



**Nordic  
Electrofuel**

Clean at scale



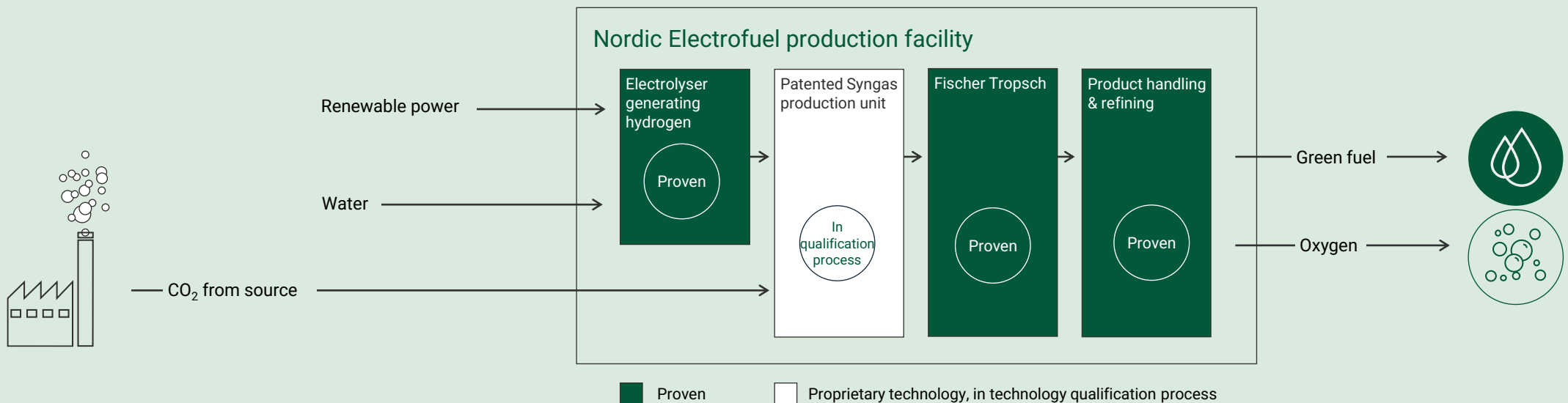
**Nordic Electrofuel will make it Green to Fly!**

# We produce sustainable fuel from green hydrogen and CO2 utilizing the Power-to-Liquid (PtL) pathway

**Electrolysis** uses renewable energy to split water into hydrogen and oxygen.

We focus strictly on applying well proven technologies from **reputable partners**.

Adding our **proprietary technology** brings down operating costs and increases lifetime.



# First mover advantage and robust technological platform developed together with reputable partners

## Milestones

Dec 2019 Marquard & Bahls strategic investment	March 2020 Patent application filed	Apr 2020 Freedom to Operate Opinion JA Kemp	Dec 2020 Feasibility study E-fuel 3	Feb 2021 FEED Kick-off	Apr 2021 WM - Parkshore Holding strategic investment	Mar 2022 Life cycle analysis confirming 99.9 % emission avoidance	2H 2023 Construction start / EPCI	2H 2025 Commissioning & production start-up
		 						

## Technology maturity



# Very positive macro developments for e-fuels

## ***EU political drive for synthetic SAF***

- Refuel EU Aviation sub target for RFNBOs in 2030 of 1.2 %, increasing to 35 % in 2050.
- SAF targets 6% in 2030 increasing to 70 % in 2050

