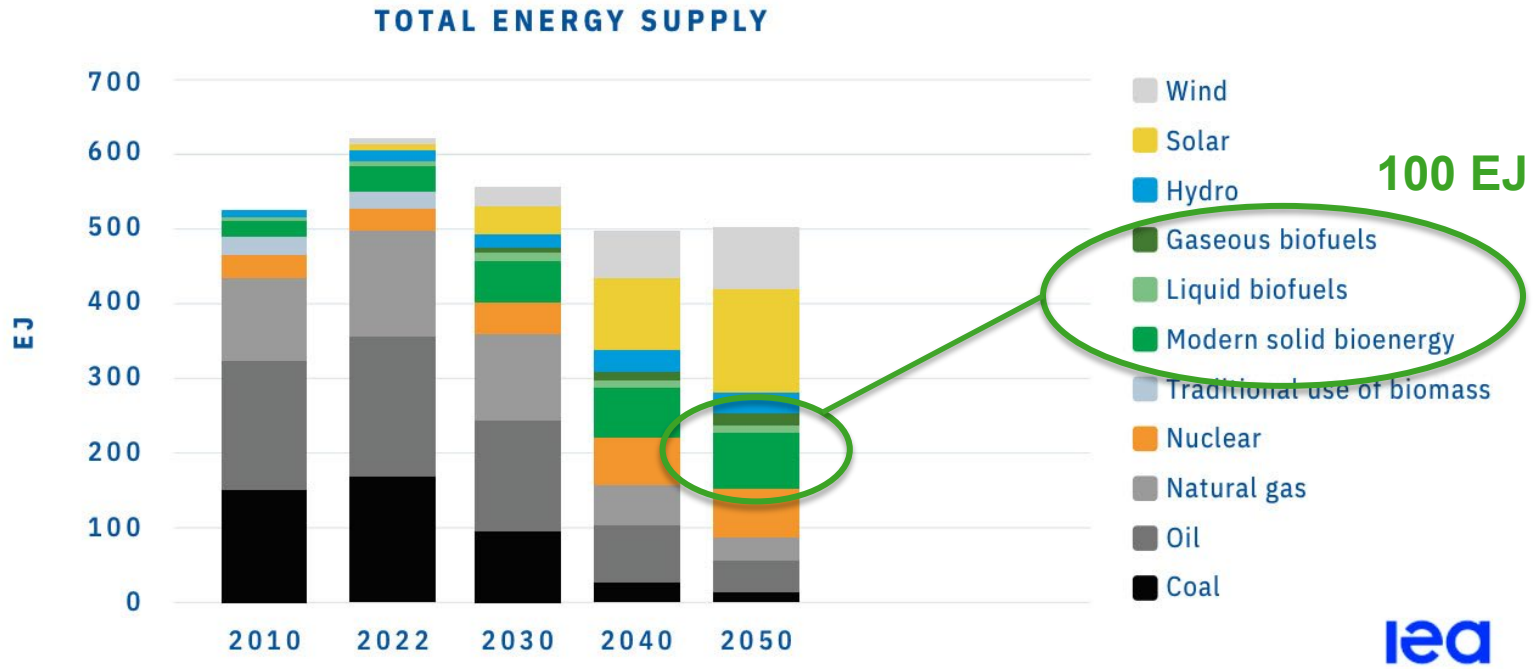
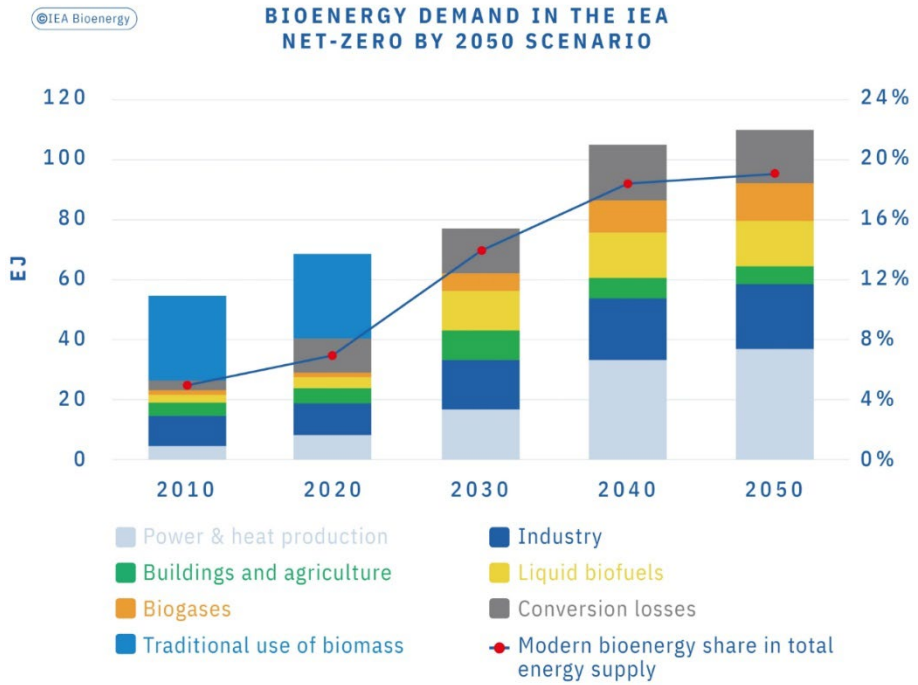
Net Zero by 2050 Szenario der IEA



