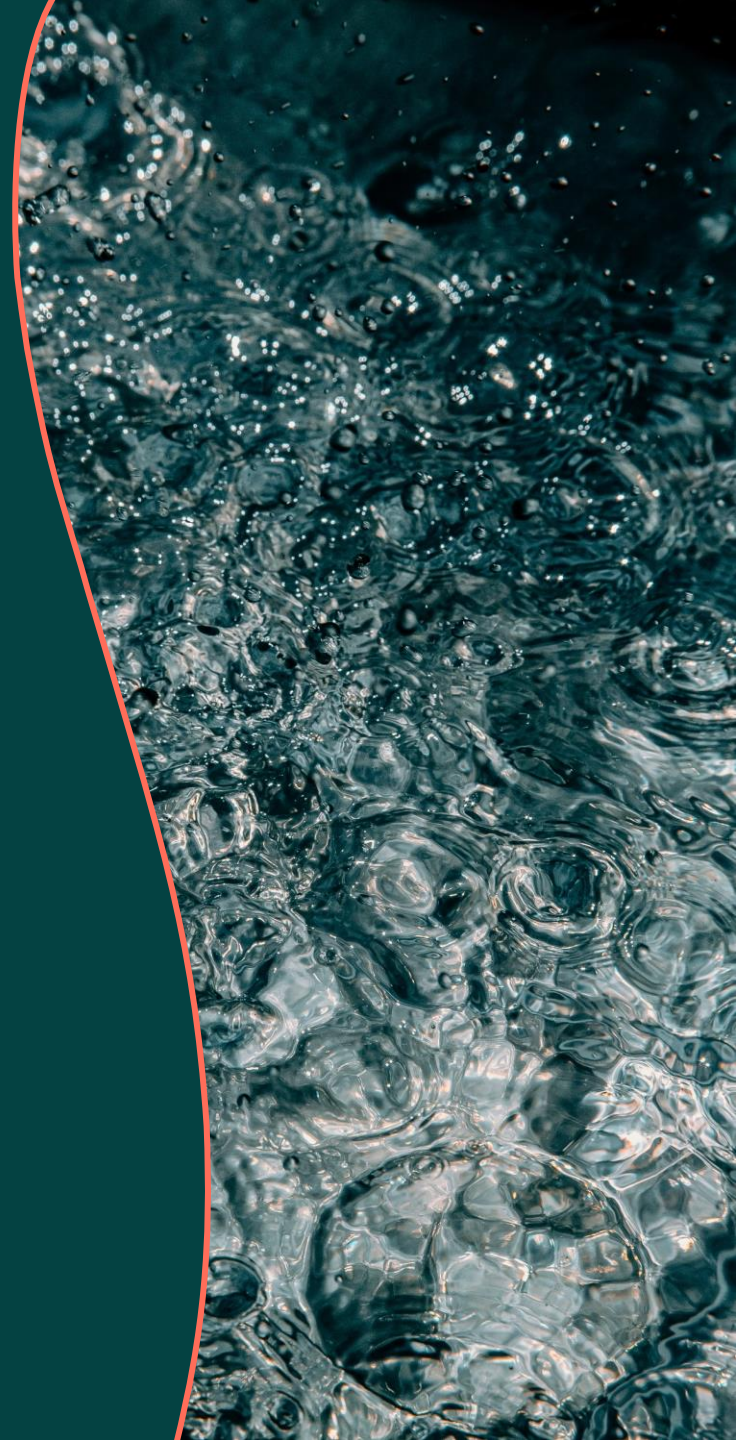


# Hydrogen pro

Pure Performance | Pure Efficiency | Pure **Power**

Company presentation

20 March 2023



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# Agenda

- I. HydrogenPro in brief
- II. Market outlook
- III. Strategy
- IV. Financials
- V. Summary
- VI. Appendix



# I. HydrogenPro in brief

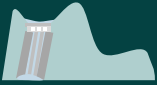
*High-performance green hydrogen electrolyzers for large-scale applications*

