



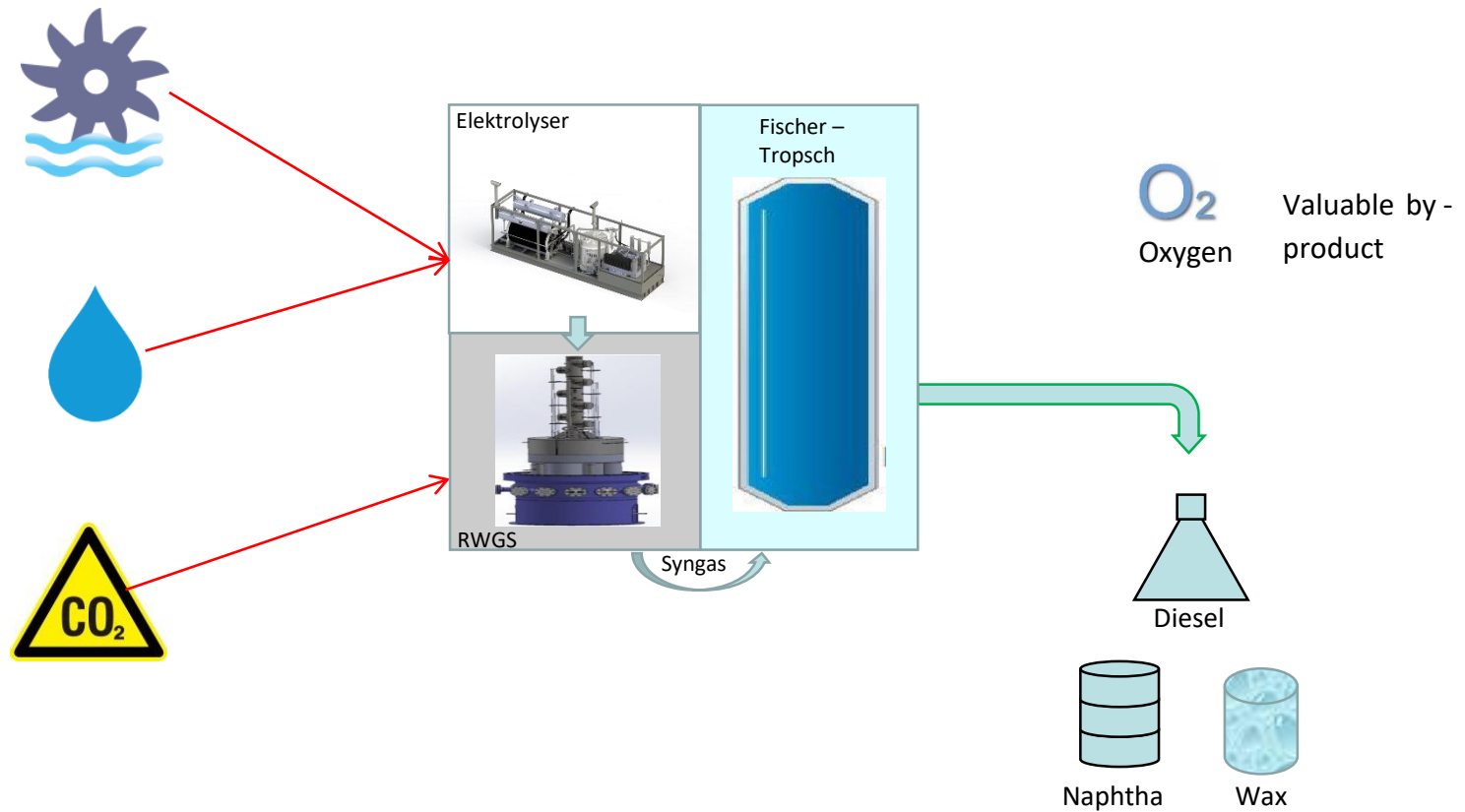
**Nordic Blue Crude 19SEP 2019**

**CEO Gunnar Holen**



**85% Carbon Neutral**

# E Fuels – Production & Products (PtL)



Renewable Energy is used to split water vapor ( $H_2O$ ) to hydrogen ( $H_2$ ) and oxygen

