



Barents Blue

World-scale blue hydrogen and ammonia

Stavanger Energy Conference

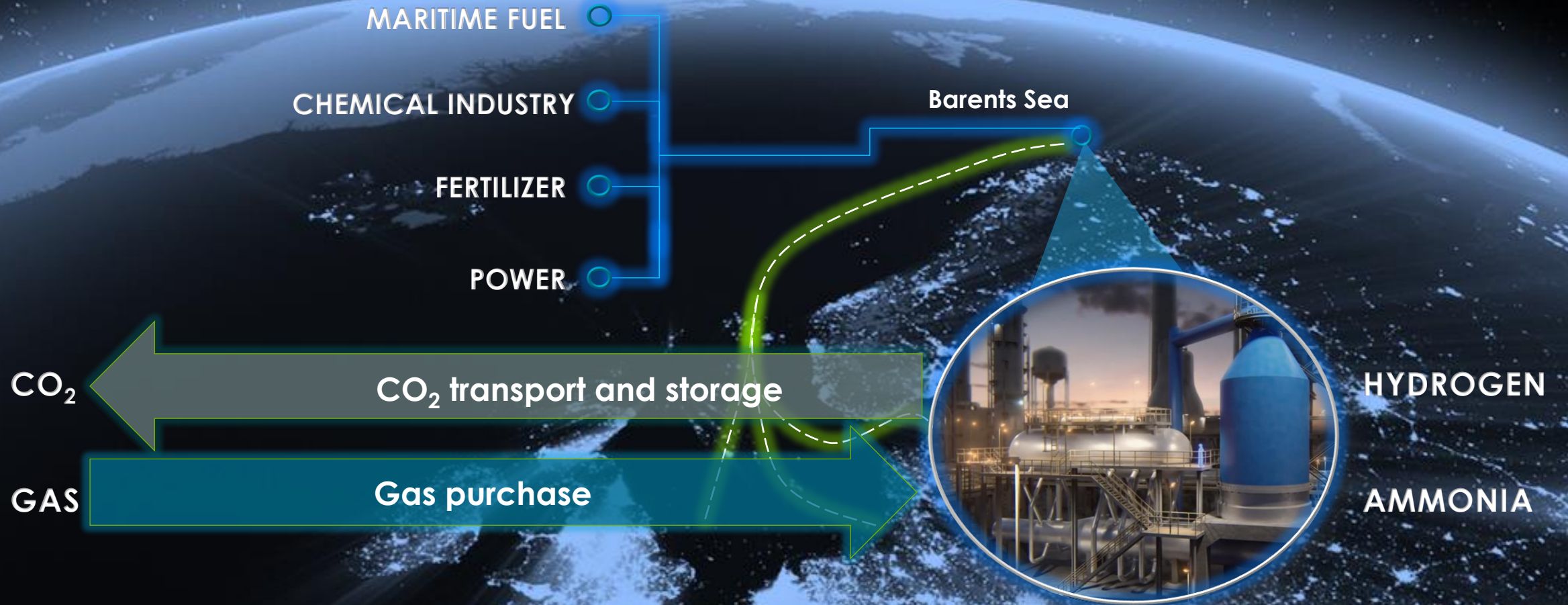
Bjørgulf Haukelidsæter Eidesen, CEO Horisont Energi

25-26 August 2021



Project Barents Blue

World scale clean hydrogen and ammonia





A clean ammonia plant for a sustainable future

Develop the most carbon and energy efficient ammonia plant in the world

- Zero emissions, environmentally-friendly plant
- Zero carbon and renewable power
- Fully automated plant with integrated energy management
- Focus on sustainable solutions and circular practices in design
- Low noise level and negligible light pollution

“ SETTING THE STANDARD
FOR **CLEAN HYDROGEN
AND AMMONIA** ”

Key project data

Location: Markoppneset, Finnmark, Norway

Start-up year: 2025

Gas supply: Melkøya LNG plant

Technology: Auto-thermal reforming (ATR)