Hydrogen pro

# Global provider of large-scale green hydrogen technology & systems

Renewables

Hydro



Solar



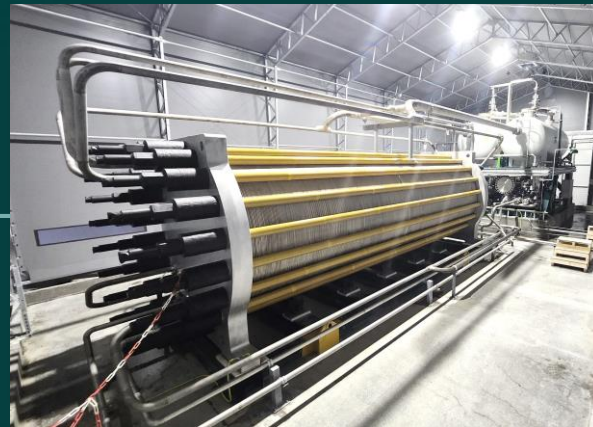
Wind



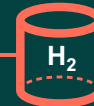
Water



## Hydrogen pro



World's largest electrolyser



+



Sustainable Aviation fuel



Refinery/Decarbonization



Power-To-Gas



Balancing the grid



Steel Production



Fertilizer/Ammonia



Shipping

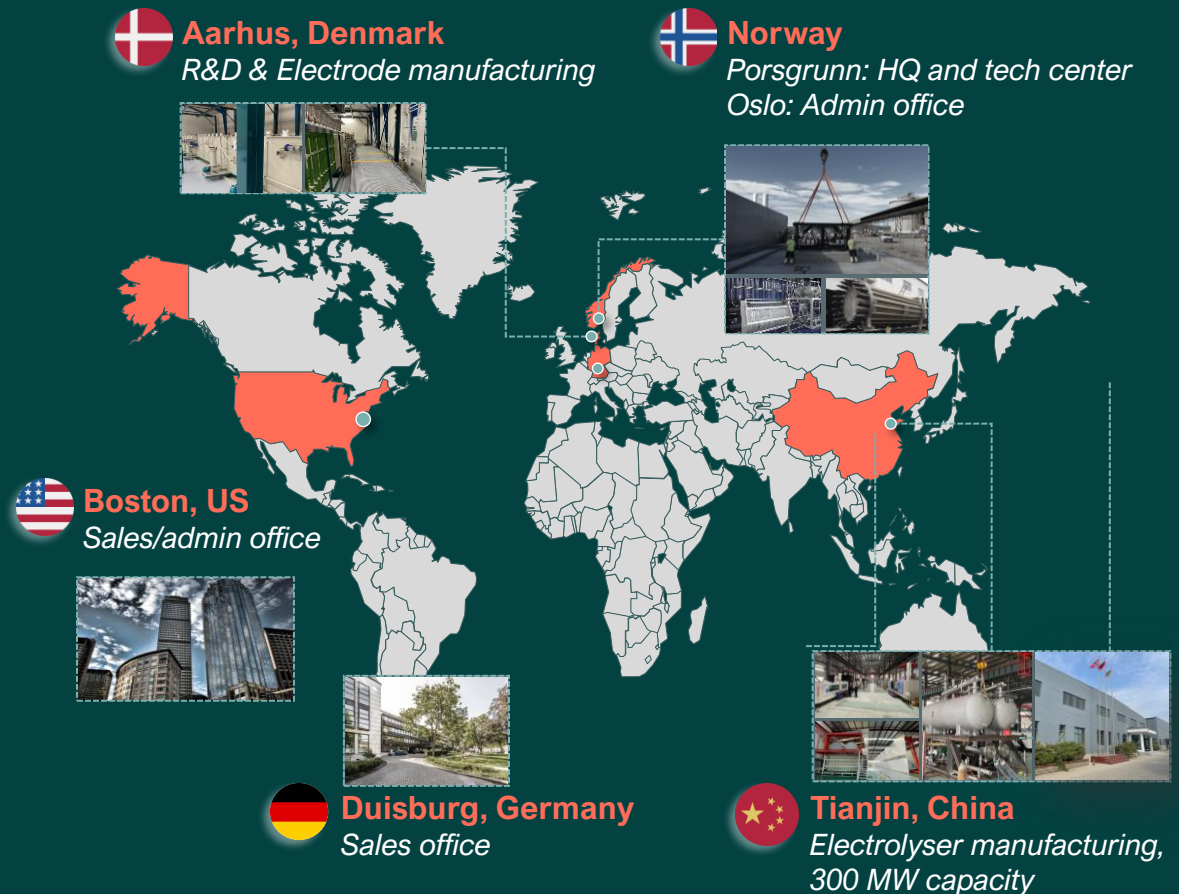


# Our current footprint – building a global brand

## HydrogenPro at a glance

- Founded 2013 by core team with several years of experience from electrolyser industry from Norsk Hydro
- HydrogenPro is an OEM for high pressure alkaline electrolyser and supplies large scale green hydrogen technology & services, ISO 9001, ISO 45001 and ISO 14001 certified
- Experienced engineering team of leading industry experts, drawing upon unparalleled experience and expertise in the hydrogen and renewable energy industry
- Listed on Oslo Stock Exchange under the ticker “Hypro” with a MCAP of NOK 1.5bn

## Manufacturing facilities and offices

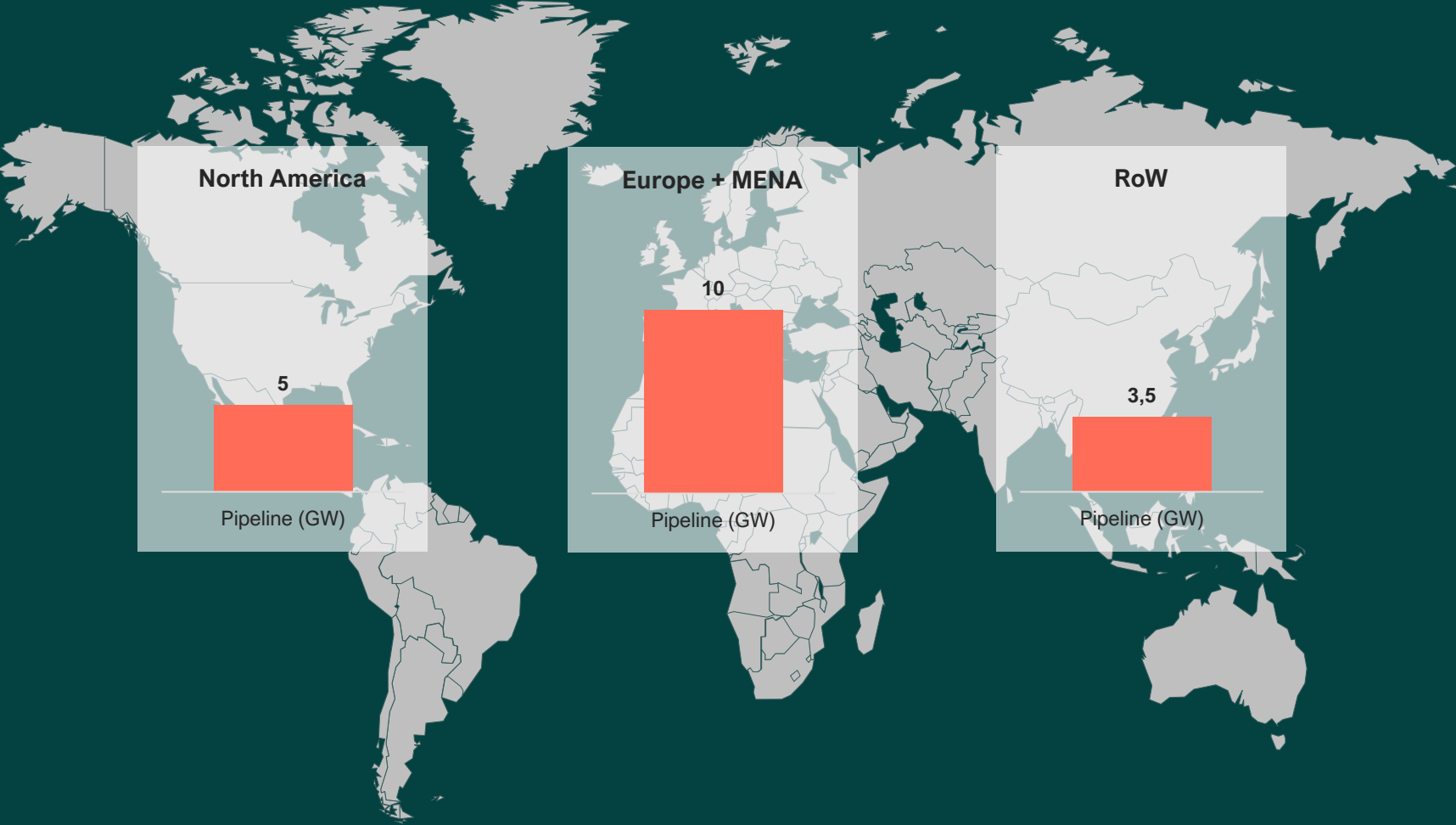


# Founded in 2013 with >10x growth since IPO in October 2020

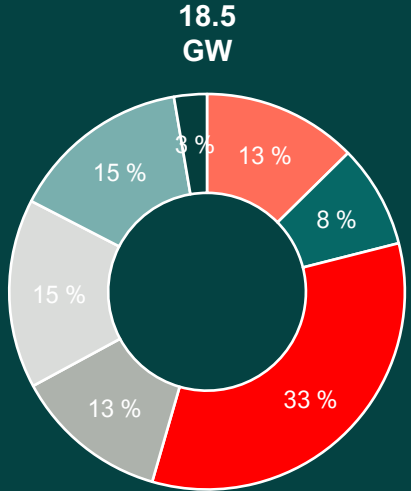
	IPO (October 2020)	Q4 2022
Value chain position	Distributor	Technology owner & OEM <sup>1</sup>
Manufacturing capacity (p.a.)	0 MW	300 MW
Backlog	NOK 15 mill	NOK 747 mill
Active sales pipeline	1.5 GW	18.5 GW
# of employees	10	165 <sup>2</sup>
Listing venue	Euronext Growth	Oslo Børs main market <sup>3</sup>

1) Original Equipment Manufacturer; 2) As of 7 February 2023; 3) First day of trading 3 October 2022

# Active sales pipeline of 18.5 GW well-diversified across geographies and use cases



Pipeline by use case (MW)



- SAF
- Power-To-Gas
- Fertilizer/Ammonia
- Other
- Refinery/Decarbonization
- Steel Production
- Shipping