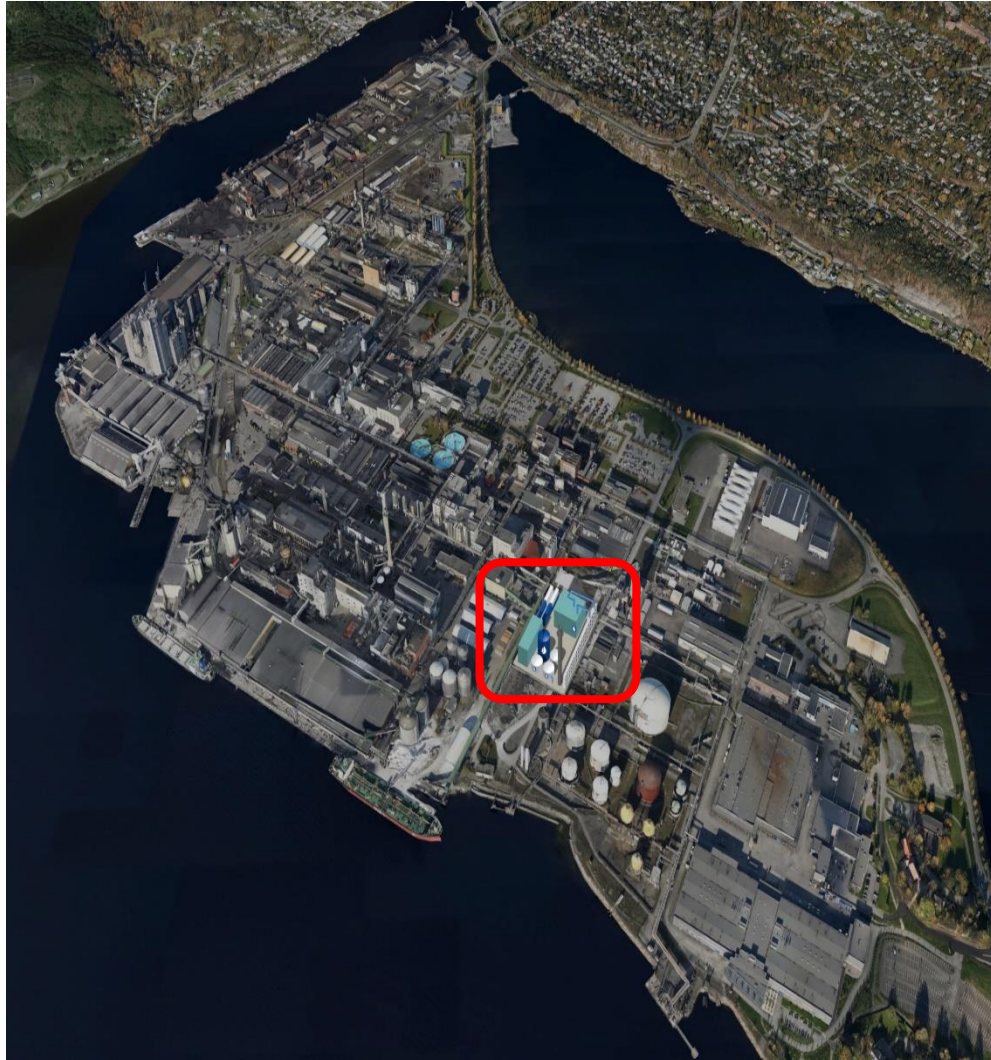


Hydrogen from electrolysis reacts with carbon dioxide ( $CO_2$ ), and reduced to carbon monoxide ( $CO$ ).



This synthetic gas ( $H_2$  and  $CO$ ) is converted to Blue fuel products consisting of wax and enhanced premium diesel and naphtha through a synthesis process.