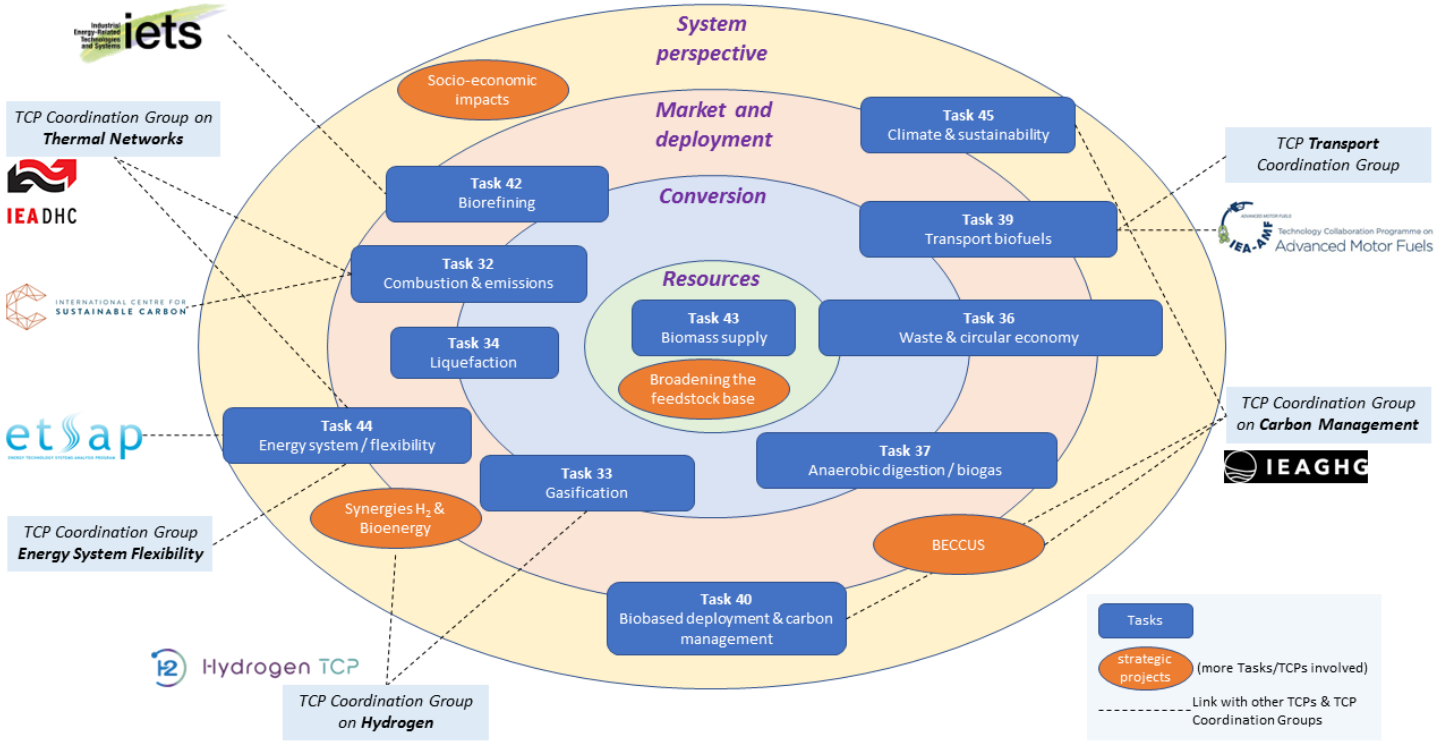
Data source: International Energy Agency (2023), Net Zero by 2050