# HydrogenPro to establish manufacturing capacity in Texas, US

## WHAT

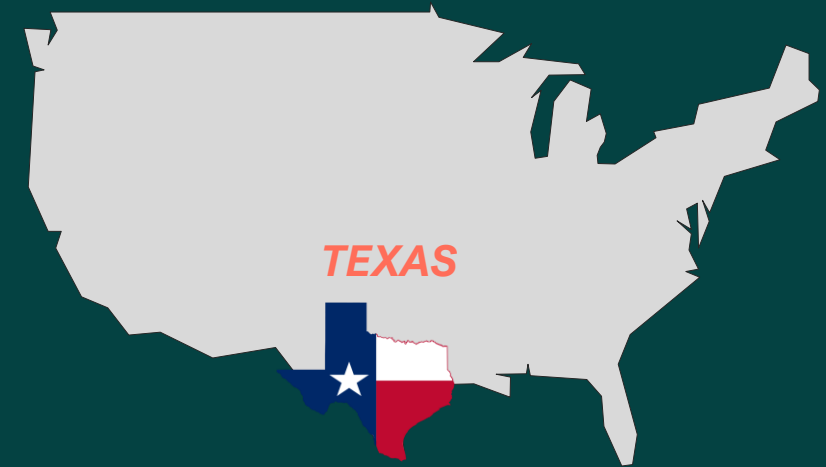
- Establishing new manufacturing capacity in Texas, US with an initial capacity of **500 MW (stage 1) with potential to scale up capacity to several gigawatts**

## WHY

- The US has become market leader on green hydrogen following the IRA, and thus become HydrogenPro's top priority
- Serving the US market as the only viable large-scale high-pressure alkaline technology provider
- Contracts and active sales pipeline > 5 GW

## HOW

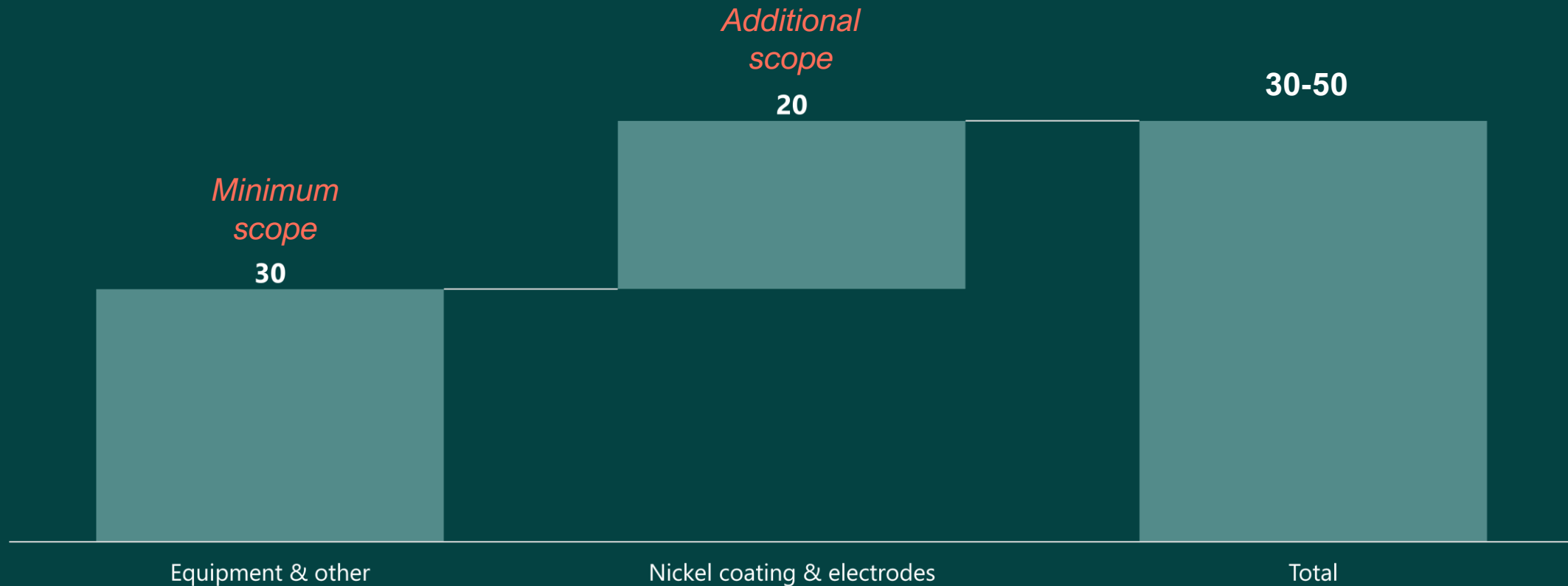
- After an extensive strategic review Texas is chosen as state of location based on several criteria (access to site and skilled workers, infrastructure, ease of sourcing raw materials, proximity to end-users and incentive programmes)
- Build-up of US organization ongoing



# Est. capex up to \$50M for 500 MW facility in Texas, US

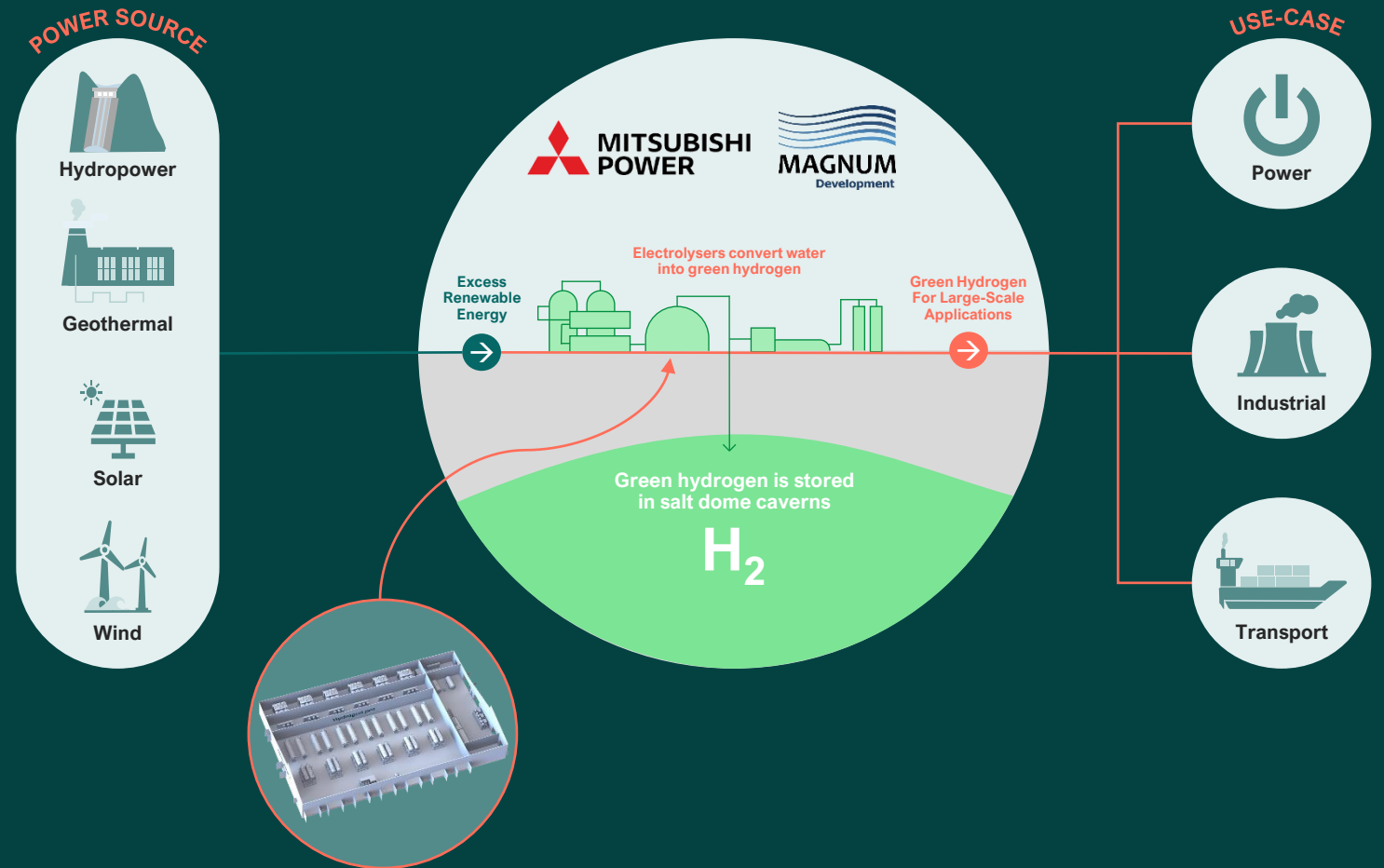
*Capital investment for 500 MW brownfield manufacturing site*