## E-Fuel 1 – Production plant connected to existing infrastructure in Norway



Location secures affordable access to:

- Unavoidable CO<sub>2</sub>
- Renewable Hydropower
- Existing infrastructure
- Industrial expertise
- Technological innovation hub



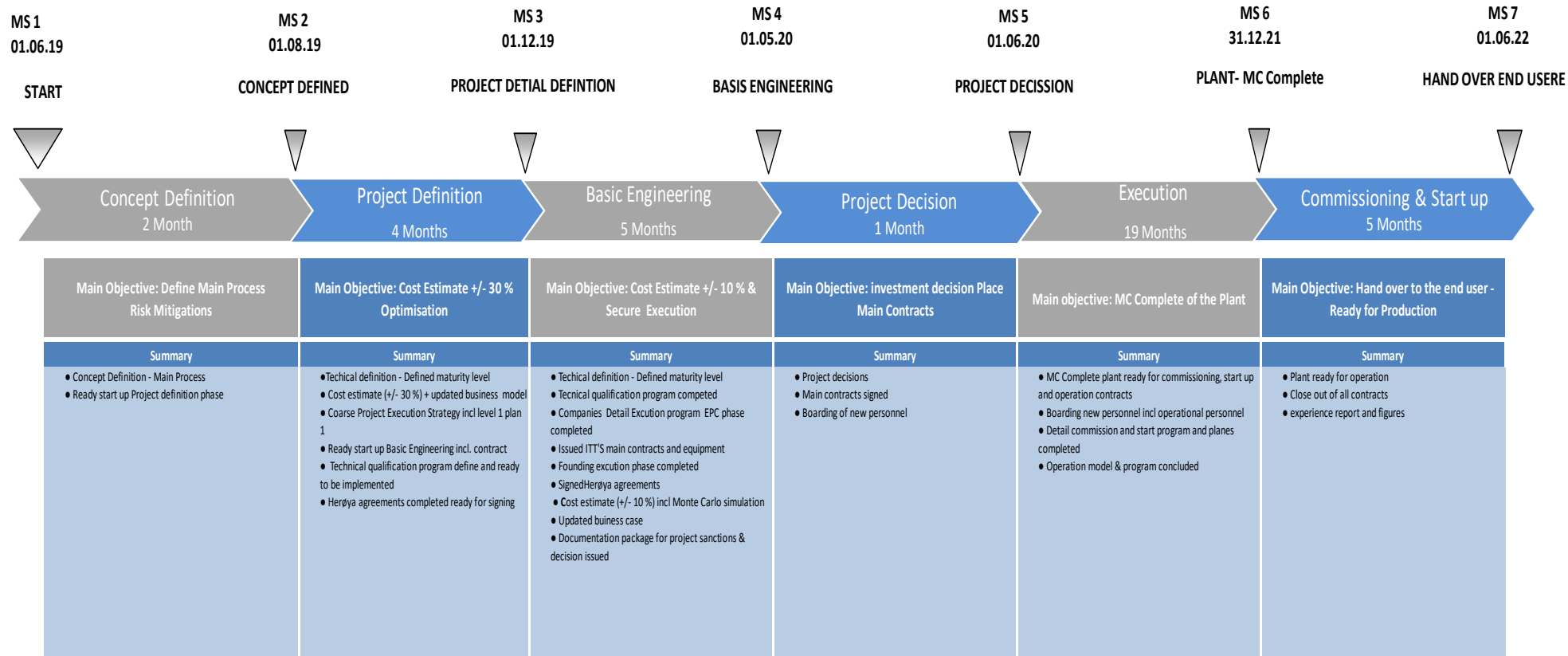
20X scale to original plant

Nordic Blue Crude “E-Fuel 1” Plant at Herøya, Norway, planned comm. 2022

## Financing Structure First Plant

NBC Financing structure E-Fuel 1 (10 mill liter plant)				
Type	Issuer	NOK mill	€ million	%
Total		750	75	100
Grants	Enova	150	15	20,0 %
Loan	Bank	100	10	13,3 %
Grants	Innovation Fund	350	35	46,7 %
Equity	Strategic Investors	150	15	20,0 %