Bioenergie soll laut NZE im Jahr 2050 rund 20% des Energiebedarfs decken



- Traditionelle Biomassenutzung muss durch sauberere Energie ersetzt werden
- Die Produktion von moderner Bioenergie muss sich von 2020 auf 2050 verdreifachen
- Auch andere Szenarien kommen auf ähnliche Werte
- Bioenergie ermöglicht durch BECCS auch negative Emissionen

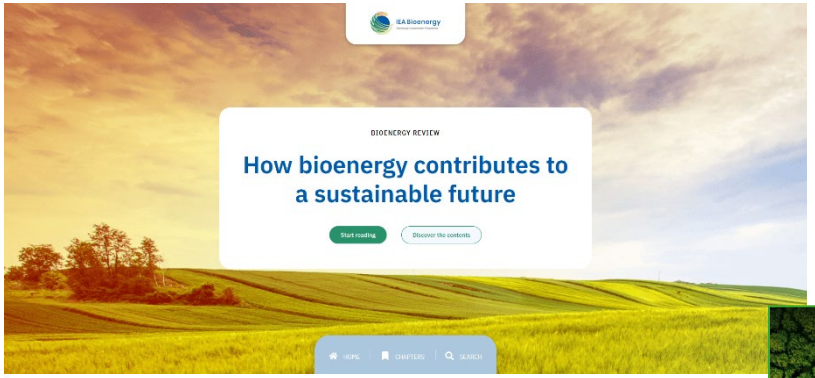
Tasks und Aktivitäten in IEA Bioenergy



Wie trägt IEA Bioenergy zur Systemtransformation bei?

- Bewusstseinsbildung / Basisinformationen
- Forschung und Technologieentwicklung
- Übersichten über den Status Quo der Implementierung
- Hervorhebung von best practice Beispielen
- Infoaustausch zu Trends

Basisinformationen



CHAPTERS

Strategic view on biomass and bioenergy

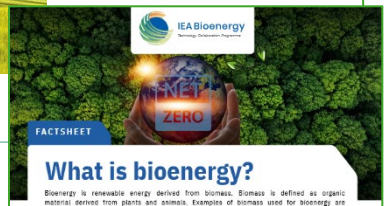
1. Transitioning towards sustainability
2. Environmental sustainability
3. Economic considerations
4. Social sustainability and the need for a just transition
5. Reaping the multiple benefits of bioenergy
6. Enabling policies and research needs

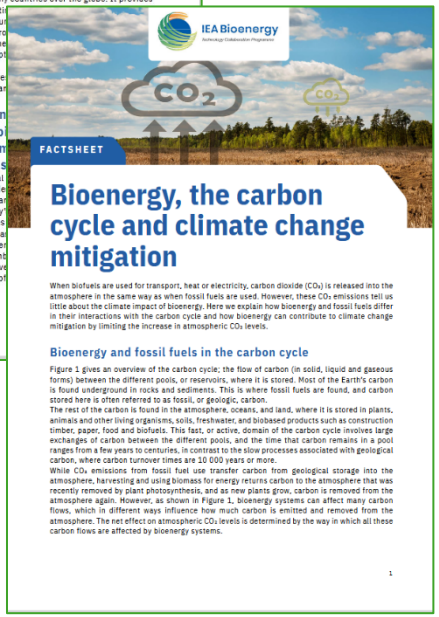
Technologies for sustainable bioenergy

7. Biomass combustion
8. Gasification for multiple purposes
9. Direct thermochemical liquefaction
10. Biogas production for heat, electricity, renewable gas, and transport
11. Transport biofuels
12. Biorefining