(\$M)



# Exclusive supplier to ACES<sup>1</sup> project: the world's largest green hydrogen energy hub

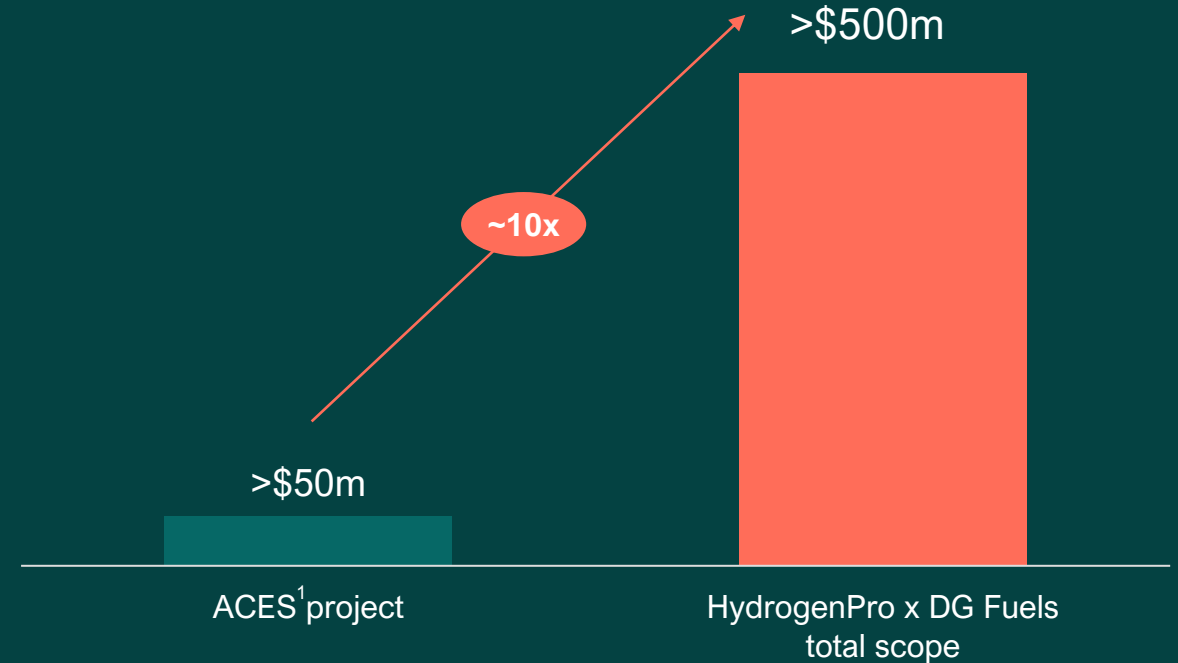
- 220 MW electrolysis plant
- HydrogenPro has also signed a 10-year service and support agreement
- The Advanced Clean Energy Storage Hub will use renewable energy sources
- HydrogenPro will complete the manufacturing of the electrolyser systems in H2 2023, followed by on-site work with completion in late 2024



1) Advanced Clean Energy Storage

# FEED study near completion at DG Fuels project in Louisiana - Final Investment Decision (FID) expected in 2023

- HydrogenPro is chosen as the supplier for high-pressure alkaline electrolyzers for DG Fuels' plant in Louisiana
- HydrogenPro's contract with DG Fuels is worth >USD 500 million, excluding life cycle services
- DG Fuels has sold out 100% of the expected initial production at the Louisiana plant in the US





## II. Market update

*Substantial demand for industrial green hydrogen generation ahead of us*

# Three major market trends: size matters!

- 1 Demand focus on **large-scale solutions**; average size 10MW a few years ago, now several hundred MW per project
- 2 **Larger end-users** with higher likelihood of reaching FID
- 3 **Green hydrogen outperforms** other hydrogen sources/colours

**HydrogenPro strategically positioned to benefit from the major market trends**

# Increased momentum for green hydrogen in the US



US Congress passed the Inflation Reduction Act (IRA) August 12, 2022

IRA boosts US demand for clean hydrogen<sup>1</sup>

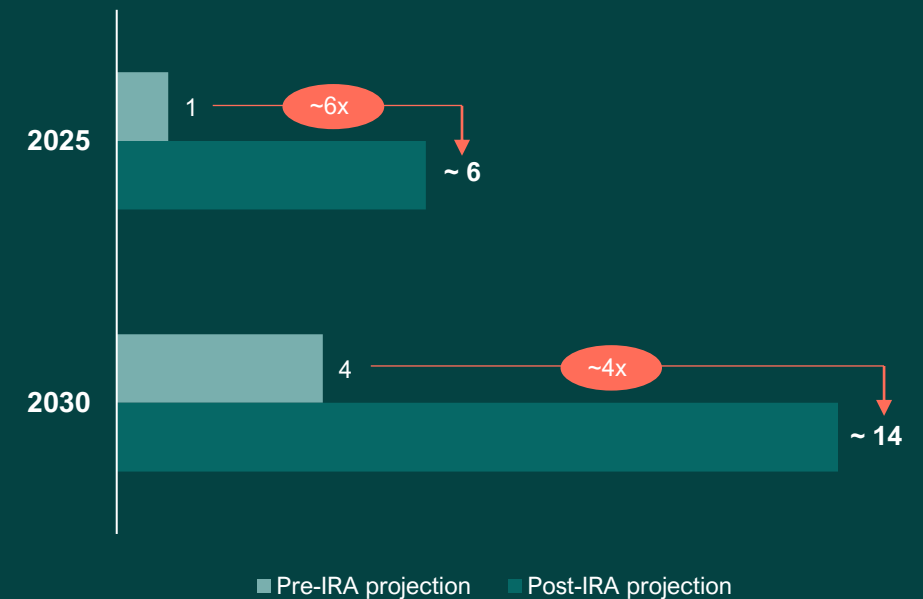
**\$3/kg H<sub>2</sub>**

in tax credits for producers of green hydrogen

Wind/solar/hydro power is a pre-requisite to maximise tax credit

High-pressure alkaline or PEM electrolysis

Low carbon hydrogen<sup>2</sup> final energy demand by end use  
(million metric tons per year)

