

Waterborne Transport



HORIZON EUROPE

HyMethShip

Hydrogen-Methanol Ship Propulsion System Using
On-board Pre-combustion Carbon Capture

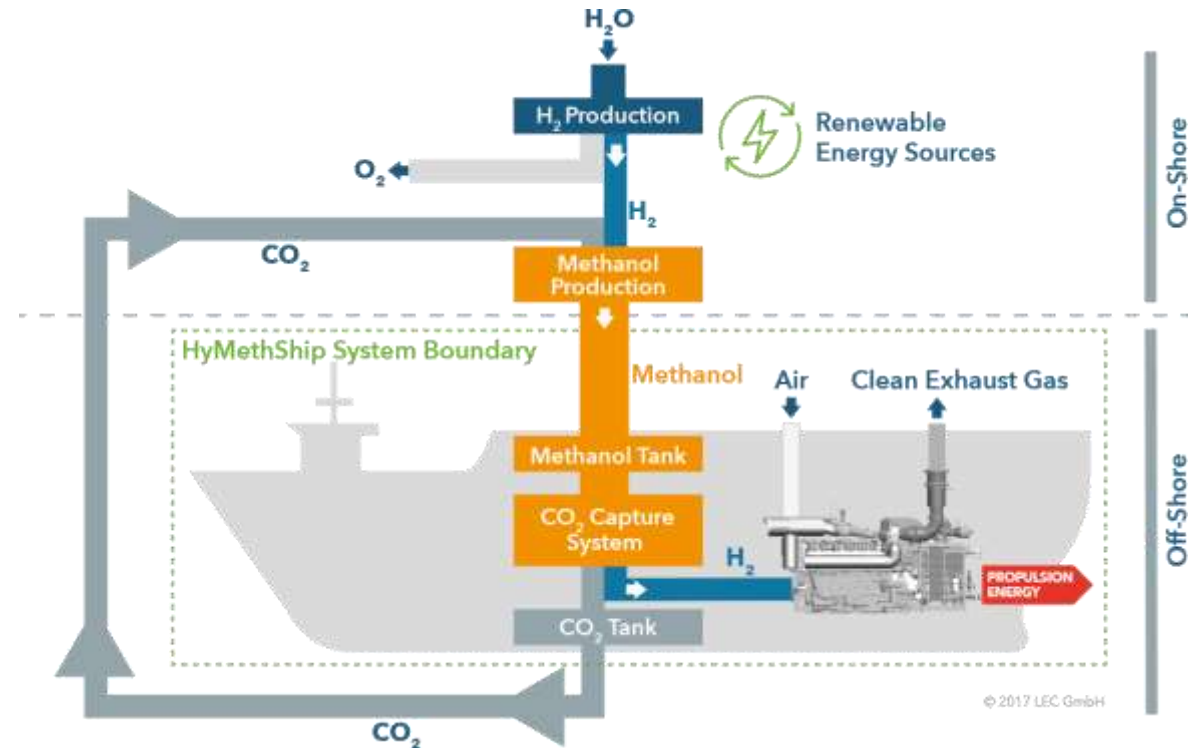
Clean and sustainable shipping

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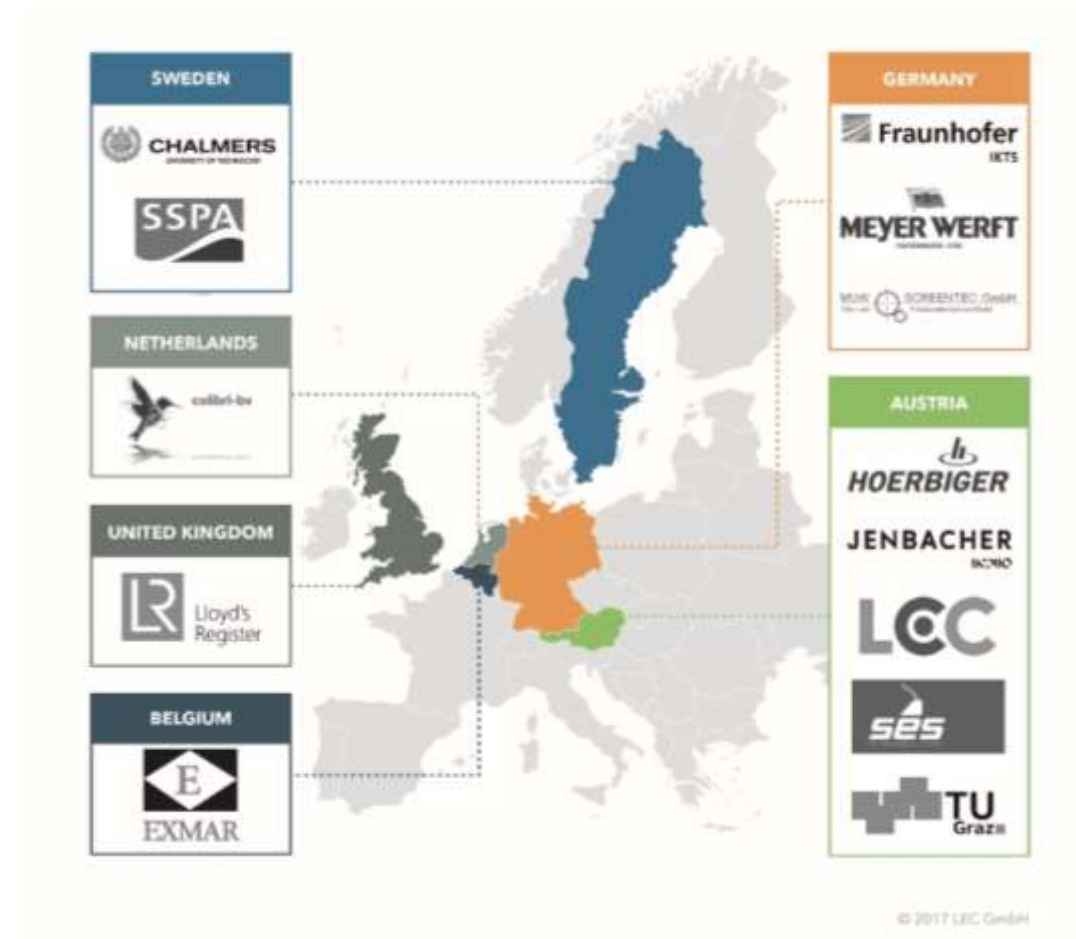
The challenge

- Reducing the carbon footprint of maritime transport while maintaining well-known and proven bunkering and propulsion technology.
- Developing a sustainable ship propulsion system with a closed-loop carbon cycle.
- Technology demonstration in full-scale onshore installation.



