Bio-CO2 Use & Removal 2025

Ida Marie Larsen
Manager Public Affairs and Funding
ilarsen@norsk-e-fuel-com

SAF needed to achieve climate goals

The aviation industry today

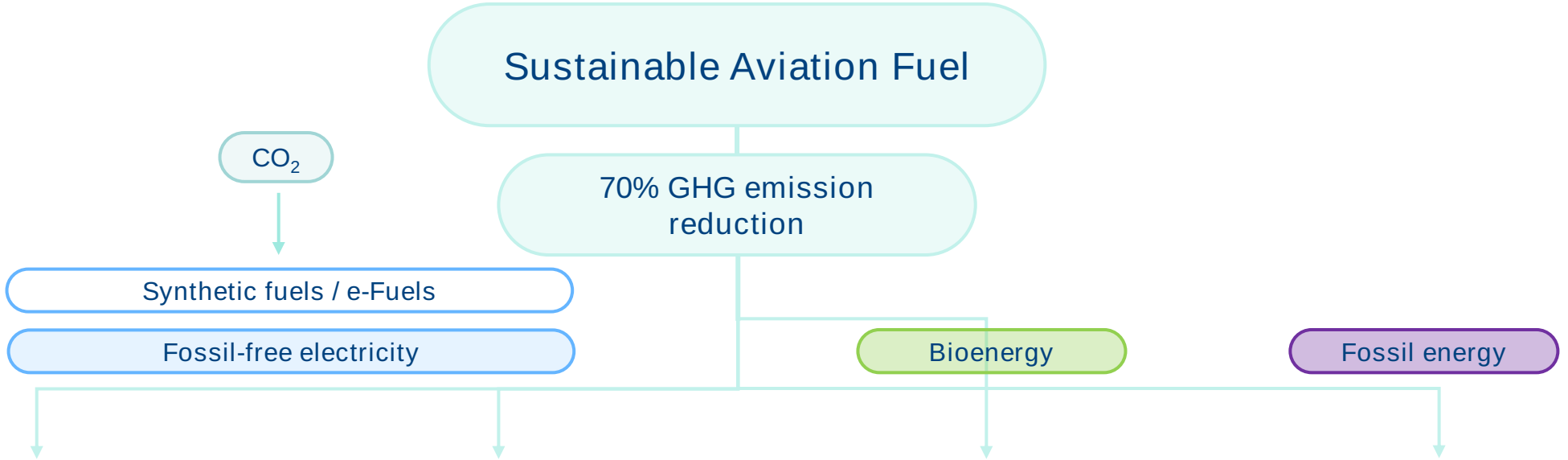
Aviation…

- …is a hard-to-abate industry with limited available alternatives
- …is hard to “de-liquify” - transitioning to battery and hydrogen powered aircrafts will take decades
- …needs SAF as important solution to achieve large emission reductions fast
- … is targeted by EU regulations to support SAF market expansion, adoption and use

Source: World Economic Forum, 2023

Defining sustainability

What is SAF according to the EU?



Renewable fuels of non-biological origin (RFNBOs)

Fuels produced from renewable power

Synthetic low-carbon fuels

Fuels produced using non-fossil low-carbon energy such as nuclear power

Biomass fuels e.g., advanced biofuels

Fuels produced from certain biomass including for example: forestry residues, bio-waste, used cooking oil or certain animal fats

Recycled carbon fuels

Non-recyclable waste streams e.g., plastics, and unavoidable industrial gasses (CO)

Ready to replace fossil fuels today

What are e-Fuels?