End-product: Clean ammonia

Yearly production: Above 1 million tons

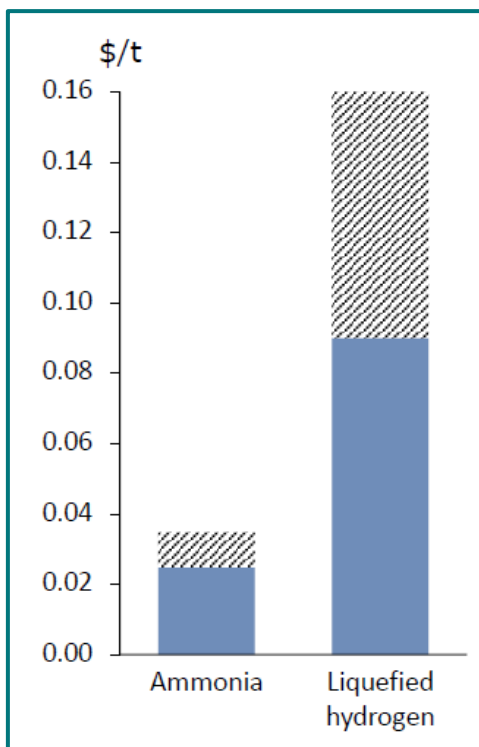
Yearly CO₂ storage: 2 million tons

Future plans: train 2 and train 3

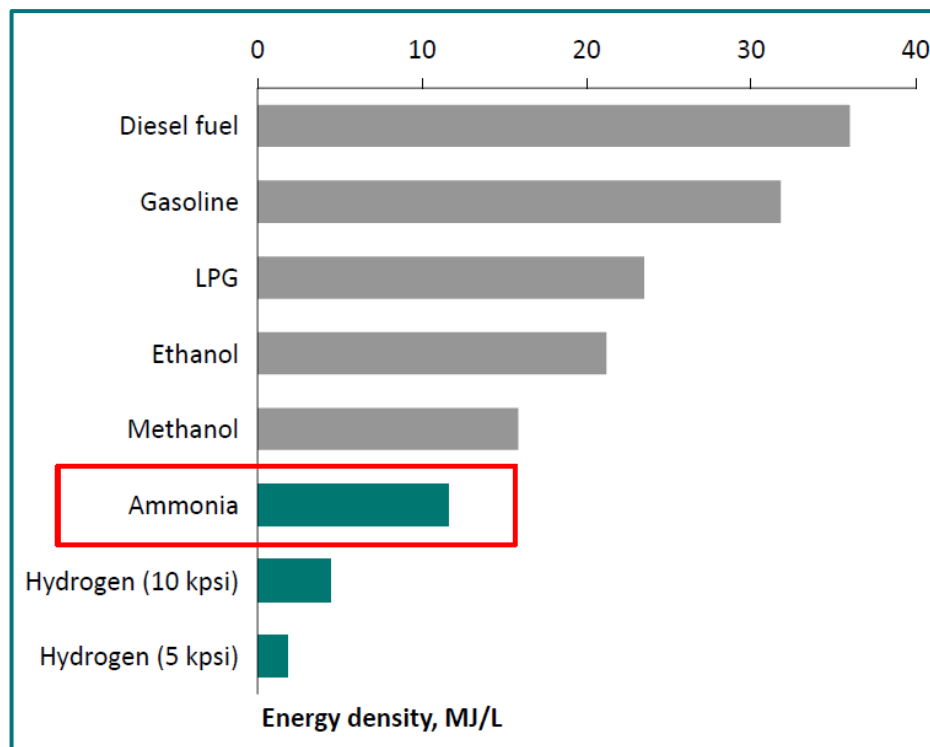


Ammonia is the most efficient H₂ carrier ...