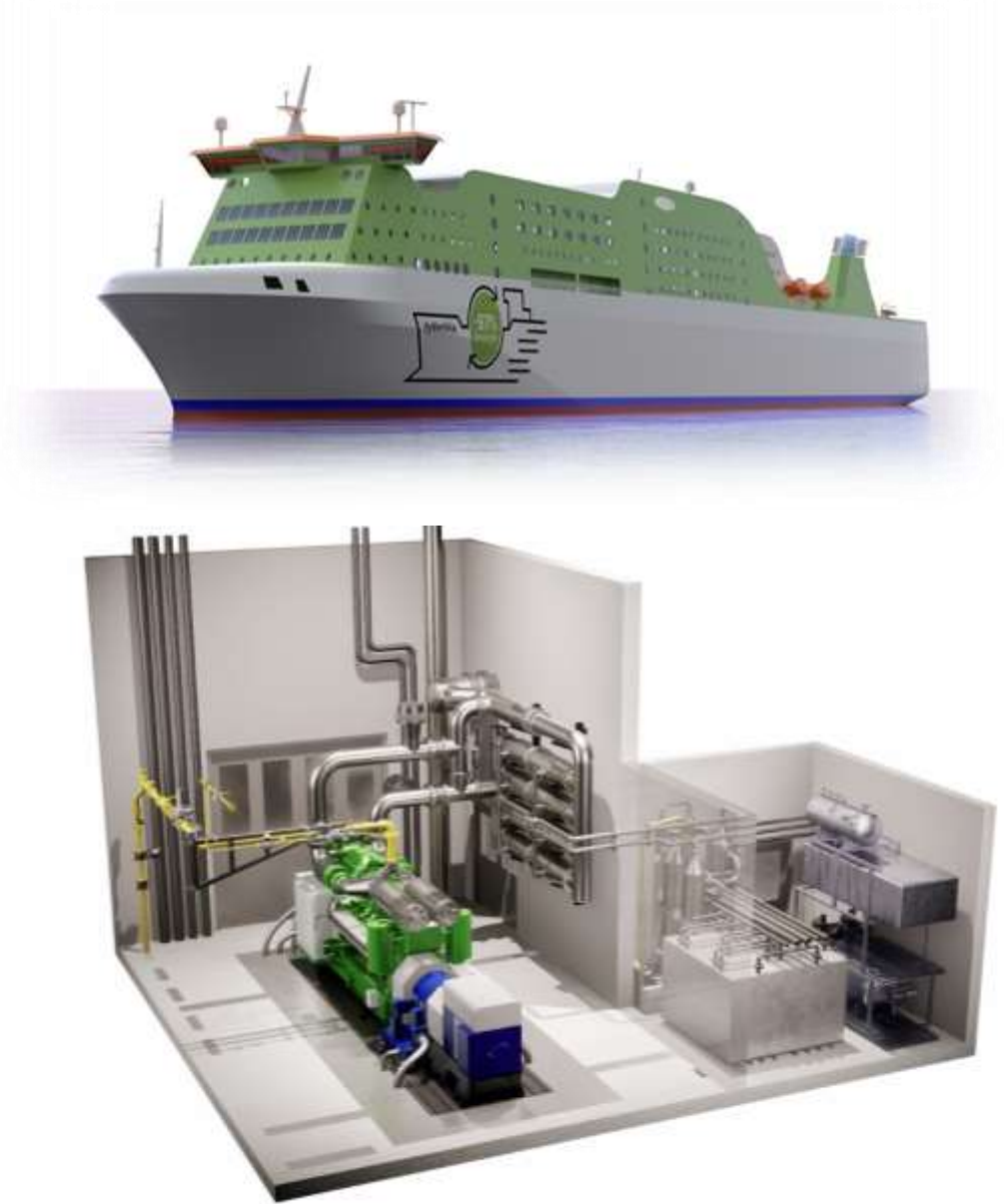
The HyMethShip project

- Expert Consortium: 13 partners from 6 EU member states
- Budget: € 9.3M with EU support of € 8.4M
- Duration: 42 months, from July 2018, until December 2021.



Achievements.

- Development of a hydrogen internal combustion engine and catalytic membrane reformers for hydrogen production. System installation and onshore technology demonstration.
- Design of a case study vessel with the HyMethShip system integration – including safety assessment.
- Proof of economic and environmental feasibility.



Next Steps

- Next steps include developing a full-scale vessel application, which would be tested and trialed on board a ship. Possible scenarios are currently being worked out with several consortia, aiming for a maiden voyage in 2026.
- Furthermore, the integration of the HyMethShip concept in power generation and storage systems will be investigated, which could contribute to a significant reduction in greenhouse gas emissions in the energy sector.
- The remaining challenges to be addressed are the availability of green methanol and the infrastructure to offload and reprocess the captured CO₂.

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Q&A ?

Speaker will be available on the stand for the remainder of the day.

Contacts:

- <https://www.hymethship.com/>
- <https://www.linkedin.com/company/11787368>, https://twitter.com/hy_meth, <https://www.facebook.com/HyMethShip-1770959659656553/>
- <https://www.hymethship.com/contact/>
- Horizon Europe Horizon Europe | European Commission (europa.eu)
- Waterborne TP: [Welcome to Waterborne - Setting the agenda for Maritime Research in Europe - waterborne.eu](https://www.waterborne.eu)