No feedstock limitations

Our e-Fuels are synthetic fuels produced from CO_2 and water through electrochemical reaction

Saving water and land

Our e-Fuels do not compete with food crops, use 95% less water and are 8 times more land efficient than biological alternatives

99% less emissions

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

Ready for use today

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

High Independence

Our e-Fuels are a solution to increase geopolitical energy independence

By 2050 the EU alone will need m liters of e-Fuels

Market for e-Fuels driven by quota system

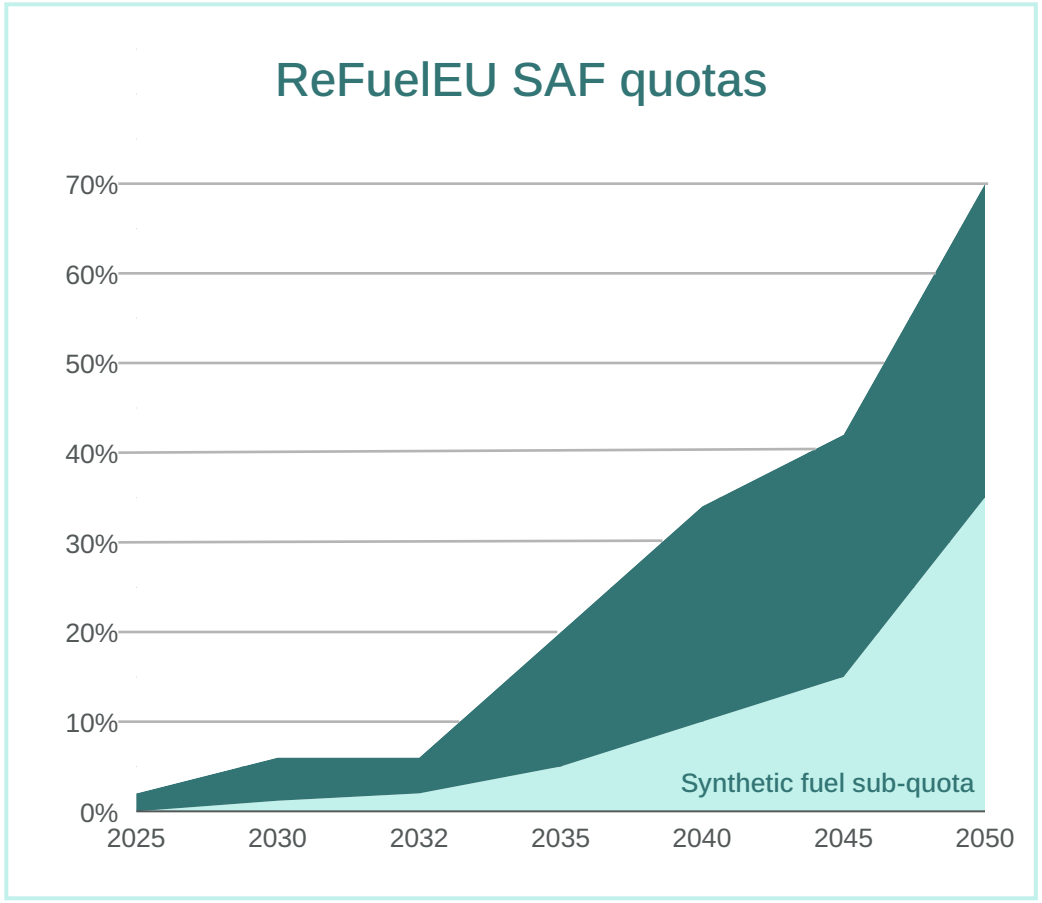
The EU is implementing a quota system for SAF and includes a specific sub-quota for e-Fuels