# Project Definition ongoing with AKER Solutions



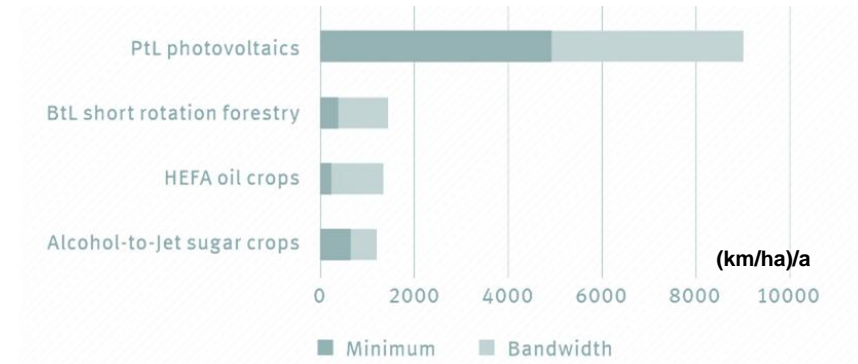
- Concept definition developed with support from NTNU<sup>(1)</sup>
- Process patent application pending
- Firming up Letter of Intents on utilities, location & feedstock

(1) Norwegian Technological University, Trondheim, Norway

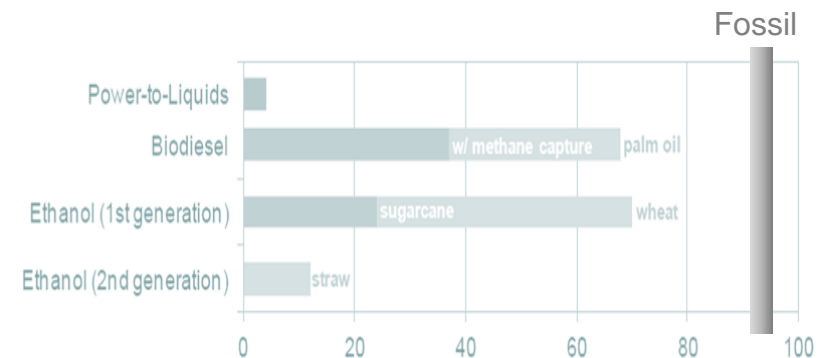


## Nordic Blue Fuel - key advantages

- **Zero cost** for infrastructure
- **Usable in hard to electrify sectors, Aviation sector target**
- **8x more efficient use of land area**
- **85 % reduction in CO<sub>2</sub> emissions** compared to fossil fuel<sup>(1)</sup>
- **Up to 100 % pollution reduction**



Achievable air mileage for an A320neo per ha of land

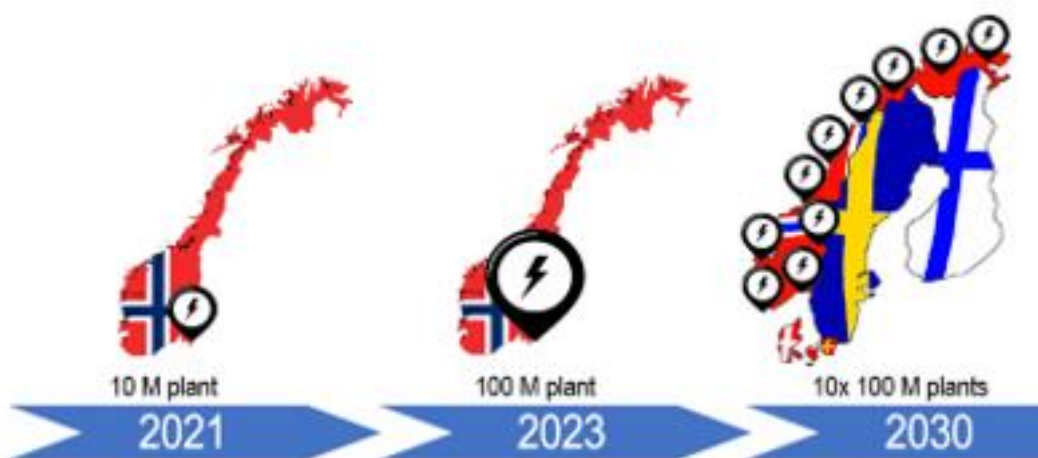


Life cycle green house gas emissions (gCO<sub>2</sub>eq/MJ)

# Commercialisation Strategy

- + Multiple off-take agreements in place @ prices which provides a sustainable business case
- + Unique advantages through location which secures affordable access to feedstock
- + Potential sites for expansion identified to fulfill the ambition to scale to 1 billion liter in 2030

Key for success is access to renewable power and CO2



## Customers



## Fuel Products



## Wax Products