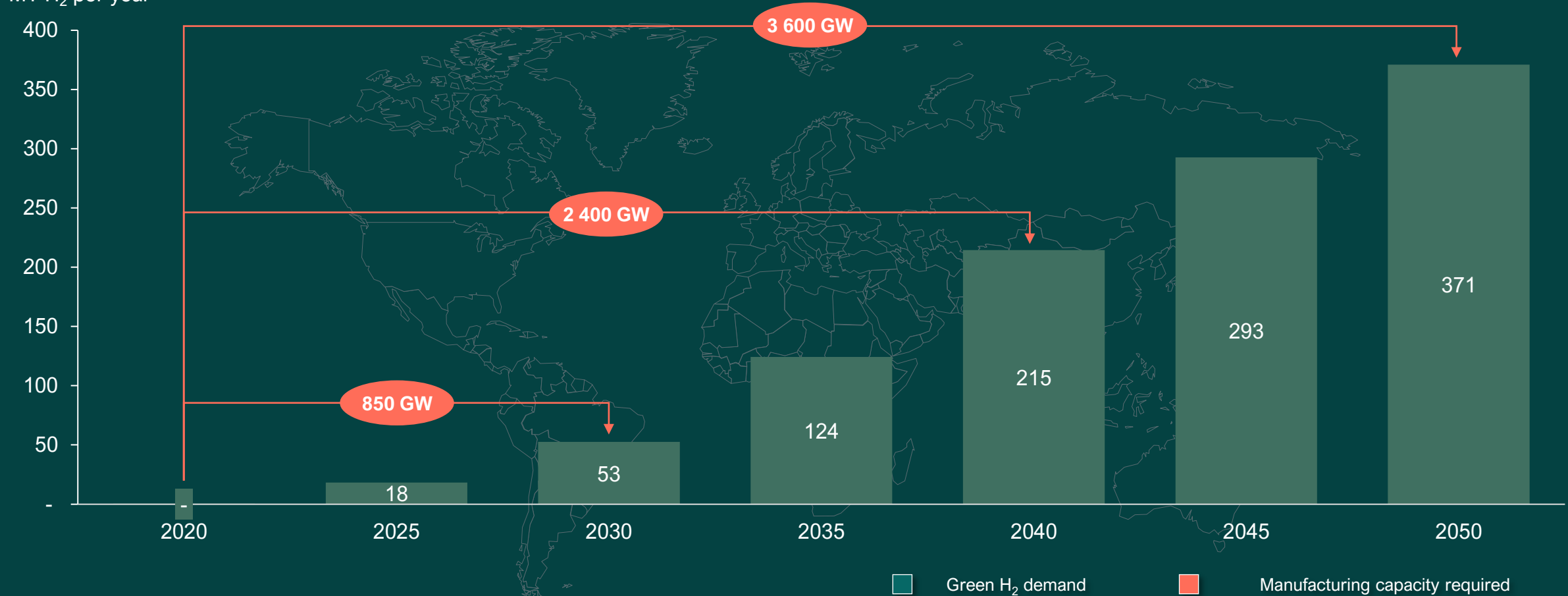


Tax incentives and clean H<sub>2</sub> demand makes HydrogenPro's high-pressure alkaline electrolyzers attractive for US market