By 2030 alone, the EU will require up to

650,000 t e-Fuels

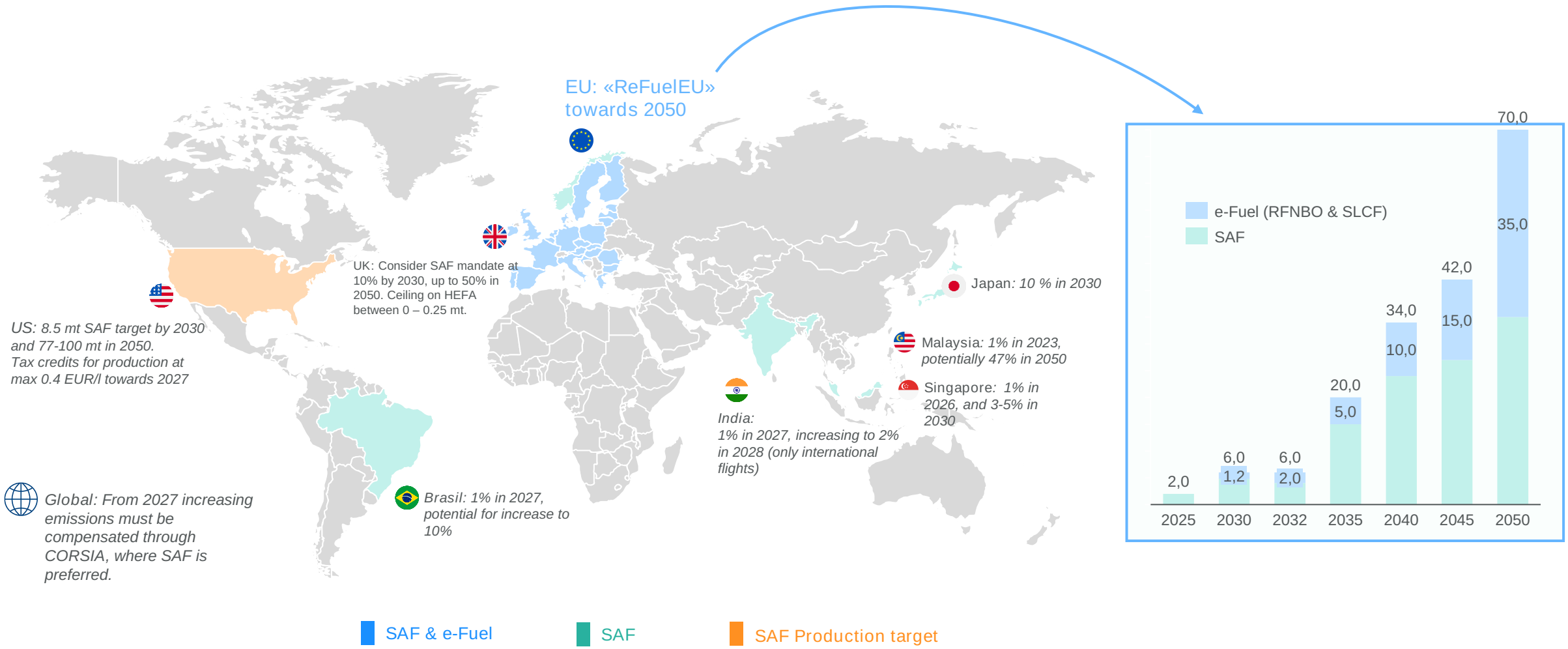
Non-compliance will be penalized

Airlines already target higher SAF shares



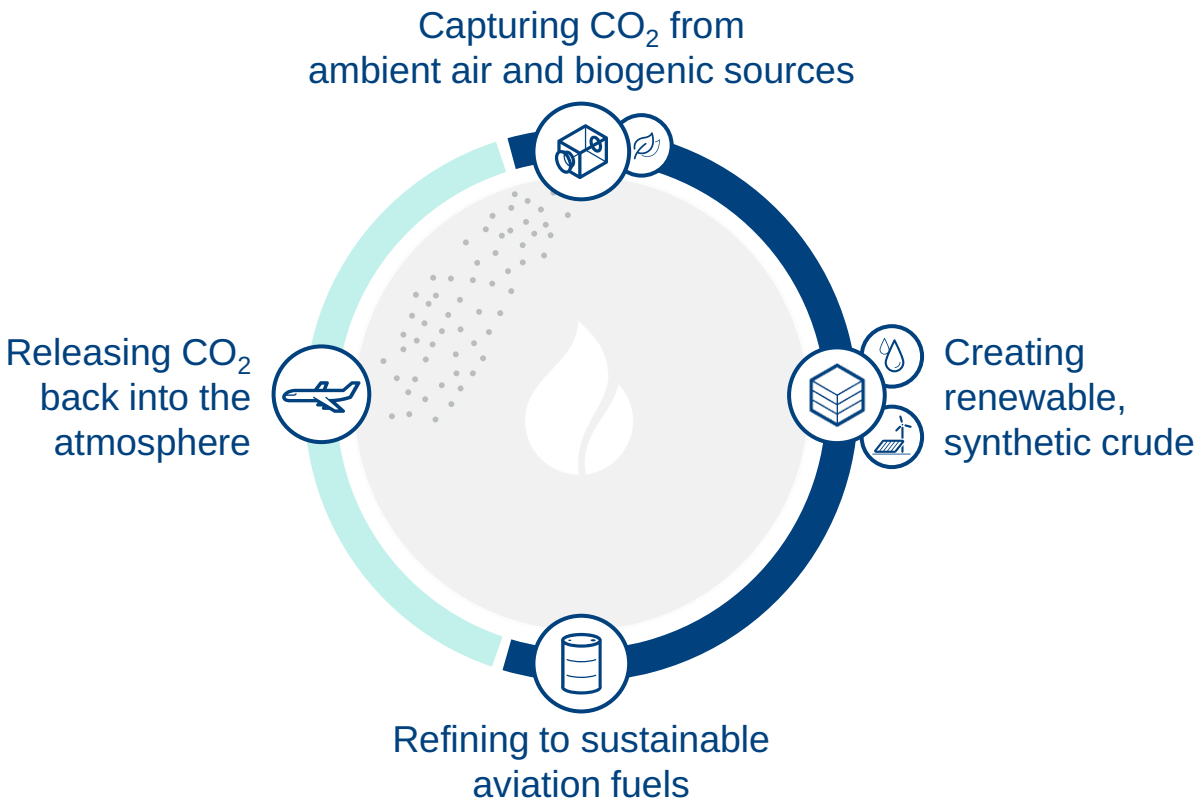
