# 40 % Efficiency 2-5 % improvements **Carbon Direct** (fuel/operations) Removal 12 % **Alternative** 46 % propulsion Sustainable aviation fuel **Aviation net zero 2050** Sources: EU 2021, IEA 2021, IEA, 2022

### Ready to replace fossil fuels today

### What makes e-Fuels great?

#### No feedstock limitations

synthetic fuels are produced from  $CO_2$  and water through electrochemical reaction

#### 99% less emissions

Our e-Fuels burn cleaner and emit 99% less greenhouse gasses than fossil fuels while being just as versatile

#### Independence + Resilience

The economics of e-Fuels are free from the price of Oil&Gas

#### Saving water and land

e-Fuels don't compete with food crops, use 95% less water and are 8x more land efficient than biological alternatives

## Same Airports, same Turbines

Our e-Fuels are certifiable for up to 50% drop-in according to ASTM D7566 and can be used in existing infrastructures today

### ReFuelEU Aviation sub-quota is also a CCU / CO<sub>2</sub> quota

### 53Mt/a of CO<sub>2</sub> demand by aviation industry alone



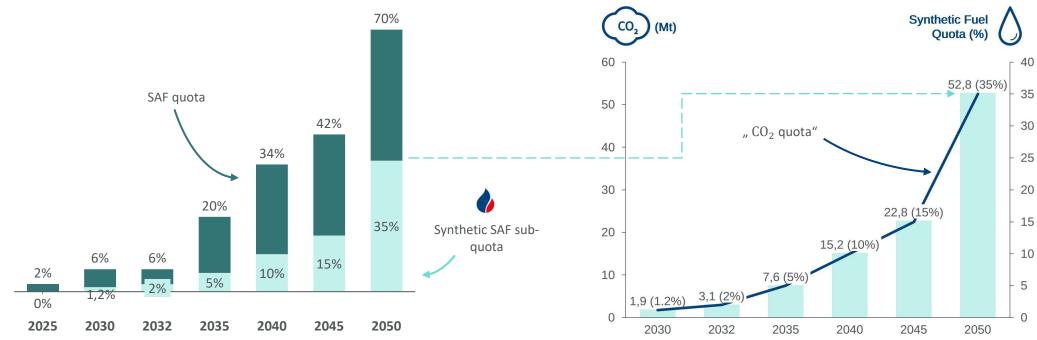
#### **ReFuelEU Aviation Quota (2030 – 2050)**

Establishes a SAF quota starting 2025 and includes a specific min. **sub-quota demand for synthetic fuels** 



"CO2 Quota" (2030 - 2050)

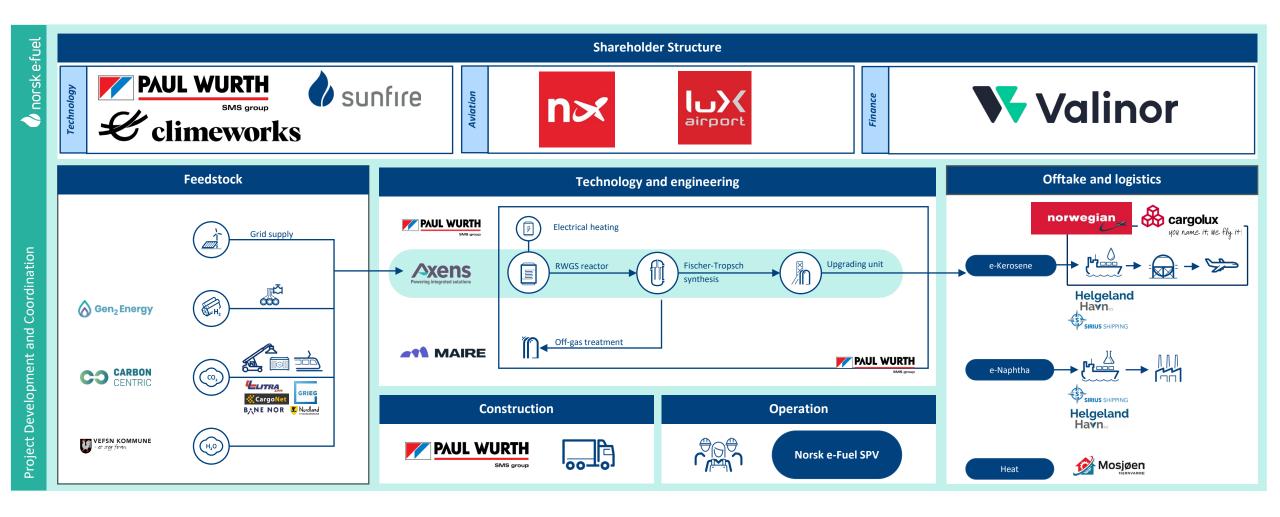
Ca. 3t\_CO<sub>2</sub> are needed to produce 1t\_e-SAF for the sub-quota demand for synthetic fuels





