

Sustainable e-fuels  
from Power-to-X  
technologies - Denmark

# TREND Hamburg

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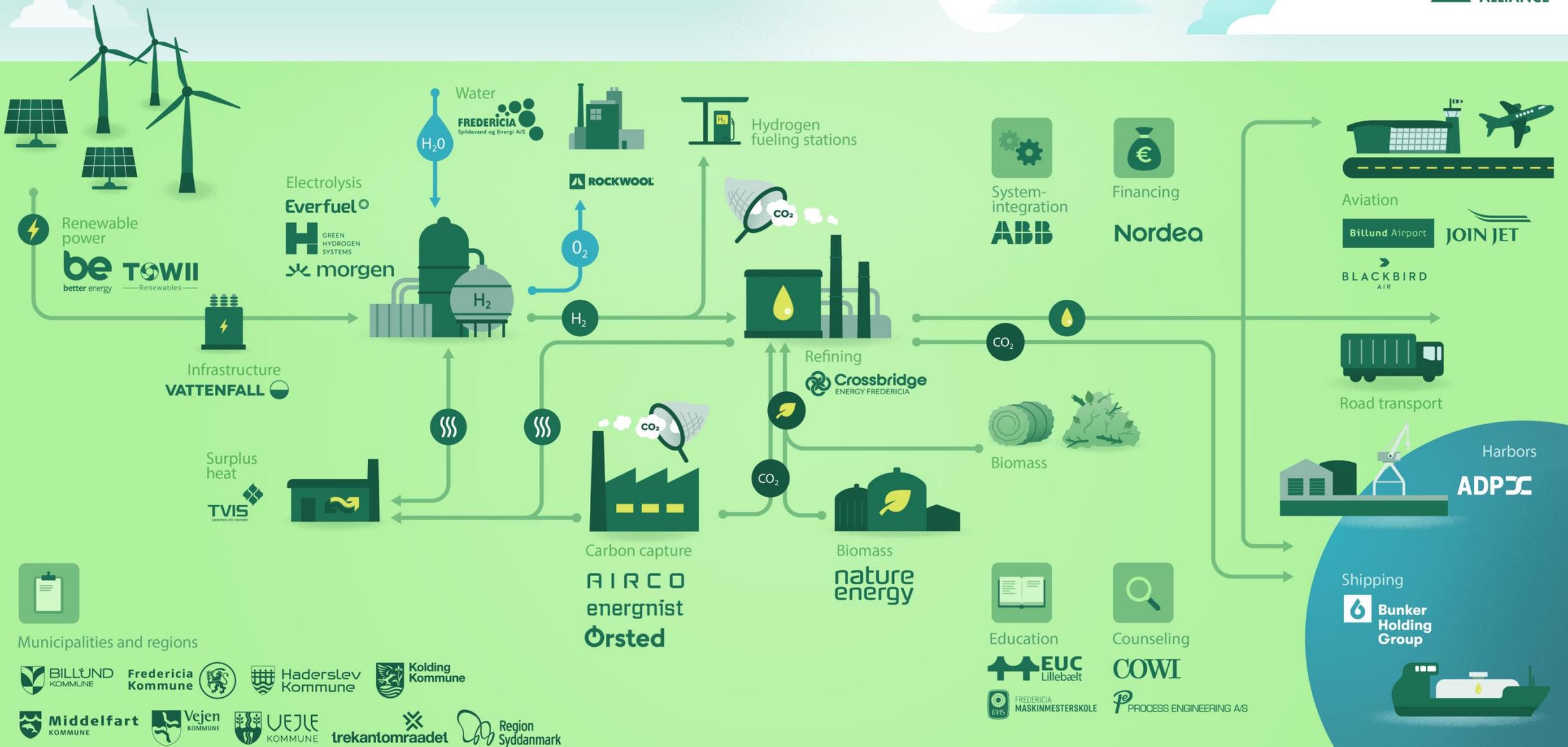




# A strong public-private partnership



# Power to X value chain in the Triangle Area



Municipalities and regions



# Existing or active hydrogen projects

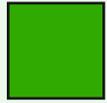


-  In production or under commissioning (black letters)
-  In active development (white letters)



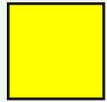
# Crossbridge Energy Park

Crossbridge has established several strategic partnerships with energy transition-focused companies. By utilizing the infrastructure of the Refinery and excess land, there is an opportunity to build a “Green Energy Park” in Fredericia