Sources: Mission Possible Partnership (2023); EASA (2023)

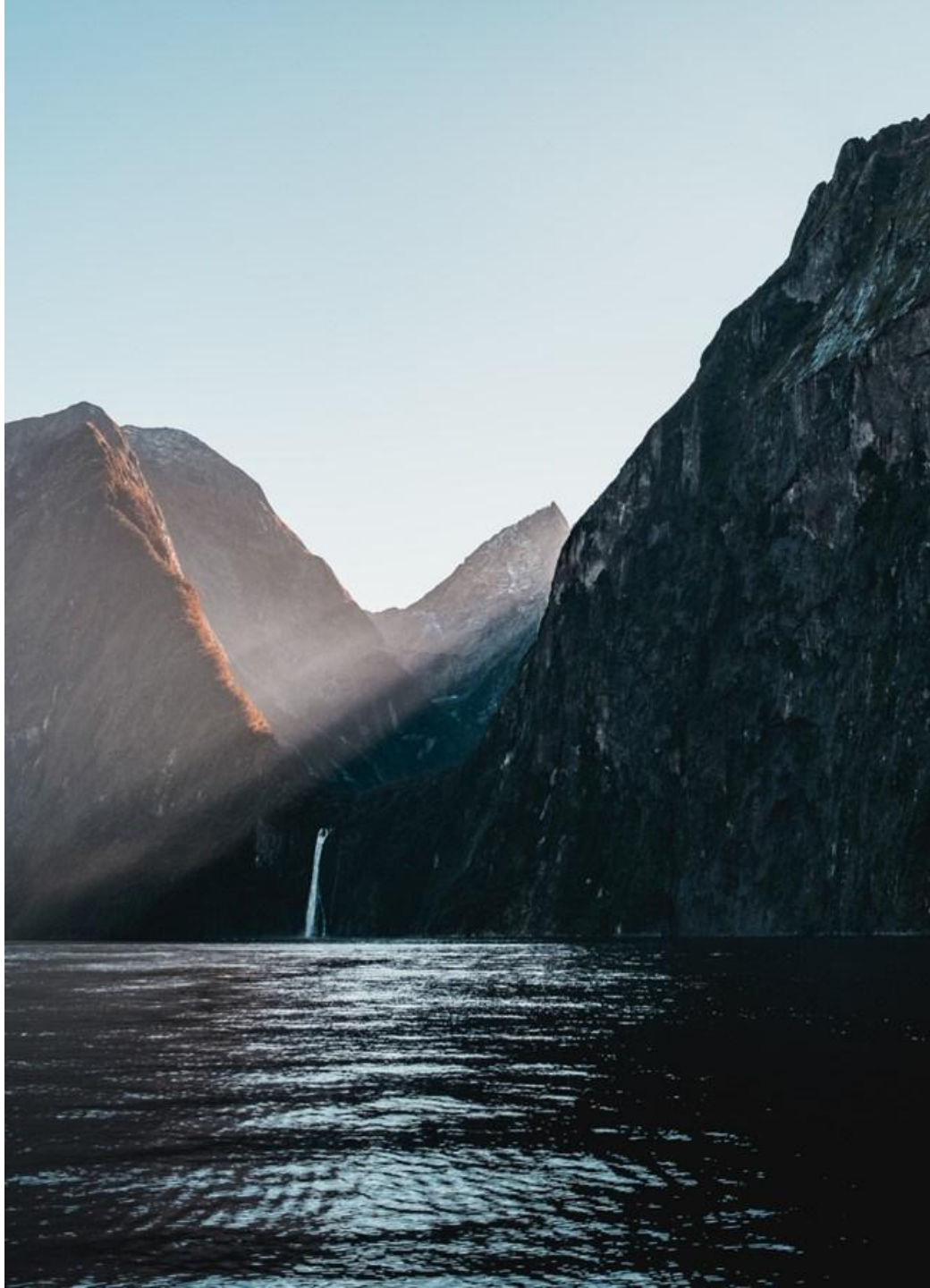
SAF mandates are being implemented in several countries, and reflects both political and sustainable ambitions internationally



