



Nordic Energy Day

Industrial Demand and the Nordic
Hydrogen Industry

2023

Driving the transition to renewable aviation

Norsk e-Fuel in brief

We turn water and CO₂ into the sustainable fuels of the future to provide for a world without fossil fuels.



Unique technology approach allows for highest efficiencies and circular processes



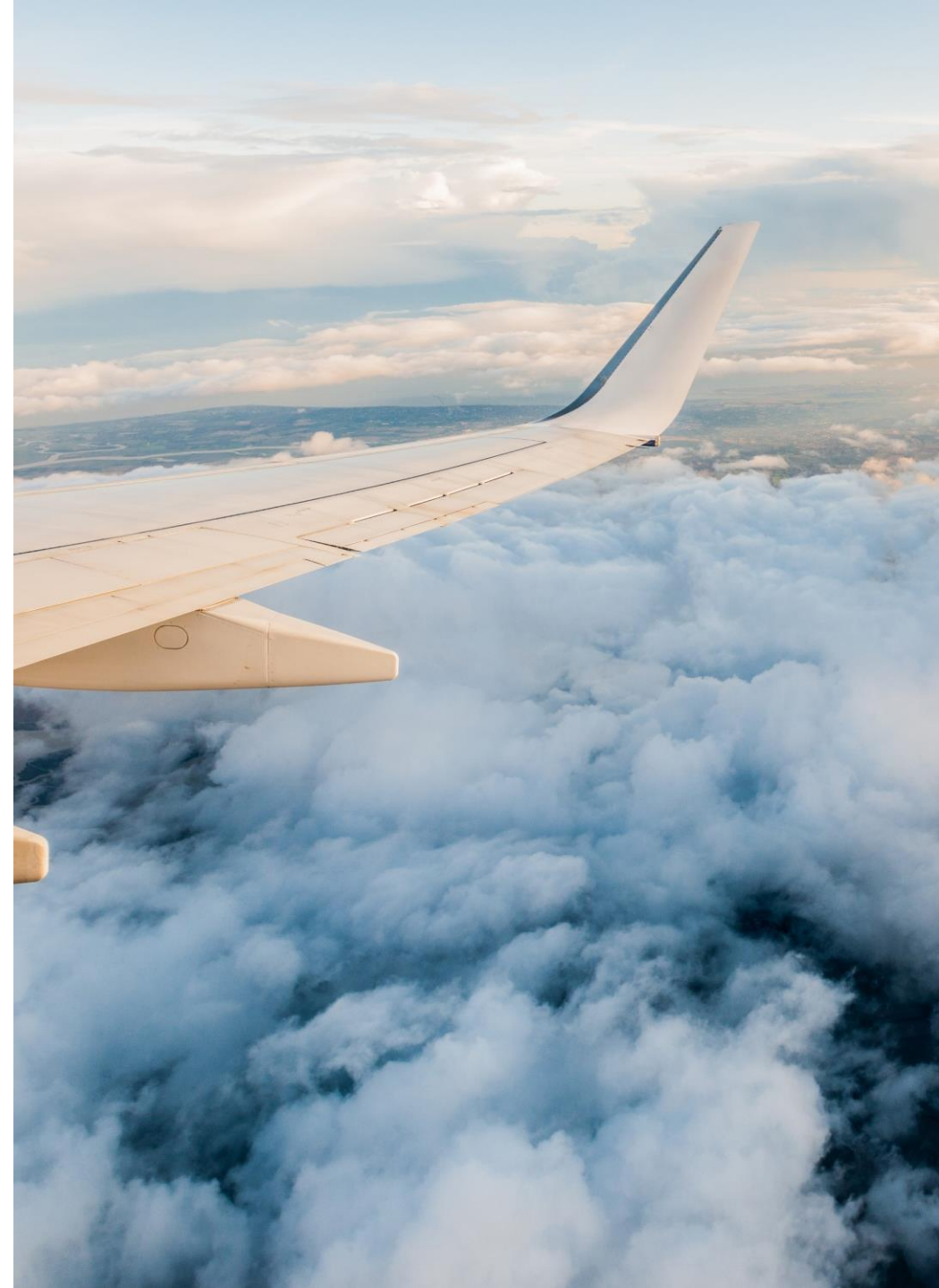
Growing team of experts backed by >2,000 specialists from partners drives success