MORE

Glossary | Acknowledgements | References | Download





Forschung und Technologieentwicklung

ROUND ROBIN ANALYSIS OF THE QUALITY PARAMETERS OF DIRECT THERMOCHEMICAL LIQUEFACTION OILS

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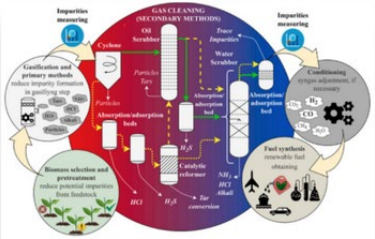

GAS CLEANING FROM GASIFICATION FOR PRODUCTION OF BIOFUELS AND BIOCHEMICALS

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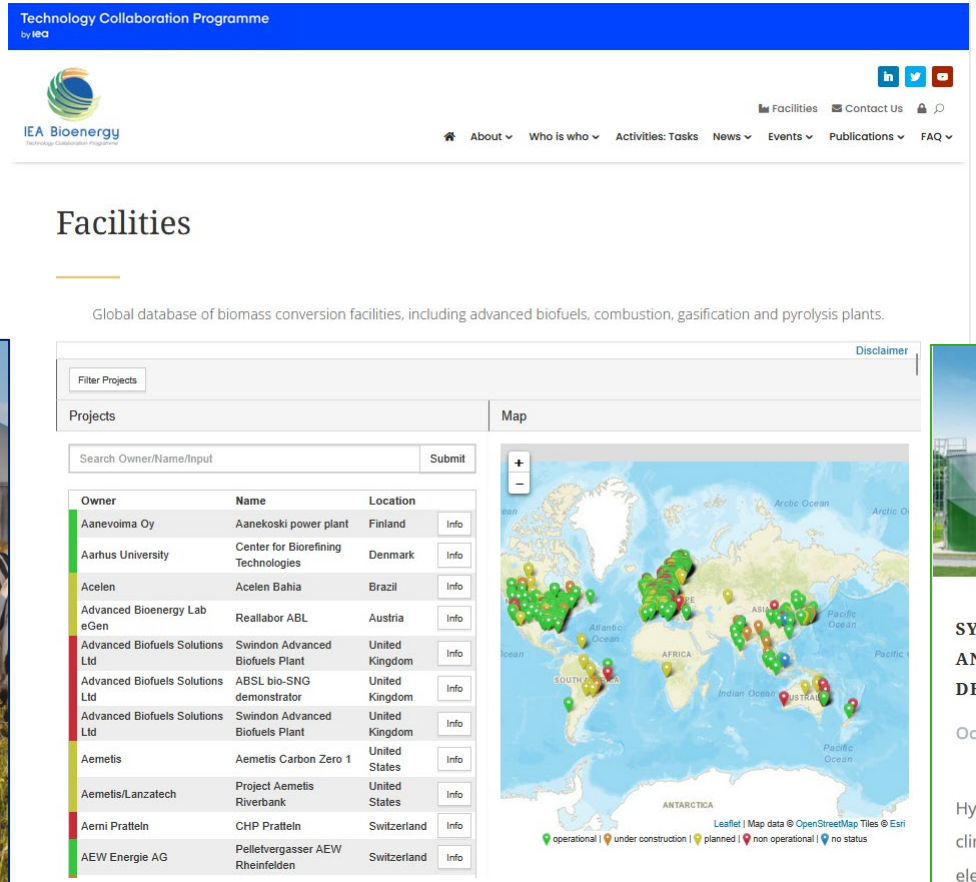
Status der Implementierung



LOWERING HINDERS FOR MARITIME BIOFUELS

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Biofuels could be the key to cleaner shipping, but higher costs, lack of

SYNERGIES OF GREEN HYDROGEN AND BIOBASED VALUE CHAINS DEPLOYMENT

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Best practice / Case studies

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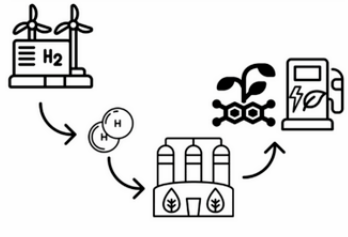

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This case study report presents the latest developments regarding the Hafslund Celsio full-scale CCS project at their Klemetsrud Waste to...

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Trends erkennen – und reagieren

BECCUS SCIENCE AND POLICY

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Bioenergy with Carbon Capture, Utilisation, and Storage (BECCUS) is a critical technology for climate change mitigation, enabling the...