e-Fuels as circular economy

This is how our solutions works





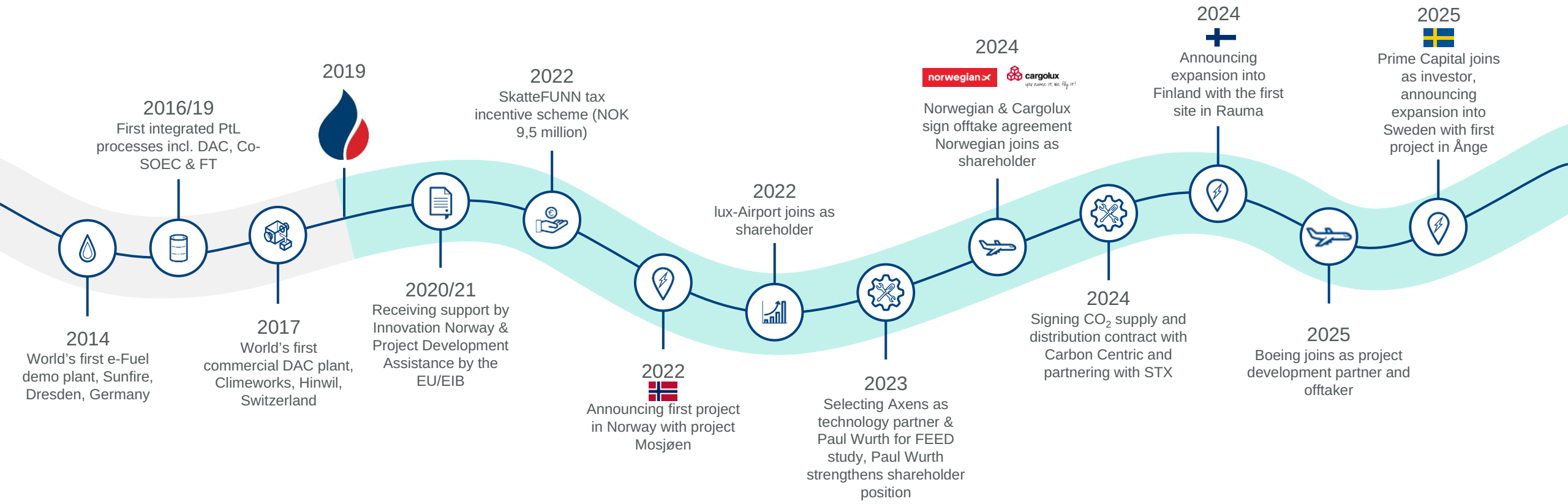
Strategic investors contribute know-how and networks