Access to ideal sites with best conditions prepares quick production ramp-up

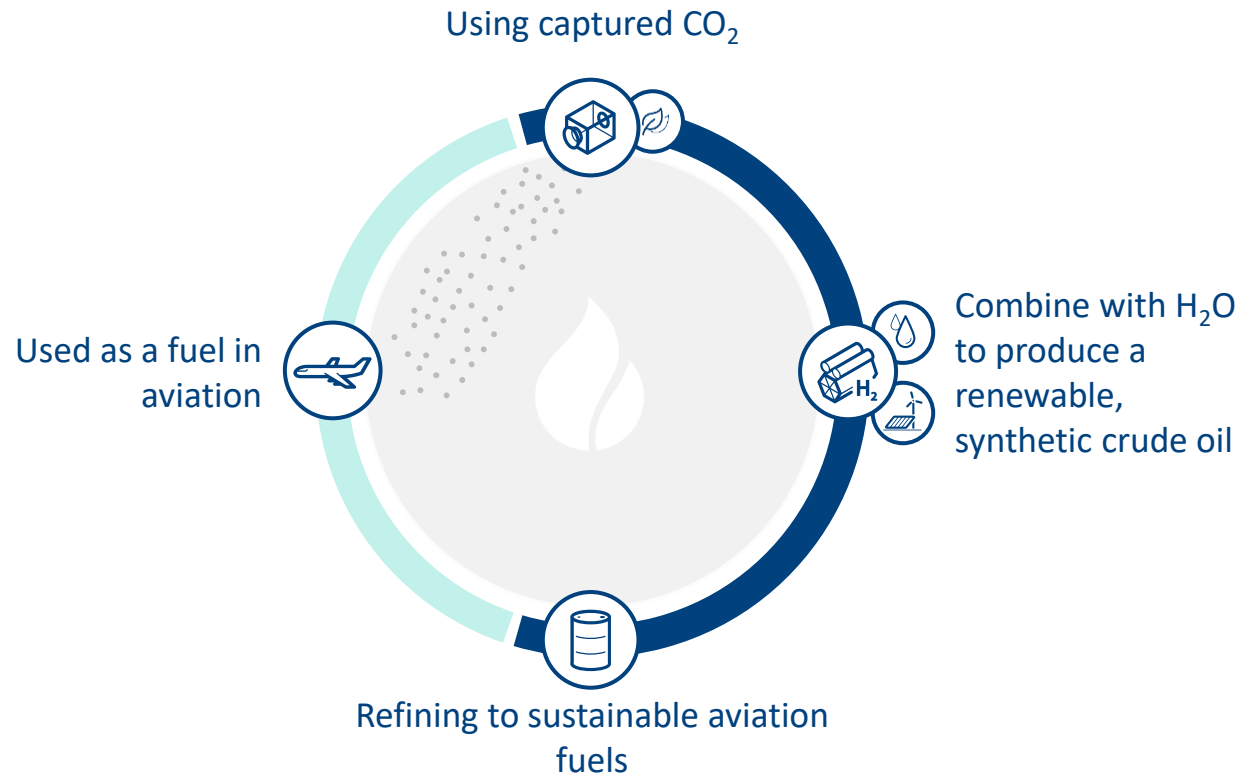


Strong partner network guarantees integration across the whole value chain e.g.:



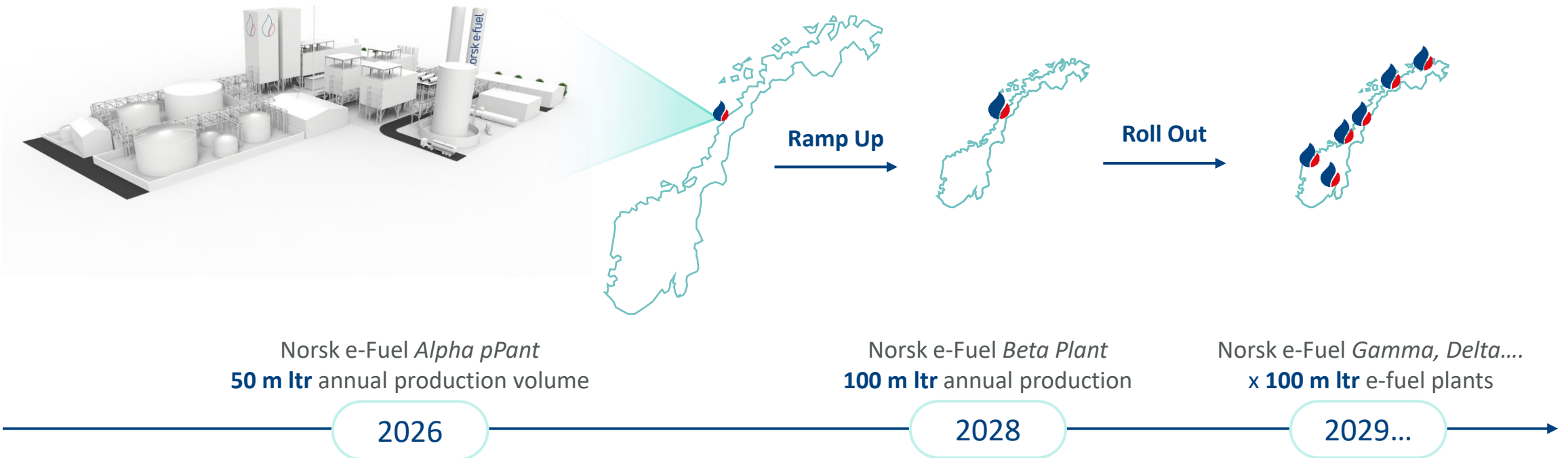
e-Fuels as circular economy

This is how our solutions works



Cutting emissions of the top 5 most frequently serviced flight routes by 50%

Replicability to scale



With our first **50 m liters plant**, we lay the basis for our **easy to replicate blueprint plant**.
One full-sized **100 m liters** plant will effectively **cut the current flight emissions** of the top **5 most frequently** serviced flight routes within Norway by about **50%**.

