IEA Bioenergy
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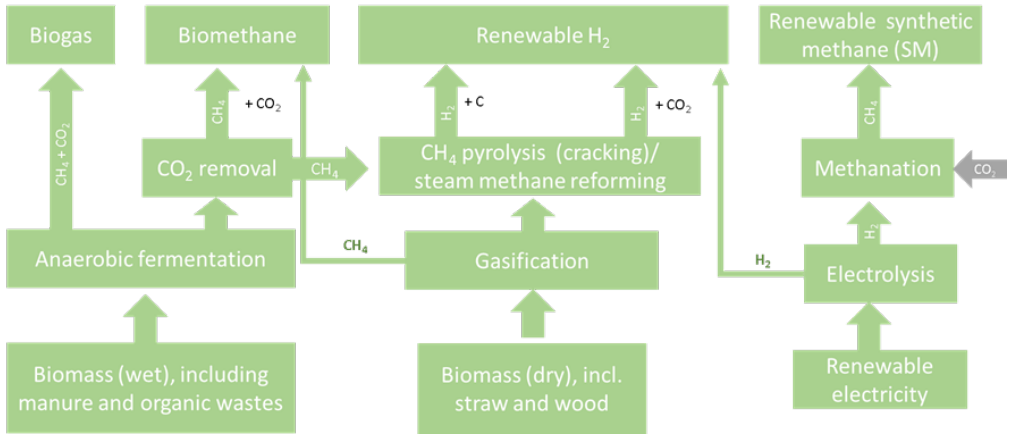


Key results of the "Renewable Gas" InterTask Project

Uwe R. Fritsche, IEA Bioenergy Task 40 Lead & IINAS

Input to IEA Bioenergy ExCo90 Workshop Oct. 17, 2022 in Vienna

Key RG results: Biomethane and GHG reduction

- RG key in global energy system aiming at net zero GHG emissions by 2050
- Biomethane largest contributor (no change in gas transmission/distribution infrastructure or end user equipment, bioLNG trade) in IEA Net Zero 2050 Scenario:

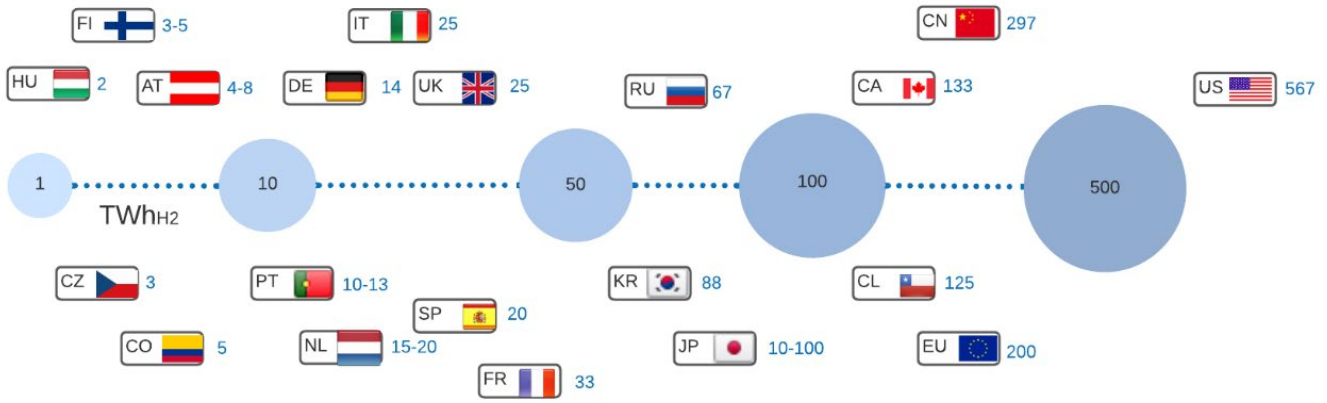
- Biogas upgrading to biomethane: valid source of "pure" CO_2
- Biogas/biomethane with carbon capture and sequestration (BECCS) achieves **negative** CO_2 balances
- Biogas/biomethane with carbon capture and utilization (BECCU) can deliver CO_2-**neutral** products

Key RG results: Obstacles…

	Australia	Canada	China	Estonia	Finland	Germany	India	Norway	Sweden	Switzerland	UK
Financial	x	x		x	x	x	x	x	x	x	x
Legislative (regulations regarding technology and plant operation)	x		x		x		x				x
Legislative (framework conditions other than financial and technological)	x	x	x		x	x					x

Key RG results: H_2 perspectives

Estimated scale of H_2 production for selected countries by 2030



- Longer-term high "green" H_2 potential for international RG trade: Exporters in Africa (e.g., Morocco), Europe (Portugal, Spain), Latin America (e.g., Chile), Middle East (e.g., Saudi-Arabia), and Oceania (Australia, New Zealand)
- H_2 trade through refurbished gas/new H_2 pipelines, or shipping (LH_2, NH_3)
- According to IRENA, **1/3 of green H_2 will be traded internationally by 2050**, a share slightly higher than the current share of natural gas traded globally

Project deliverables (WP1, WP2 and WP3 **synthesis** reports):
https://www.ieabioenergy.com/blog/task/renewable-gas-%e2%80%90-deployment-markets-and-sustainable-trade/
Overall **Summary Report**:
https://www.ieabioenergy.com/wp-content/uploads/2022/03/Fritsche-et-al-2022-IEA-Bioenergy-Renewable-Gas-Intertask-Summary-Report.pdf

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Contacts:

Uwe R. Fritsche, uf@iinas.org
Christiane Hennig, chistiane.hennig@dbfz.de

www.ieabioenergy.com