# Significant investment required in manufacturing capacity to meet future green hydrogen demand

## Green hydrogen growth in IEA Net Zero Scenario

MT H<sub>2</sub> per year





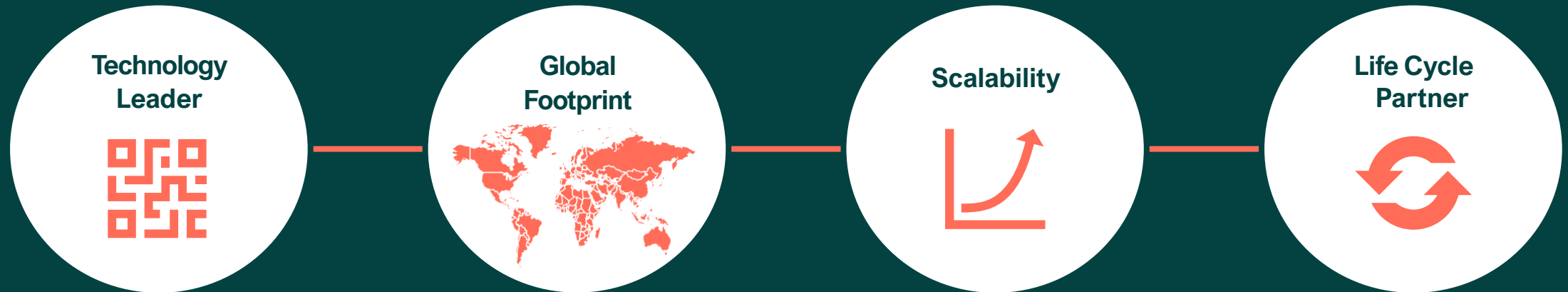


## III. Strategy

*Becoming #1 provider of large-scale green hydrogen technology & systems*

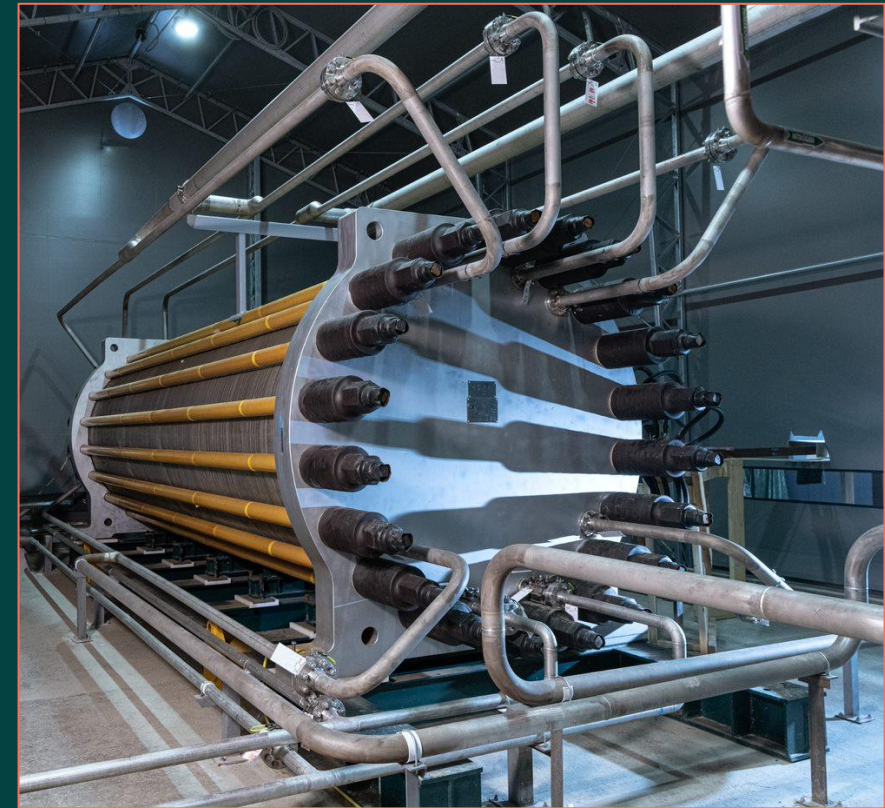
Hydrogen pro

# Four strategic pillars to become #1 provider of large-scale green hydrogen technology & systems



# Setting a new industry standard

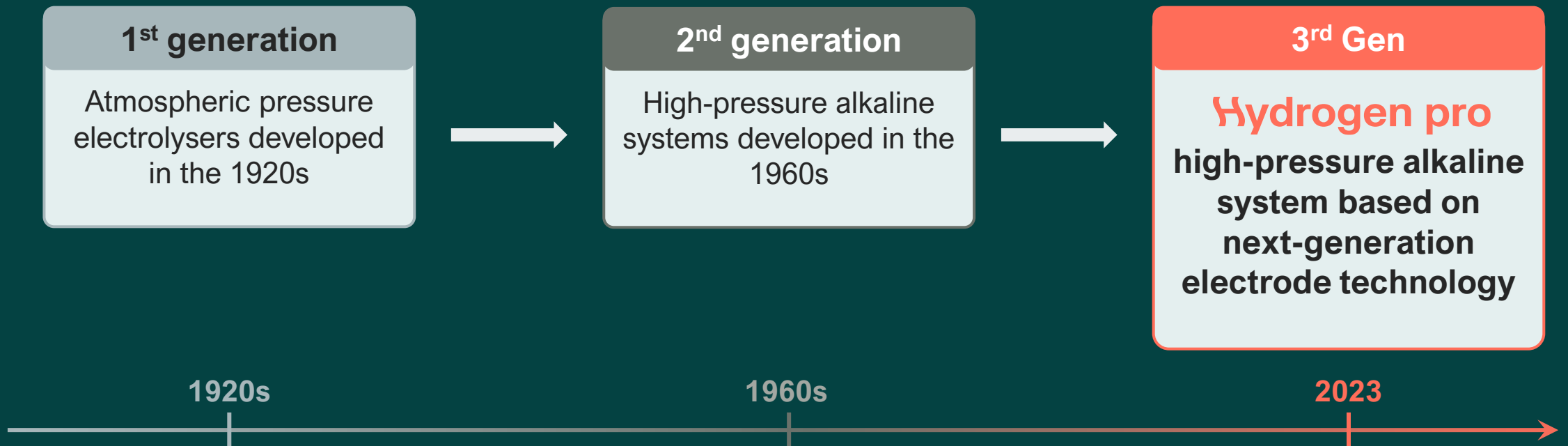
- The initial test of the world's largest high-pressure alkaline electrolyser at the Herøya Industrial Park located in Porsgrunn, Norway is completed
- Our single 5.5 MW electrolyser has been validated to produce 1,100 Nm<sup>3</sup>/h hydrogen at normal current density. This equals 100 kg of pure green pressurized hydrogen per hour, which sets a new standard for the industry
- The test provides proof-of-concept that our electrolyser and gas separator technologies will produce hydrogen on a large scale
- Further testing to optimise electrolyser efficiency on-going



*Herøya Industrial Park, Porsgrunn*



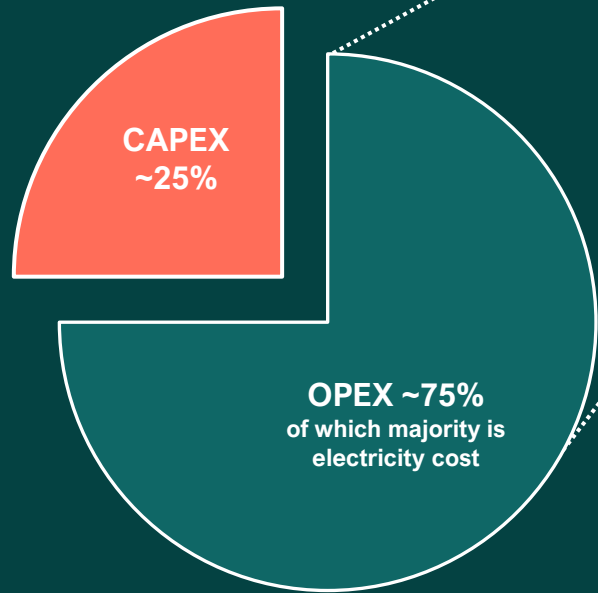
# HydrogenPro takes the lead role in the technology revolution





# HydrogenPro's 3<sup>rd</sup> Gen electrode technology increases efficiency and reduces OPEX

## Levelised cost of hydrogen



## Near-term R&D priorities to reduce end-user OPEX

3rd Gen electrode

New hydrogen gas purifying unit

New electrolyser body

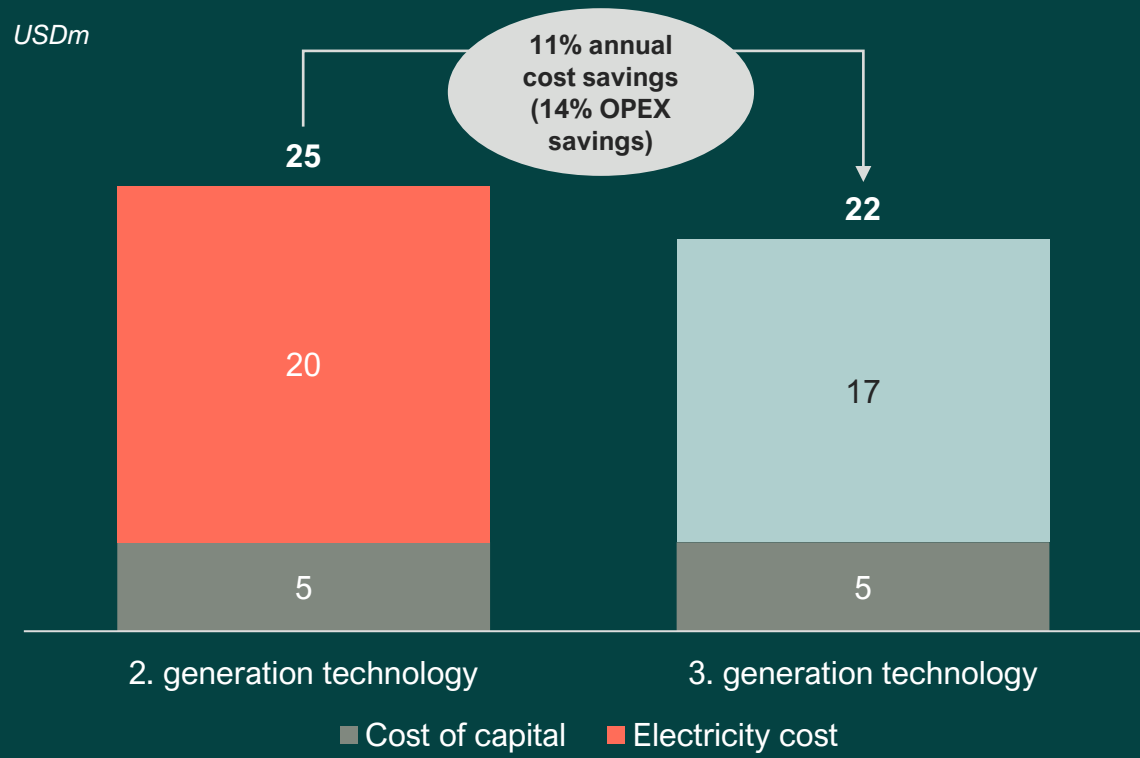
Advanced electrodes is a *game changer* for production of green hydrogen

- HydrogenPro's 3<sup>rd</sup> Gen technology reduces consumption of electricity by 14%
- Increasingly higher advantage with high energy prices
- Significant reduction of cooling water need