We are building on the long industrial tradition of Mosjøen

Norsk e-Fuel's Alpha plant



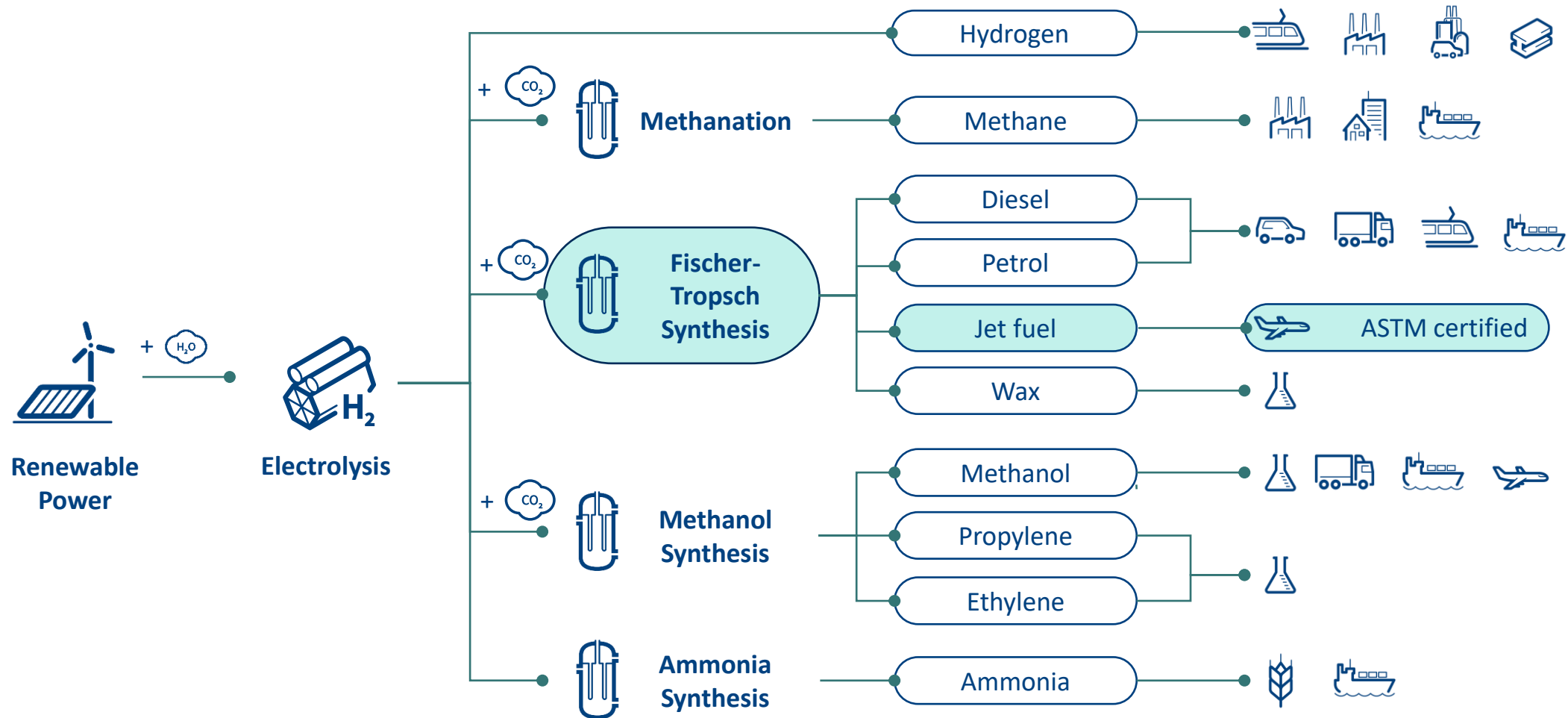


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H₂ and its derivatives

The X in Power-to-X

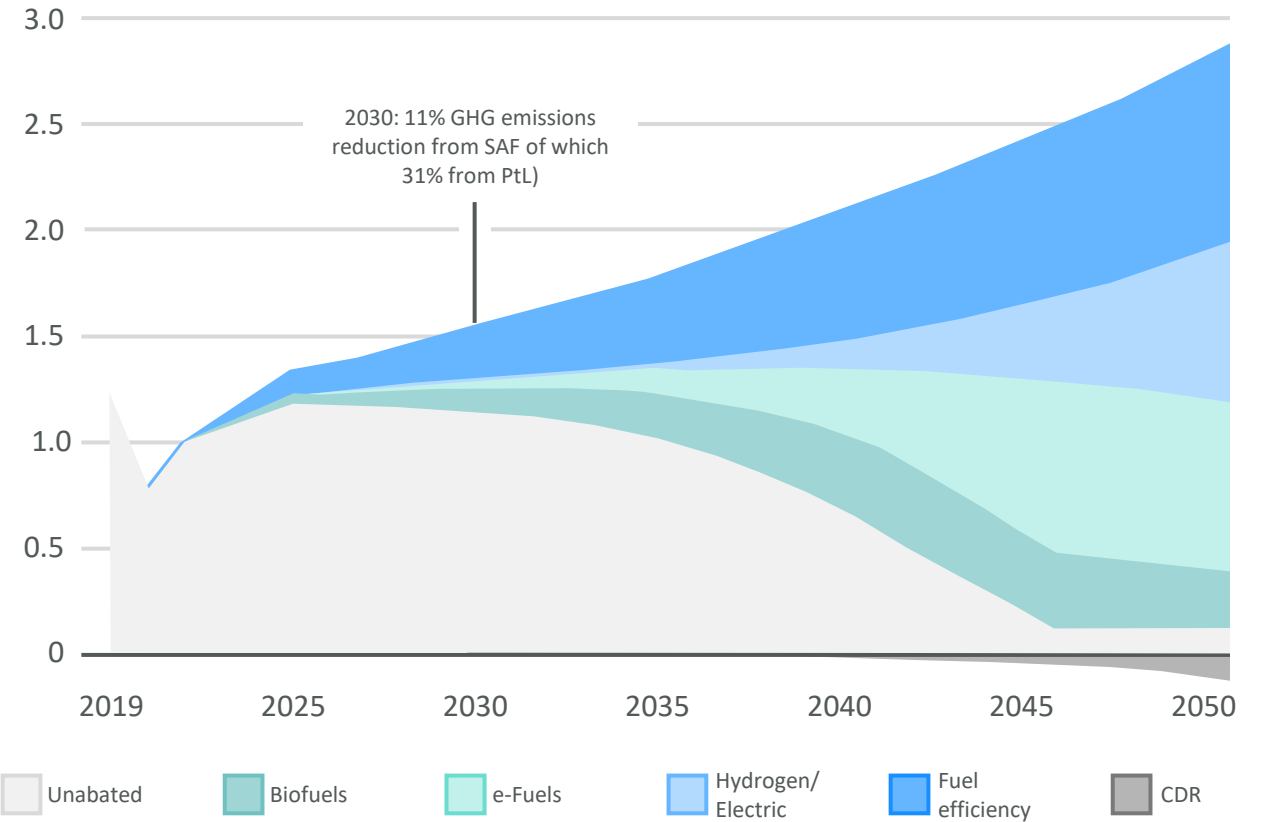




E-Fuels are a necessity for the future

Aviation needs PtX fuels