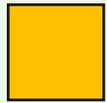
## Everfuel

- Production of ISCC certified green hydrogen with direct integration to the refinery
- Utilization began in 2025



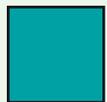
## Trinity Synergies

- Conversion of environmentally challenging mineral waste (insulation, asbestos, wind mill wings, etc.) into green recycled cement
- Facility to leverage on multiple synergies with the other partners within the area



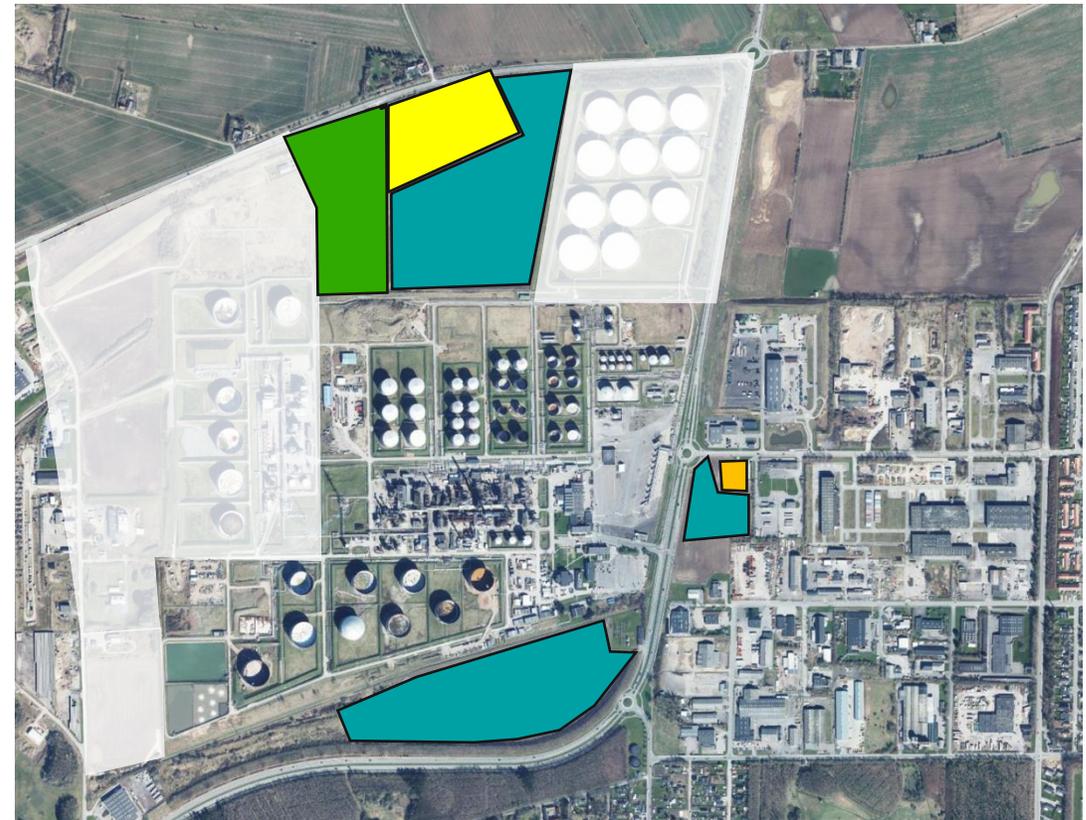
## Kvasir Technologies

- Small demonstration unit converting straw etc. to marine fuel currently under construction