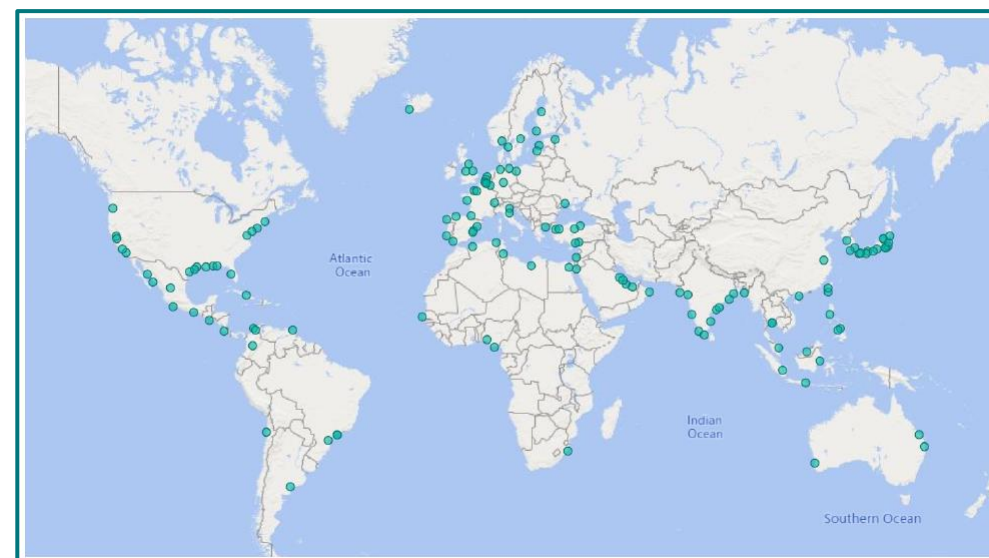
Ship transport,
USD/t km (in H₂)