GHG emission reduction
Gt CO₂e (billion tons)



Source: [Mission Possible Partners, 2023](#)

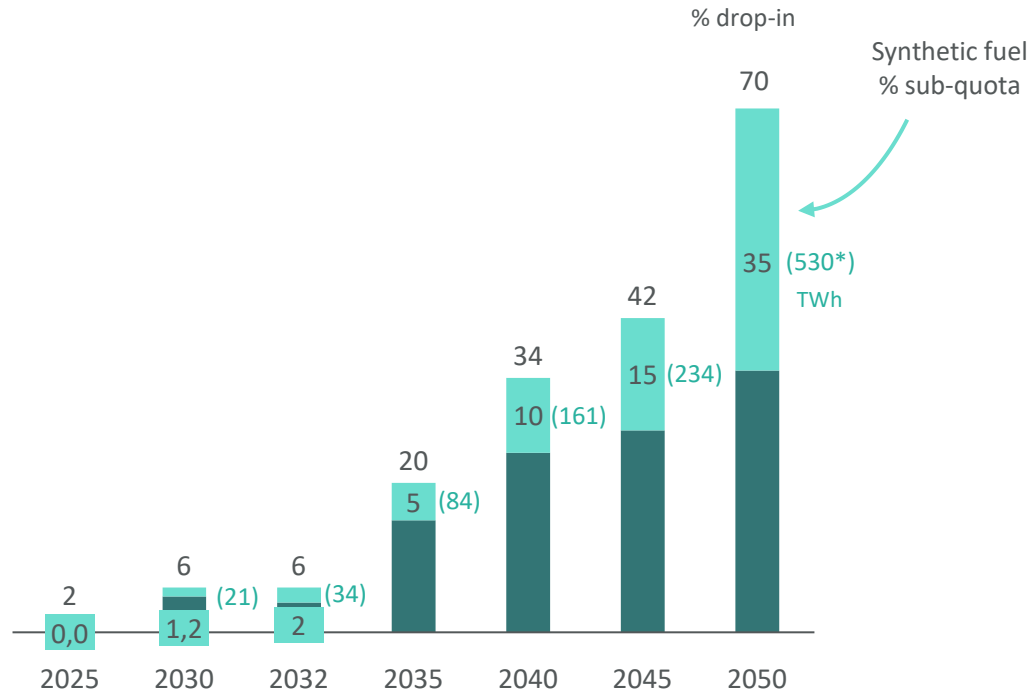
Industrial demand for e-fuel production

EU quotas sets increased power demand into law



ReFuelEU Aviation

SAF drop-in target from 2025 and specific min. sub-quota for synthetic fuels (PtX)