### Value chain overview, Alpha Plant in Norway

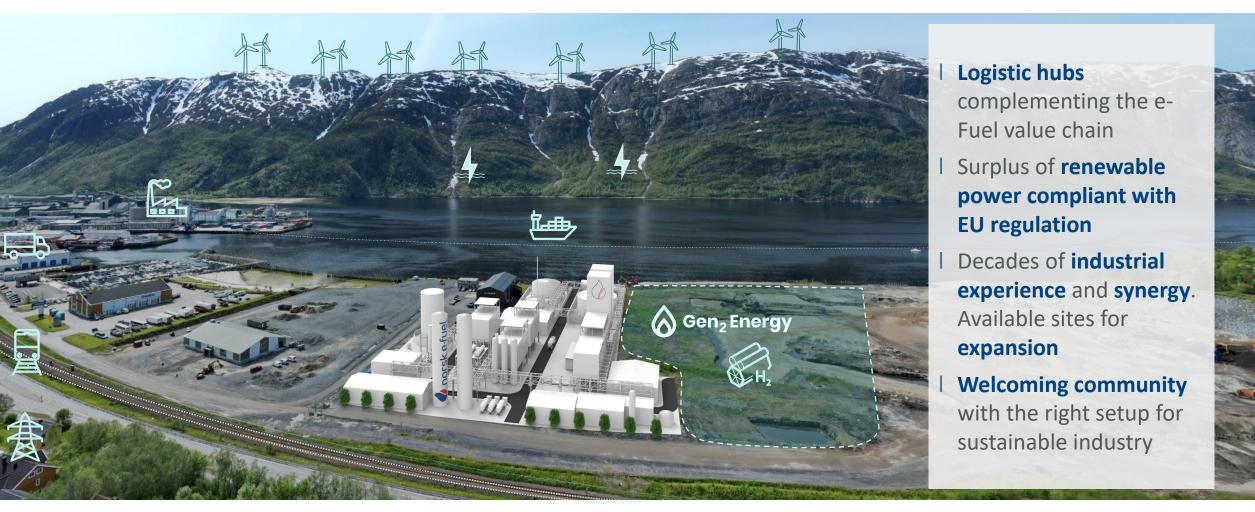
### Feedstocks, production and offtake





### Advantages of the Nordics for a strong developing e-Fuel industry

## From Mosjøen to the world

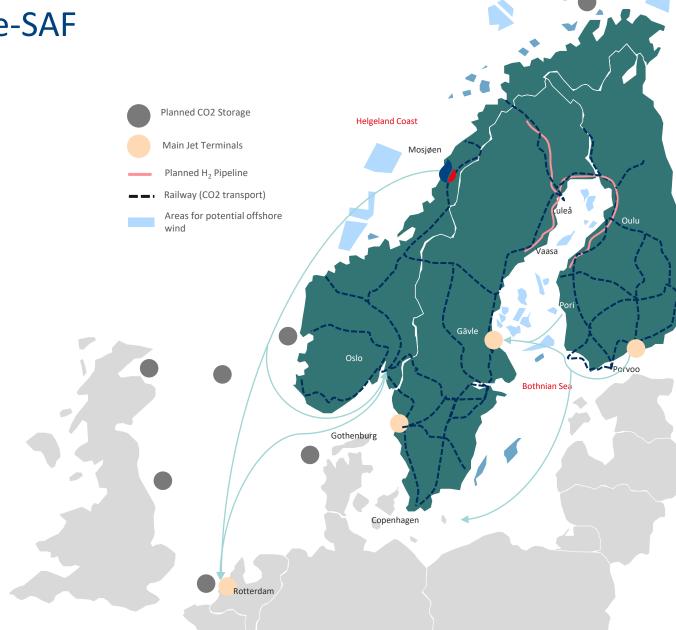




### Norsk e-Fuel's strategy for e-Fuel production in the Nordics

## Key regions for developing Nordic e-SAF

- Helgeland (NO) and the Bothnian Sea (FI & SE) are key regions in the production of e-SAF
- Here, CCU enables <u>local value creation</u> through  ${\rm CO_2}$  recycling into sustainable chemicals and fuels
- CCU is an <u>oil and gas disrupting</u> technology which strengthens energy security and lowers fossil emissions
- <u>Distances to sub-seabed CCS can be far, CCU can in many</u> cases be a suitable alternative.
- The EU Impact Assessment report for 2040 shows <u>targets</u> of 200Mt/a for Utilization of CO<sub>2</sub> (compared to 250Mt/a for Storage of CO<sub>2</sub>)







# Thank you!