Energy content for
various fuels, MJ/L



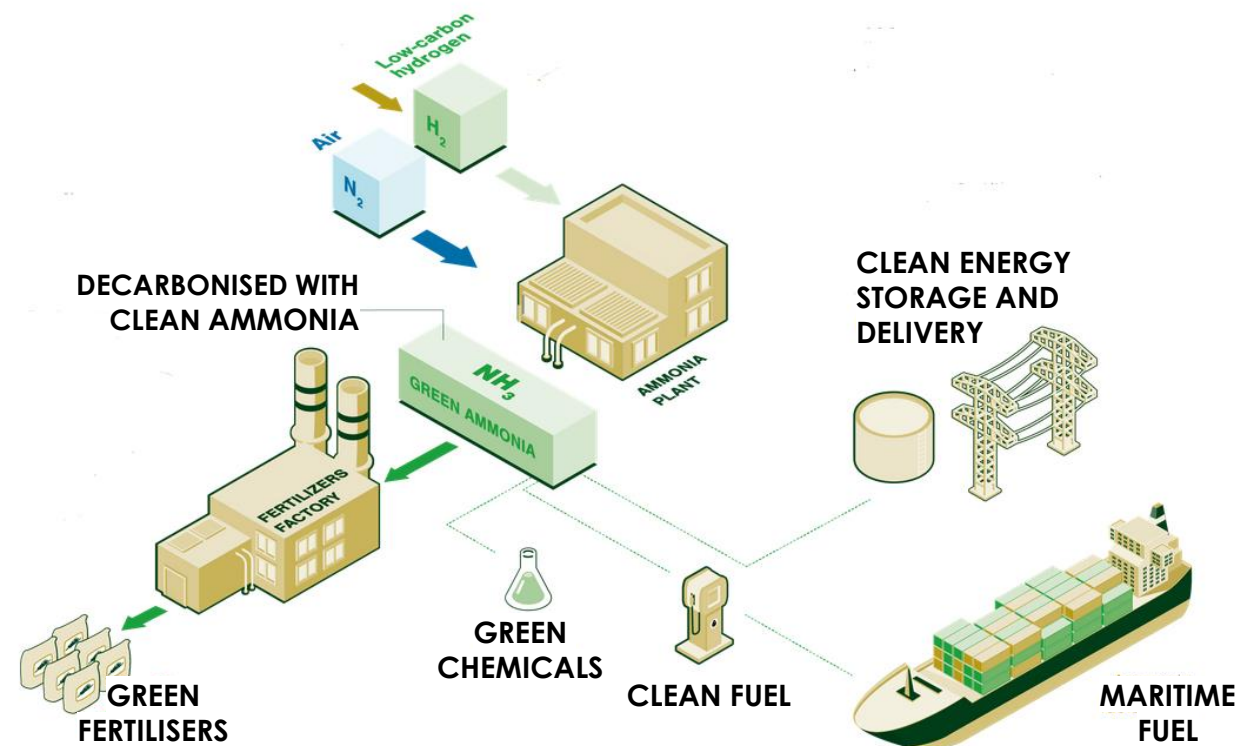
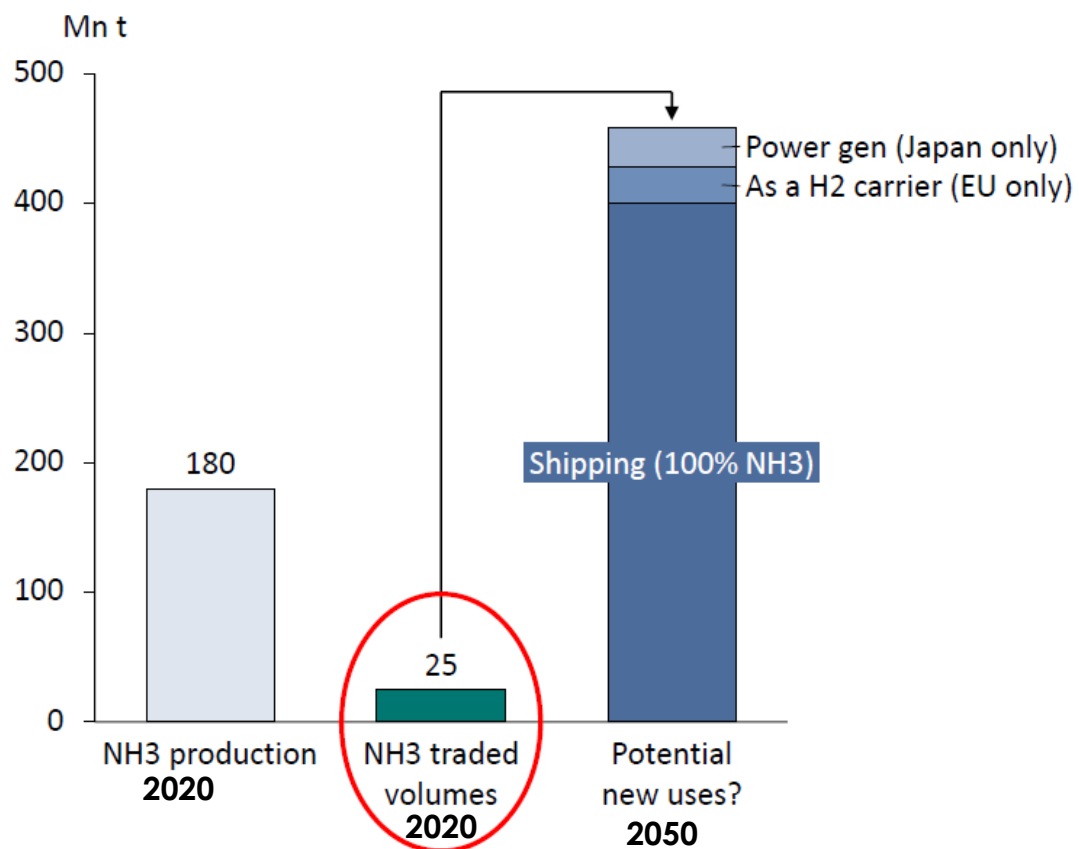
Global ammonia terminal locations



Ammonia is the second most used industrial gas globally, at 185 million ton/year

... and also well established

Potential new uses of clean ammonia



Polaris CO₂ Storage Asset

Onshore Control Room



Power & control cable to shore

CO₂ injection system

CO₂ Carrier

Offshore
off-loading
system

CO₂ injection riser

- 100 km off the coast
- High quality reservoir
- 2 million tons/yr CO₂ injection capacity in the first phase
- Over 100 million tons of estimated storage capacity

Barents Blue Summary

Europe's first world scale clean ammonia project

A European hydrogen project in the making

Creating one of the largest global production hubs for clean ammonia in this decade

Establishing a value chain from Finnmark to Rotterdam for clean maritime fuels



Markoppneset

Northern
Norway

DISTANCE FROM HAMMERFEST:	43 KM
DISTANCE FROM ALTA:	95 KM
DISTANCE FROM ROTTERDAM:	2700 KM

PROJECT BARENTS BLUE



“ LEADING THE WAY TO A
CARBON NEUTRAL FUTURE