The power behind the company

- PAUL WURTH SMS group — Leading **engineering company** & technology provider
- PRIME CAPITAL — **Asset management firm** & financial services provider
- sunfire — Global leader for **industrial electrolyzers**
- Valinor — Norwegian **sustainable investment company**
- climeworks — Technology leader for **Direct Air Capture** of CO_2
- lux airport — **Aerodrome operator** of Luxembourg Airport
- norwegian — **Largest Norwegian airline** & low-cost carrier

From validation to foundation to realization

Track record and company history



Securing site in Rauma, Finland

Securing a site for e-Fuel production in the Port of Rauma and partnering with Fortum for site development and grid planning

- Pre-developed site with good logistical infrastructure
- Partnership with Fortum for further site development and grid planning
- Strong grid and more renewable energy production expected to come online
- Local and regional partnerships and feedstock availability (e.g. CO_2) for a strong value chain

We are building a strong project pipeline for future growth

Our project pipeline across the Nordics

Why the Nordics?

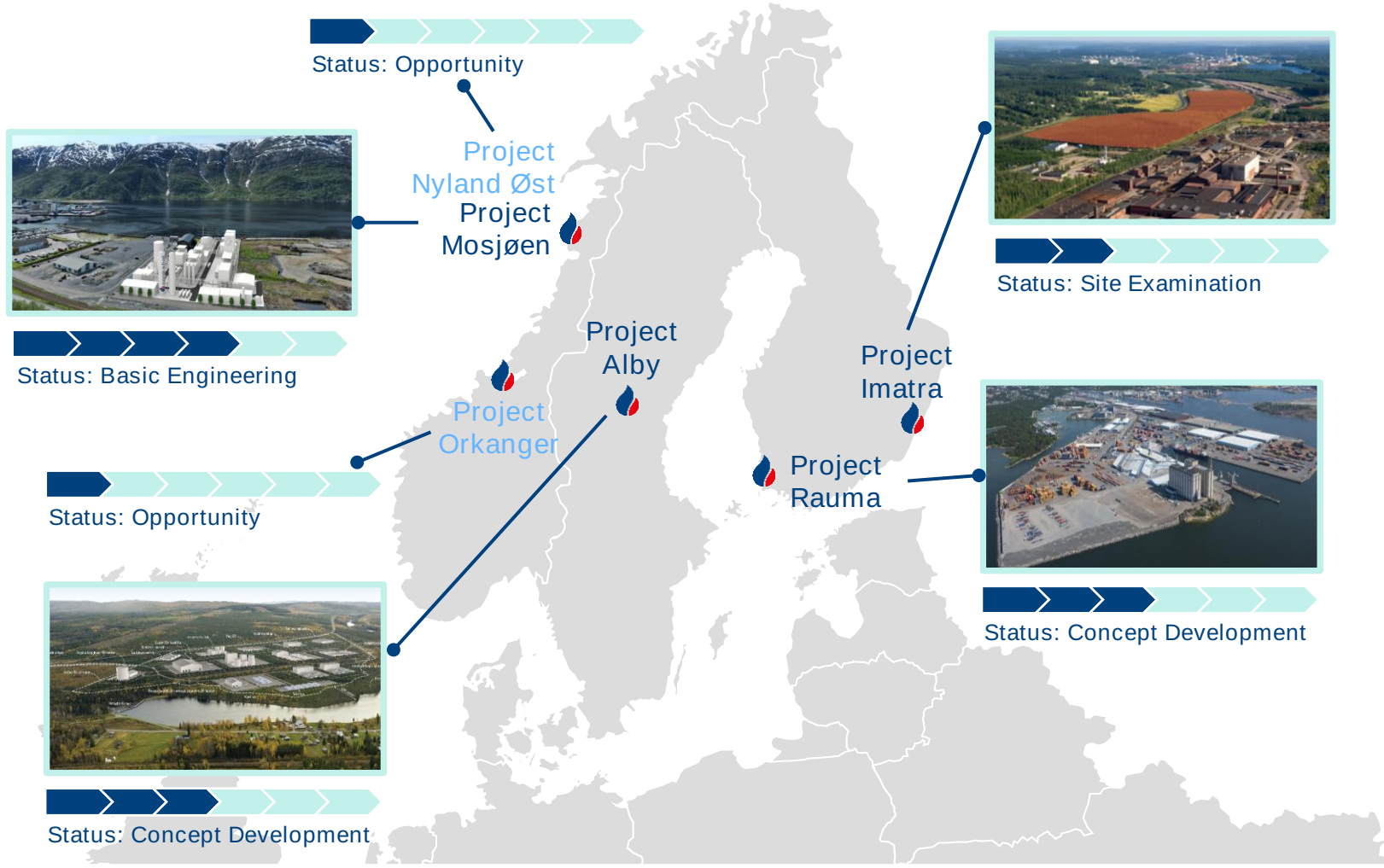
Surplus of low-carbon power at competitive prices