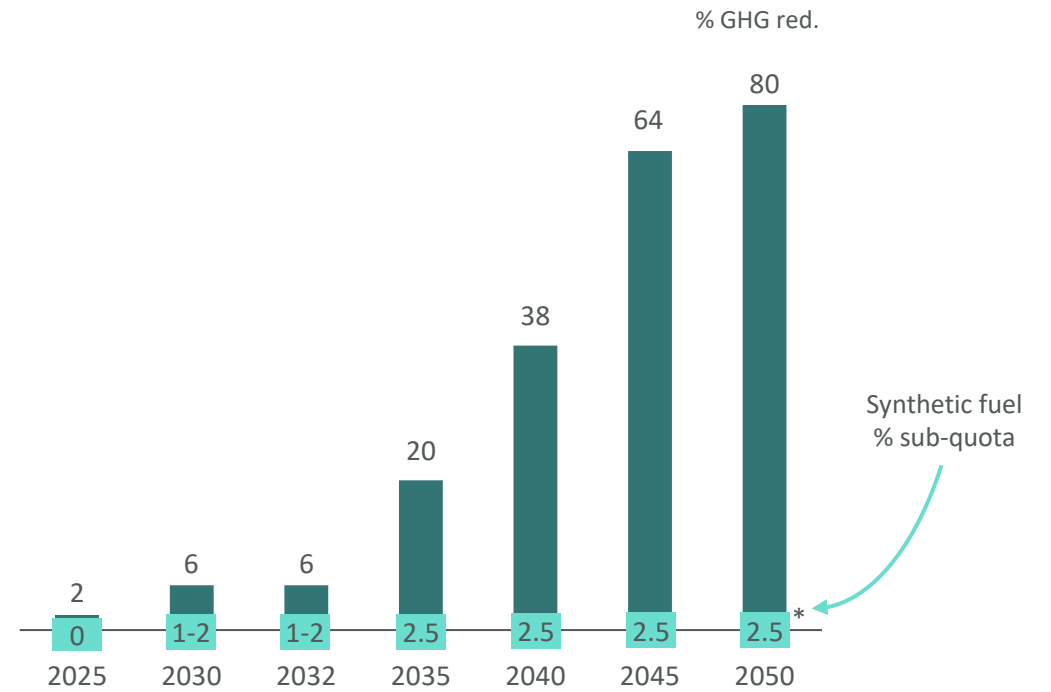


* Numbers based on historical trends and sector expectations on total EU aviation growth in fuel consumption. Conservative e-Fuel production efficiency improvements have been factored in.



FuelEU Maritime

% GHG-reduction target from 2025 and specific min. sub-quota for synthetic fuels (PtX)