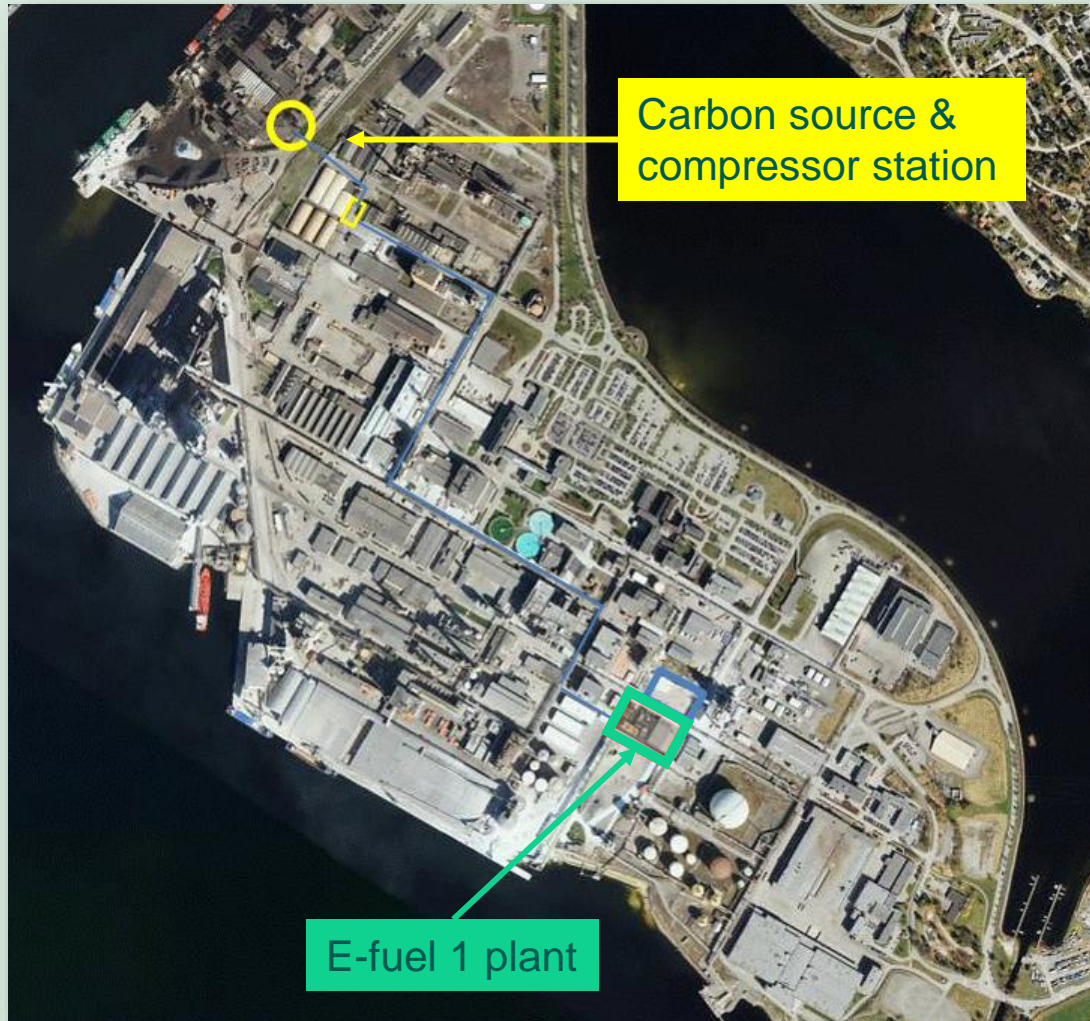
## ***Supportive policy confirmations***

- Norwegian grid power counts as renewable and can be used for producing e-fuels – no need for a dedicated renewables project
- CO2 captured from emissions of fossil origin can be used for RFNBO until 2035
- Acceptance by ESA of Norwegian state paying CO2 Compensation to power intensive green industry using hydrogen

## ***Return boost from repricing of SAF***

- Price increases following a dramatic demand increase combined with no material new e-fuel supply and limitations in bio-based supplies
- Our projects are located in the Norwegian price areas with attractive power price outlook

# Site Location- Herøya Industrial Park (Norway)



# 3D-Model after completed FEED



# Solid Technical and Project Maturity

- ✓ The technology- and project development have been executed according to well recognised methods and together with reputable partners
- ✓ Licensor and Suppliers of main equipment units will take process guarantees including commercial liabilities
- ✓ High score from EU innovation fond issued March 2022
- ✓ Investors have carried out extensive technical DD processes e.g.,Chiyoda, Arup etc. The current equity funding from the investor is to be concluded in coming months and will be in range of 65 – 95 Million Euro.
- ✓ Several partners are willing to licence our technology
- ✓ All necessary authority applications were applied for last summer and are expected to be approved shortly

Component		TRL
Alkaline electrolyser		9
Electrolysis system		9
Fischer-Tropsch reactor		8
Fischer-Tropsch system		8
Syngas production components	POX burner	8
	POX reactor	9
	Syngas cooler	9
	Syngas drying	9
Syngas production system		8
Syngas cleaning		9

# GHG calculation has been verified by Bureau Veritas

- ✓ The RED GHG methodology is in line with GHG methodology set by EU Innovation Fund. Hence our **relative CO<sub>2</sub>-emission avoidance will be above 99%**
- ✓ This has been checked and verified by Bureau Veritas



Verification date: 28-02-2022

## Verification /validation of GHG calculator following the criteria in annex C

Summary- Absolute emissions avoidance	240 839 ton CO <sub>2</sub> e Validated – verified as stated
Summary- Relative emissions avoidance	99,9 % Validated – verified as stated



# Ambitious expansion plan targeting above 1 billion liters of green fuel by 2033

Land and feedstock for E-fuel 1 is secured and negotiations initiated for E-fuel 2.

Negotiations for additional new sites are in process, with the ambition of producing above 1 billion liters E-fuel by 2033. Have evaluated economics of 1 billion liter plants.