## Excess land

- Industrial land suited for production facilities in environmental classes 4-7



# Danish Hydrogen backbone

## Development steps, Energinet

Lower 7



Lower T



Backbone to Hol-  
stebro

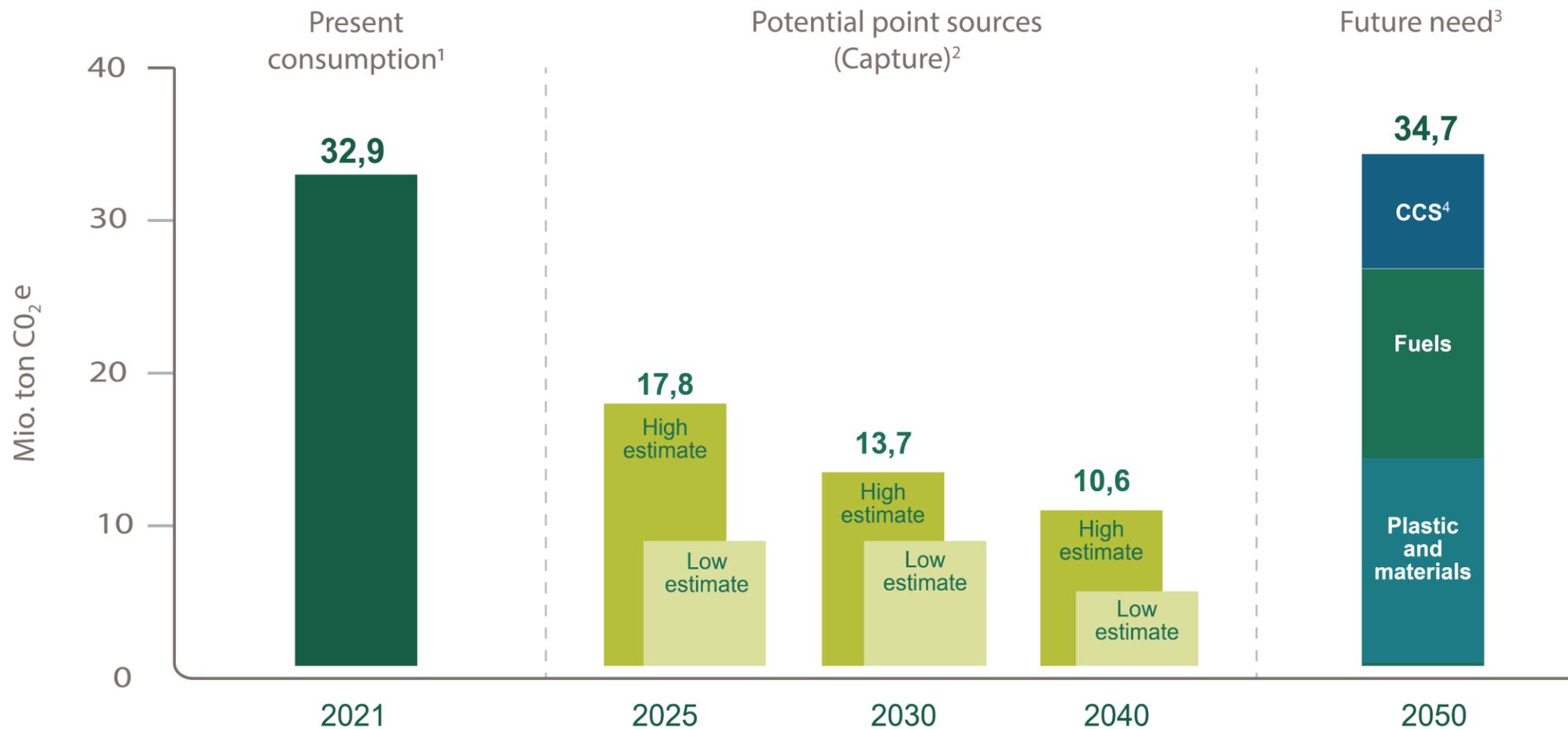


The fully developed  
Danish Hydrogen  
Backbone





## Future demand and availability of carbon in Denmark



Sources:

1) NETTOFORBRUG AF BRINT OG KULSTOF I DANMARK I 2021 - BAGGRUNDSNOTAT for Triangle Energy Alliance, COWI, 2023

2) Punktkilder til CO<sub>2</sub> – potentialer for CCS og CCU 2022-opdatering, Energistyrelsen, februar 2023

3) Scenarier for anvendelse af biomasseressourcer i fremtidens produktionssystemer for fødevarer, energi og materialer inden for rammerne af gældende politik for landbrug, miljø, klima, natur og energi.

DCA - Nationalt Center for Fødevarer og Jordbrug, 2022. (Rådgivningsrapport fra DCA - Nationalt Center for Fødevarer og Jordbrug).

4) Statusrapport 2025 - Danmarks nationale klimamål og internationale forpligtelser - Klimarådet



# So – where will the carbon have to come from?



When we will not – or can not – use fossile ressources any longer. This will take new technologies and sector integration

## Photosynthesis – residues from primary production



## Or Direct Air Capture (DAC)

(or maybe even from the oceans, DOC)



2017: 900 t/yr (Schwitzerland)



2021: 4.000 t/yr (Iceland)



202?: 1.000.000 t/yr (! Texas)

20??: ? t/year



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