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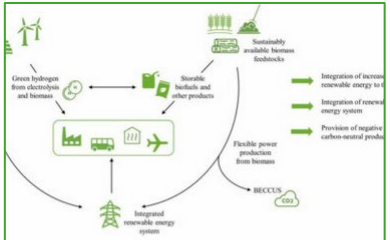
ONGOING TASKS AND PROJECTS

- 32 Biomass Combustion
- 33 Gasification of Biogenic and Waste Feedstocks for a Sustainable Future
- 34 Direct Thermochemical Liquefaction
- 36 Material and Energy Valorisation of Waste in a Circular Economy
- 37 Energy from Biogas
- 39 Biofuels to Decarbonize Transport
- 40 Deployment of Biogenic Value Chains and Carbon Management
- 42 Biorefining in a Circular Economy
- 43 Biomass Supply in a Nature Positive Circular Economy
- 44 Flexible Bioenergy and System Integration
- 45 Climate and Sustainability Effects of Bioenergy within the Circular Bioeconomy
- ITP Inter-Task Projects
  - Management of Biogenic CO2: BECCUS Inter-task Phase 2
  - Synergies of Green Hydrogen and Bio-Based Value Chains Deployment
- SP Special Projects
  - Socio-economic impacts of bioenergy



FLEXIBLE BIOENERGY – ENABLER FOR ENERGY TRANSITION FOR ZERO EMISSION ENERGY SYSTEMS

Aug 2025

This article is part of the IEA Bioenergy Annual Report 2024 and was developed by members of IEA Bioenergy Task 44, a group of...

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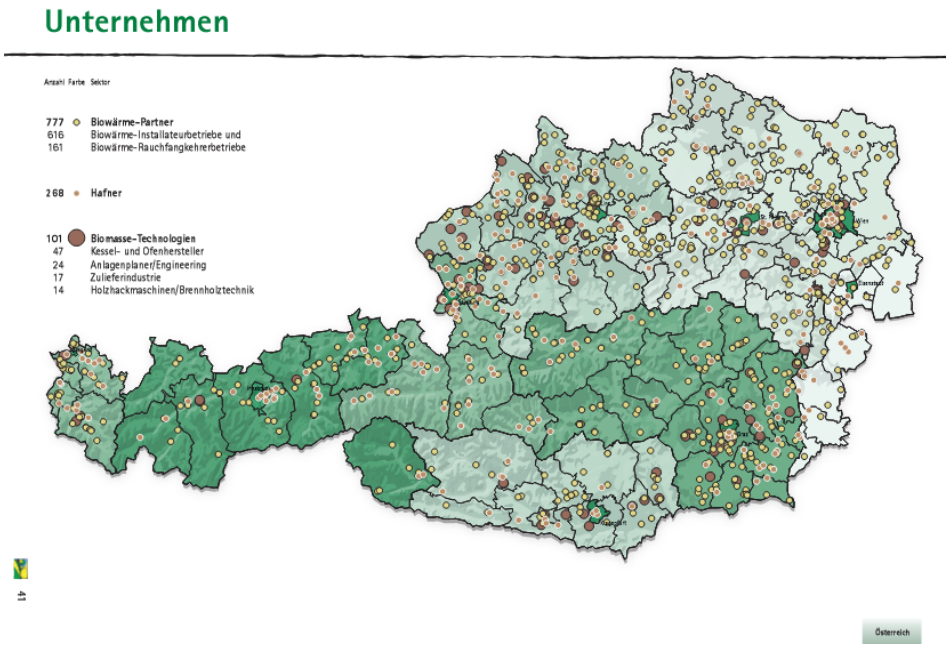
Bioenergie ist in Österreich stark verankert, Technologien werden aber auch exportiert



Biomasseverband listet im Bioenergie Atlas 2023:

- 777 Biowärme-Partner
- 268 Hafner
- 270 Biogasanlagen
- 20 Biotreibstoffanlagen
- 2.461 Biomasseheizwerke
- 168 Biomasse-KWK-Anlagen
- 48 Pelletsproduktionen
- 62 Einrichtungen in Lehre, Forschung und Ausbildung
- **101 Biomasse-Technologie Firmen**

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