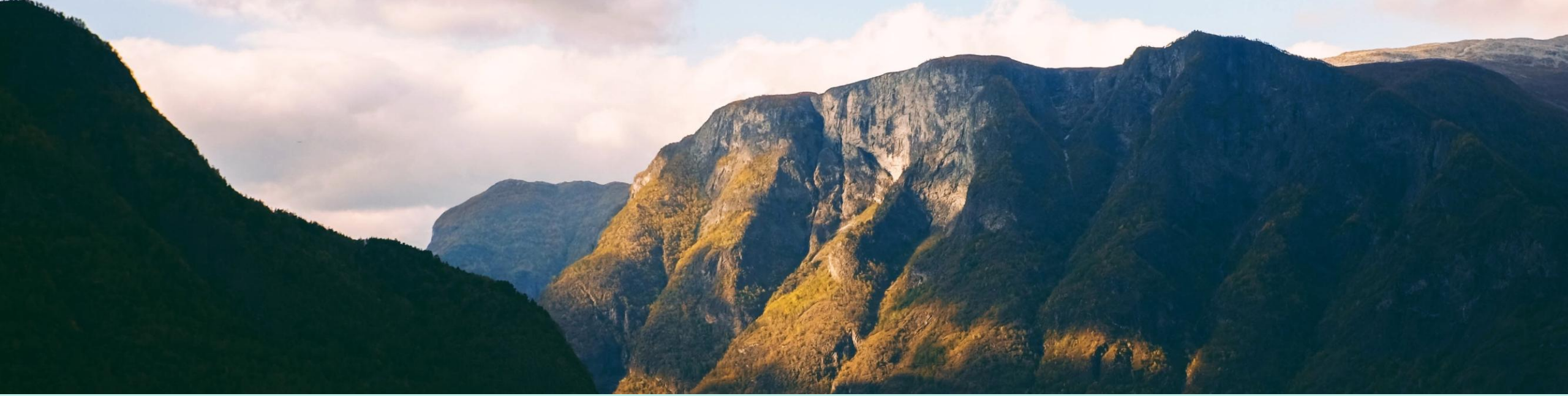
Easier compliance with EU regulation (e.g. RED II)

High availability of suitable CO_2 sources for production

Expert know-how on fuel handling and logistics

Availability of industrial land with potential for expansion





We turn CO_2 and water into the sustainable fuels of the future

norsk e-fuel

Thank you!

ilarsen@norsk-e-fuel.com
www.norsk-e-fuel.com