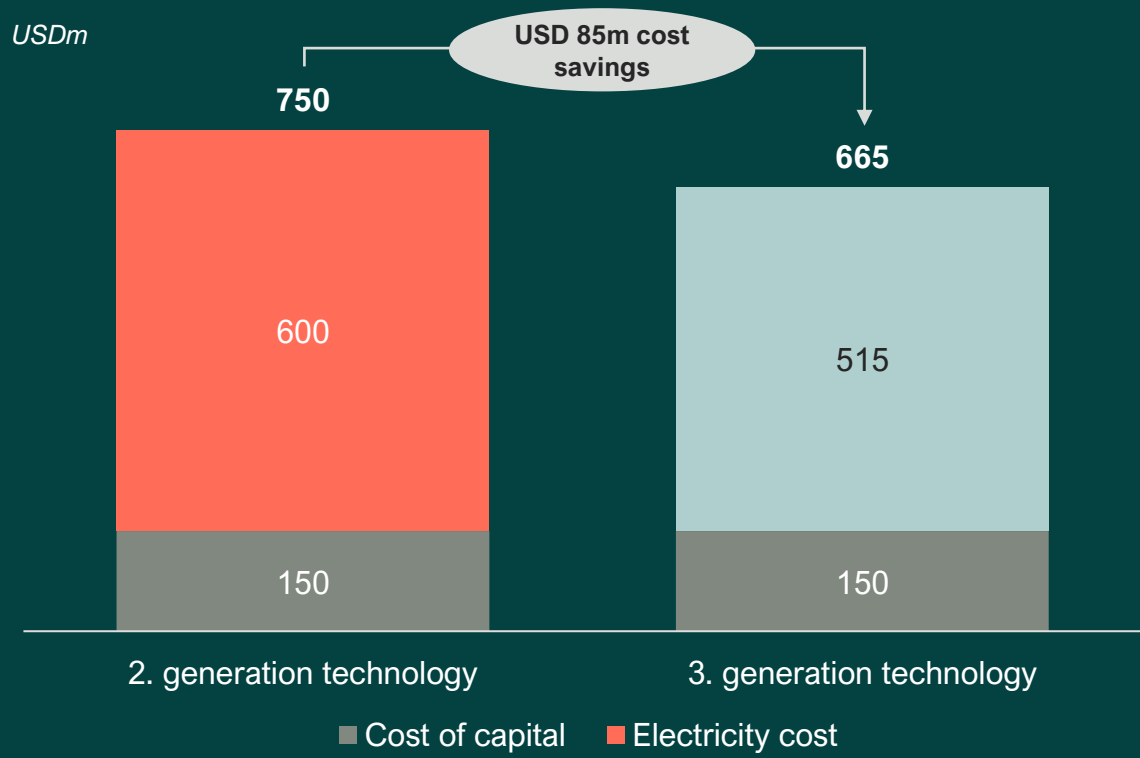


# 14% OPEX savings of 3rd Gen technology equals saving of > 50% of capital cost @ USD 20/MWh electricity price

Total annual cost of operations



Total lifetime cost over 30 years

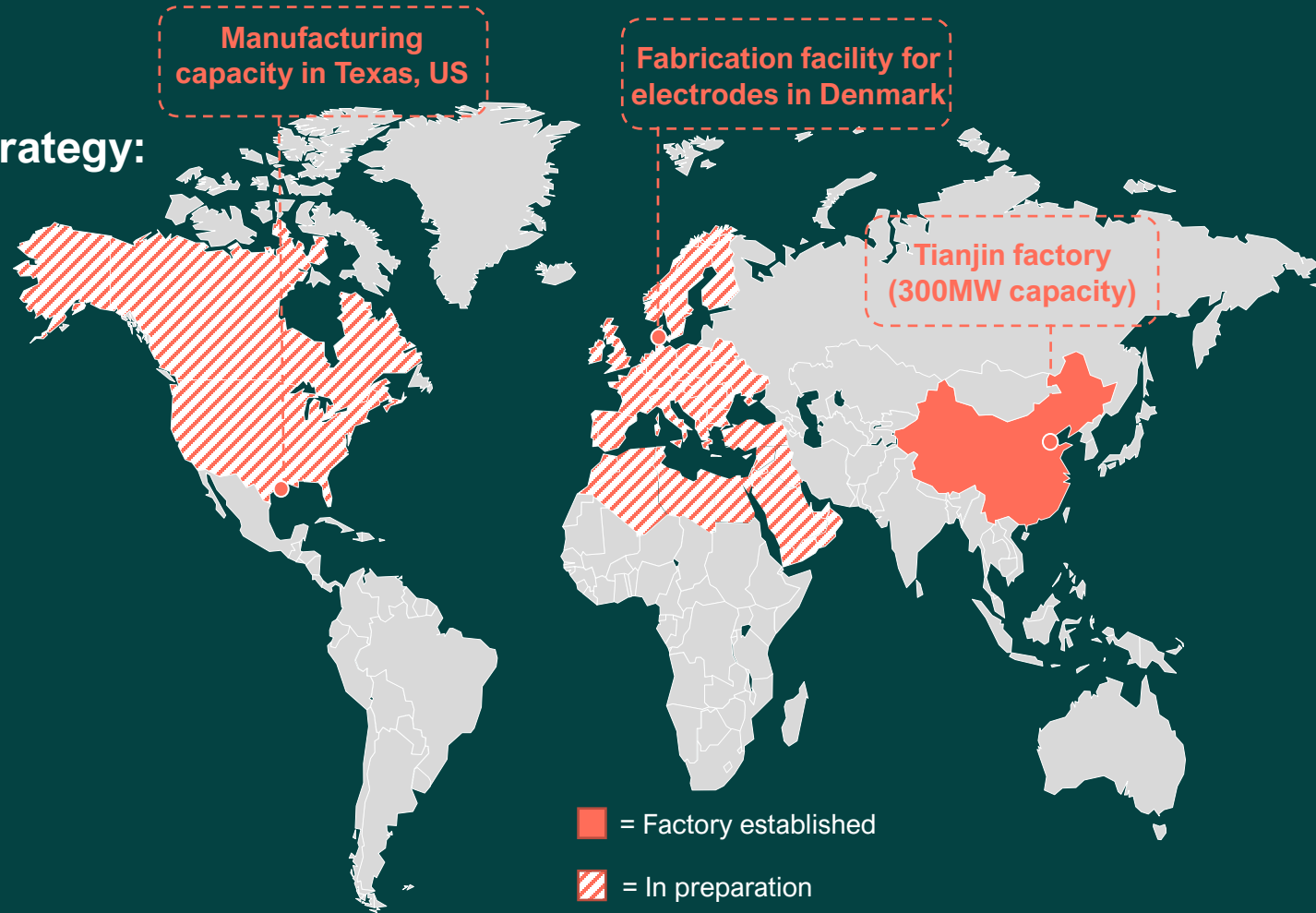




# Expanding our global footprint

## Pillars of HydrogenPro's global fabrication strategy:

- Develop organisational flexibility to serve each individual region
  - HydrogenPro, JVs, licensing, other partnership models
- Dynamic, flexible supply chain and logistics
  - Develop local supply chains, secure service and aftersales, reduce cost from shipping, tolls and fees, and secure national political support
- Establishing manufacturing capacity in Texas, US
- Currently preparing expansion of footprint in Europe and MENA