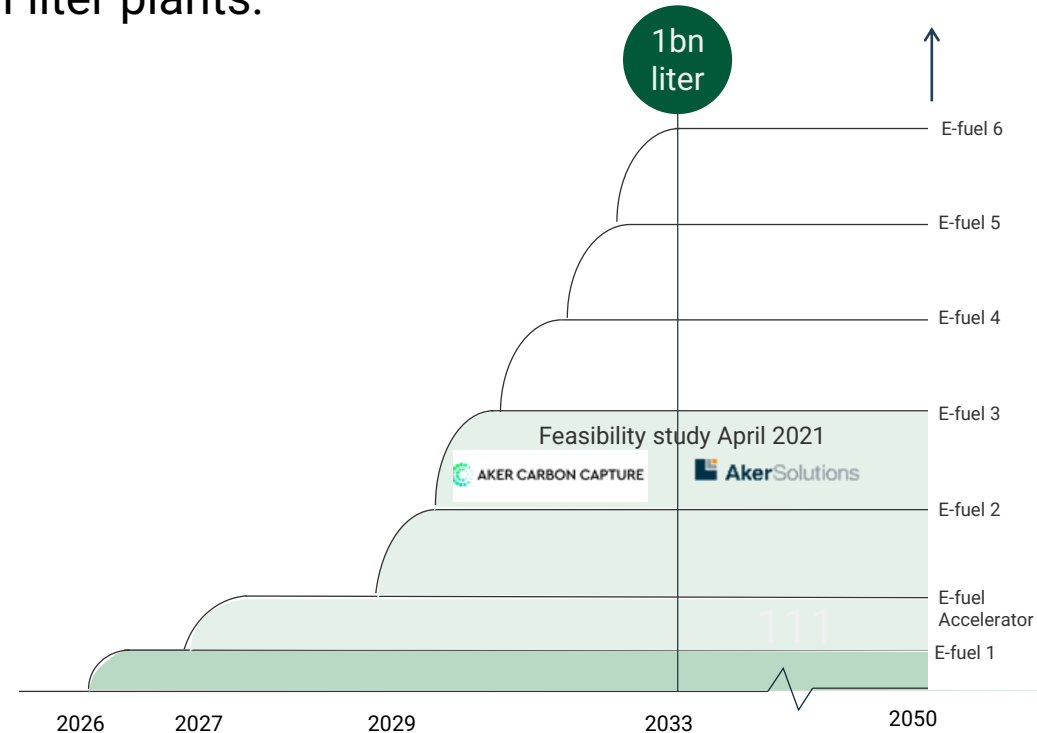
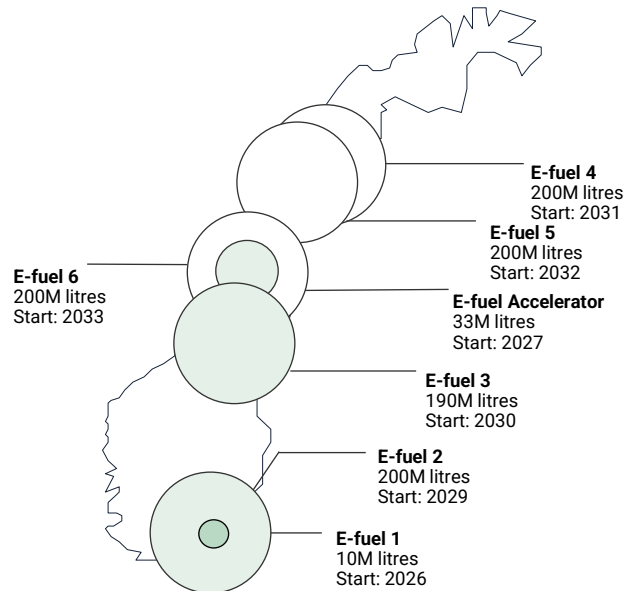
2033 target in litres

1bn

Capex for 200M litres facility in EURm

600

## Norwegian expansion plan



# Highly experienced team with strong execution power

Nordic Electrofuel has a highly experienced and balanced management team of six professionals. Board of Directors with members holding extensive management and board experience from listed and non-listed companies.