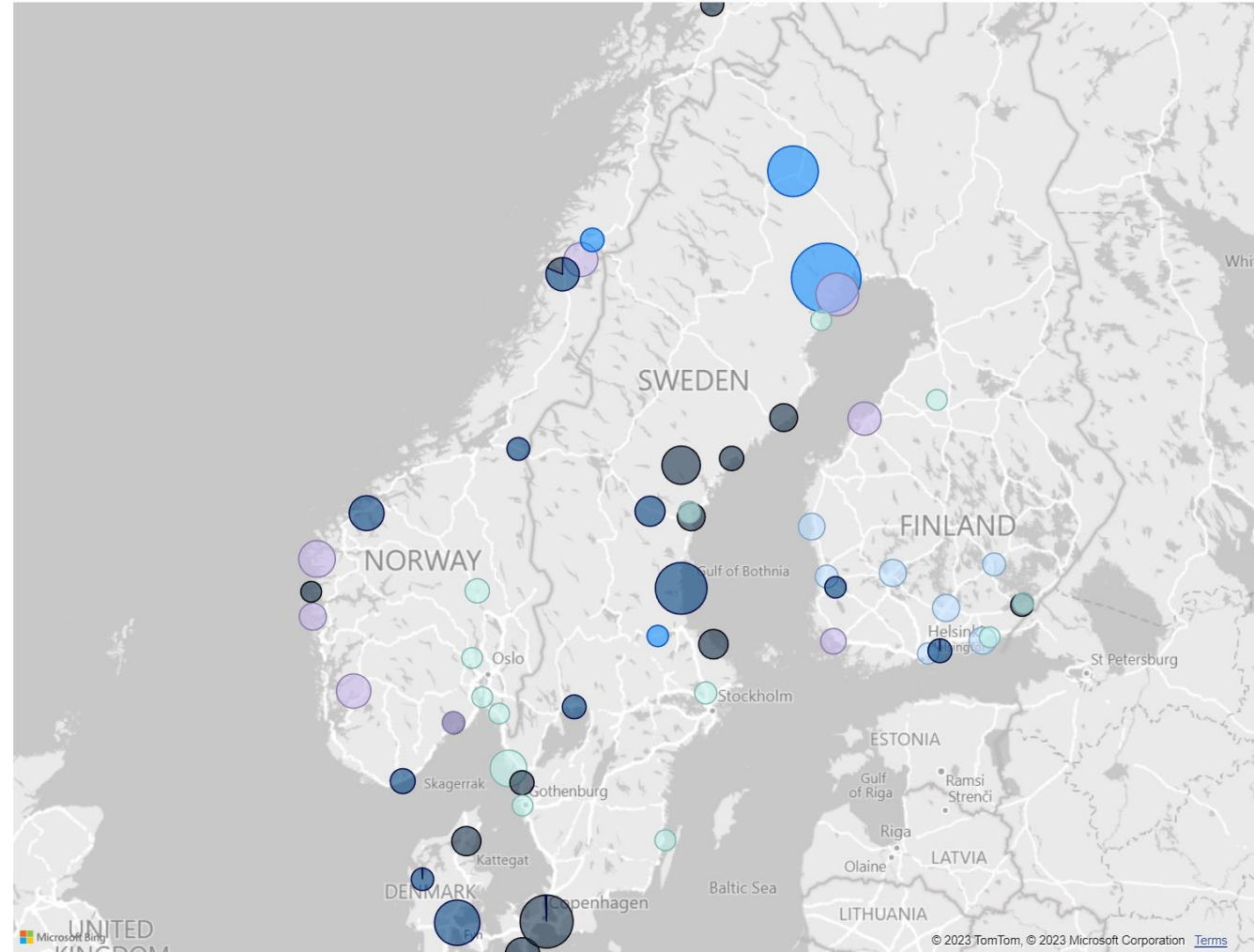
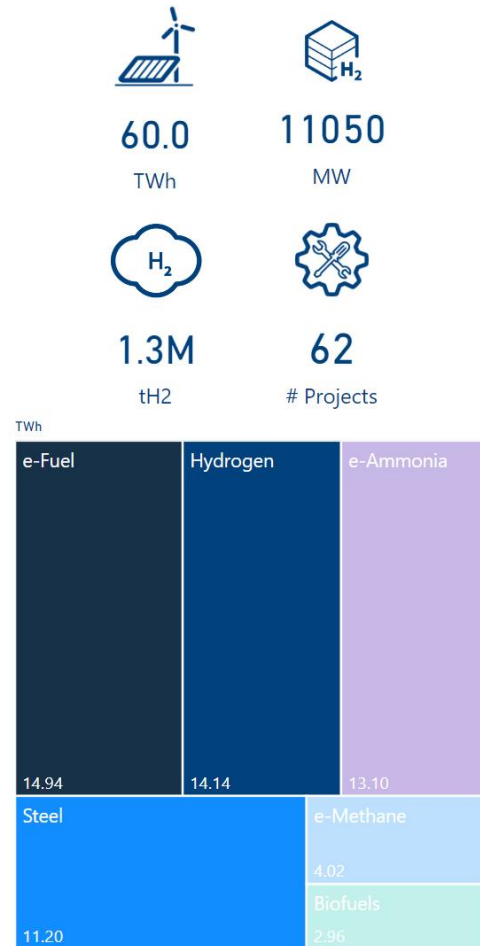


* Assuming 80% GHG emission reduction for synthetic fuel

Announced Power-to-X projects in the Nordics

Development towards 2030

Announced projects in the Nordics with commissioning by early 2030s






* Bubble size reflect the estimated annual energy consumption. Numbers based on Norsk e-Fuel's market investigation. We make no claim to the completeness and accuracy of the data. Should only be used in an illustrative manner

The Nordic region can be Europe's PtX hub




The opportunities and challenges for a Nordic PtX economy



Key opportunities in the Nordics:

- |  Legislation (REDII) puts the Nordics in an advantageous position.
- |  Large electricity surplus and continued growth in renewables
- |  Good access to other feedstocks needed for PtX
 - | Biogenic-CO₂, Land, etc.

Challenges to be addressed

- |  Power availability starting to become a bottleneck.
- |  Supply chains is not mature.
- |  The right political support for early adopters and offtakers



Thank you!

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