Team members

10

Core team overview



Gunnar Holen  
CEO  
30+ yrs



Tom H. Sundby  
CFO  
25+ yrs

Board members

5

Overview of Board of Directors



Rolf Bruknapp  
Chairman



Bastian Müller  
Board Member

Average years of professional experience

30+



Rolf Bruknapp  
Founder  
30+ yrs



Rune Løvstad  
Project Director  
30+ yrs



Harald Norvik  
Board Member



Jörg Walter  
Board Member



Bjørn Bringedal  
Chief Technical Officer  
30+ yrs

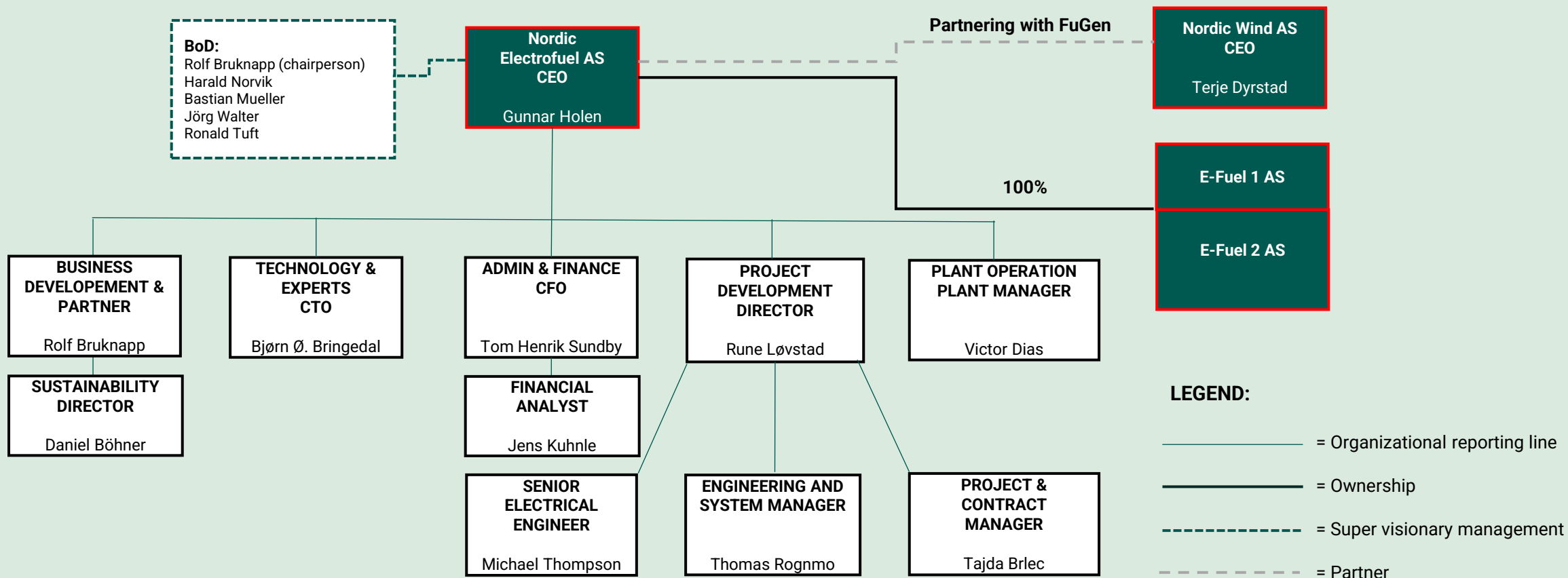


Victor Dias  
Plant Manager  
20+ yrs



Ronald Tuft  
Board Member

# Nordic Electrofuel - Company and organization



# Reputable partners and research bodies

Our technology solution is developed by Nordic Electrofuel in close collaboration with a number of reputable partners and research bodies. Close cooperation with the leading experts on heat exchange solutions and synthetic fuel production increases quality and limits risk of our project.



Shareholder

Founded	Employees	Reach
<b>1947</b>	<b>3 000</b>	<b>Global</b>

**Marquard & Bahls AG** is an agile, independent holding company in the energy and chemicals sector. Founded in 1947, the company's vision is to be a successful ethical investor supporting human development.



Technology provider

Founded	Employees	Reach
<b>1910</b>	<b>1 700</b>	<b>Global</b>

With more than 100 years of experience, **Arvos Group** is the leading expert on heat exchanging solutions. Arvos verifies and delivers our syngas and heat recuperation system.



Technology integrator

Founded	Employees	Reach
<b>1841</b>	<b>15 000</b>	<b>Global</b>

**Aker Solutions** has executed the Feasibility and Concept study together with Nordic Electrofuel and have completed the FEED.



Research provider

Founded	Employees	Reach
<b>1760</b>	<b>7 600</b>	<b>Norway</b>

Experts from **Norwegian University of Science and Technology (NTNU)** has developed kinetic simulation models of the syngas reactor to demonstrate the viability of the design..



Potential shareholder

Founded	Employees	Reach
<b>1954</b>	<b>80 000</b>	<b>Global</b>

**Mitsubishi Corporation** is Japan's largest trading company. The company is a global integrated business enterprise with offices and subsidiaries in approximately 90 countries and regions worldwide.

# We are the leading initiative for producing green fuel

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Exponential market growth for liquid green hydrogen fuel

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Proven technology with a magic touch

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Scalable concept with attractive economics

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Highly experienced team and reputable partners



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## Disclaimer

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