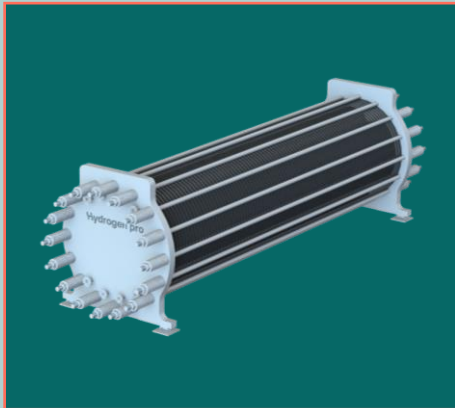


# A scalable and flexible business model combined with a scalable and modular product offering

## Turn-key process plant

Standardised core scope manufactured by

**Hydrogen pro**



Electrolyser stacks



Gas separator skids

Scope delivered together with partners

Electro

Auxiliary systems

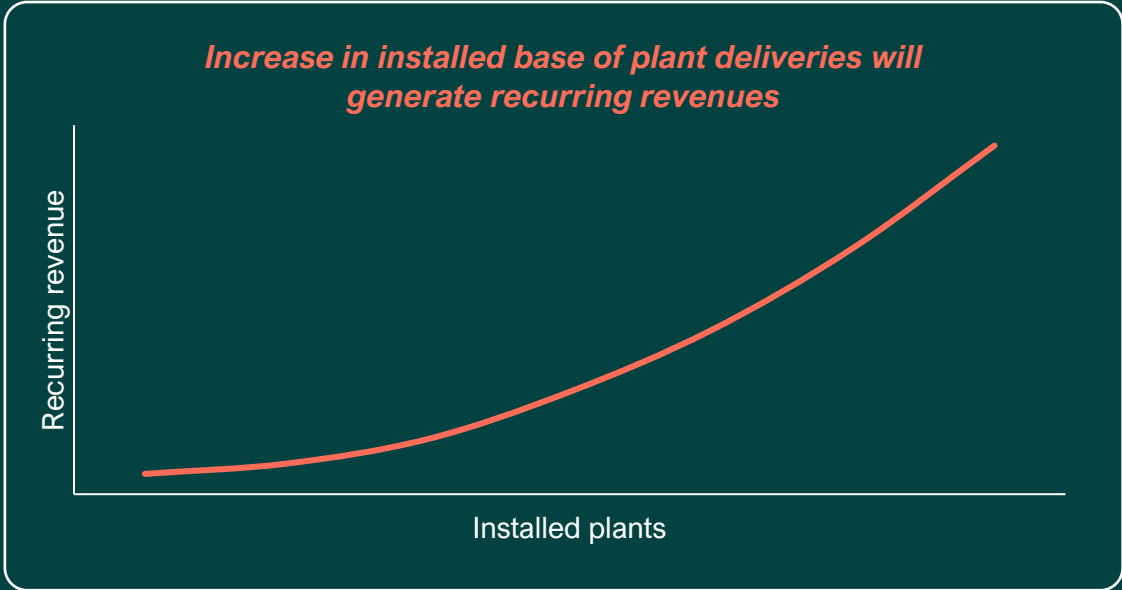
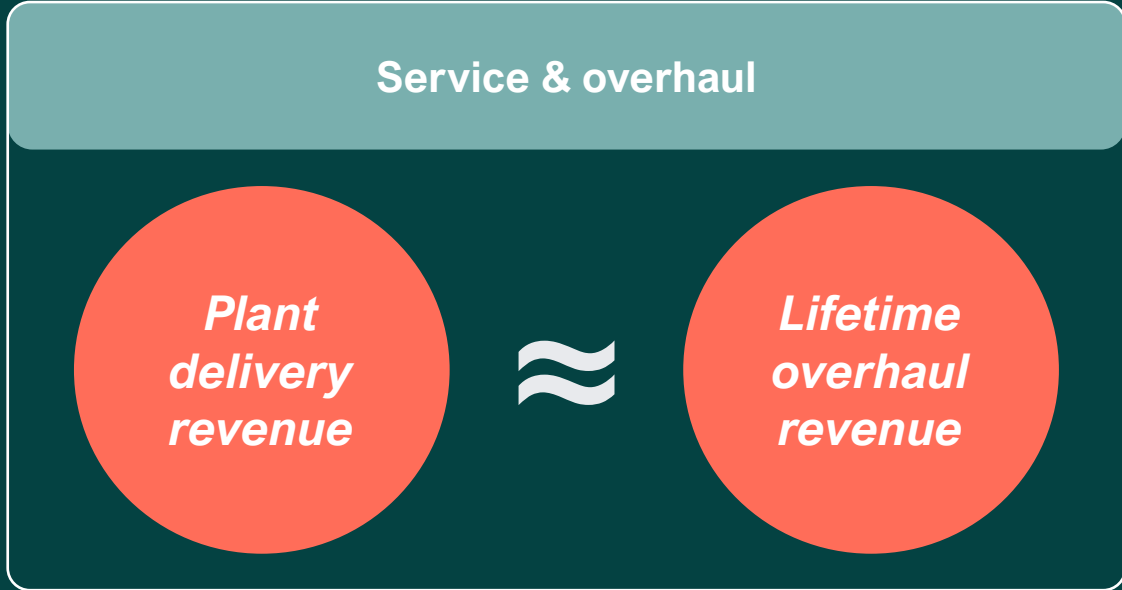
EPC

- Scope delivered with large industrial partners like Mitsubishi and ABB
- Targeting additional strategic partnerships going forward





# Life cycle model increases recurring revenues



Significant potential for **additional** after-sales revenues

- Remote and digital services
- Rapid response support
- Product optimisation
- Predictive modelling



# IV. Financials

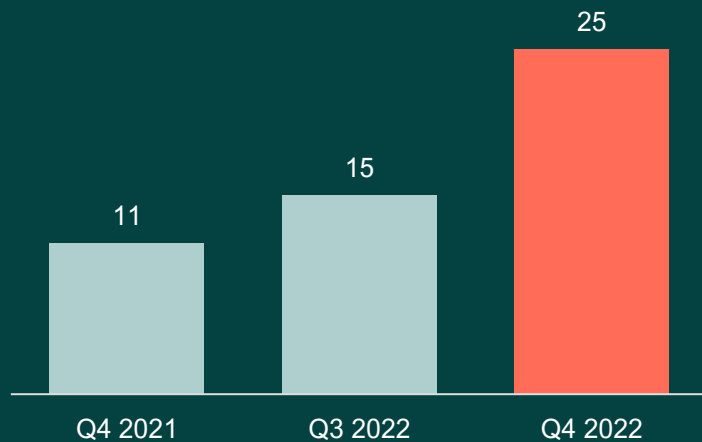
*Financial roadmap to scale up globally and generate industry-leading returns*

# Q4 2022 financials

UNAUDITED FIGURES

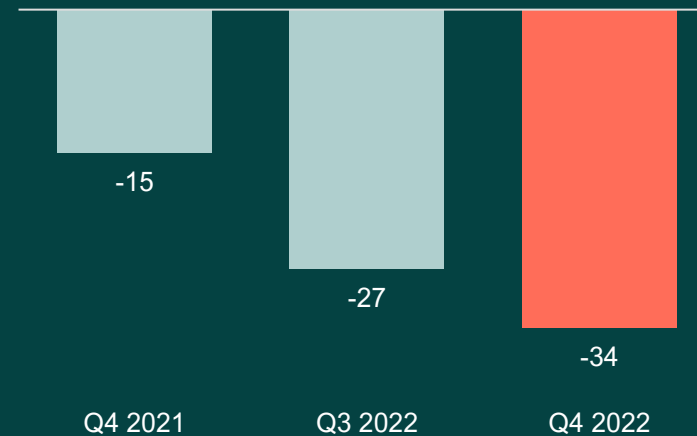
## Revenues

(NOK mill)



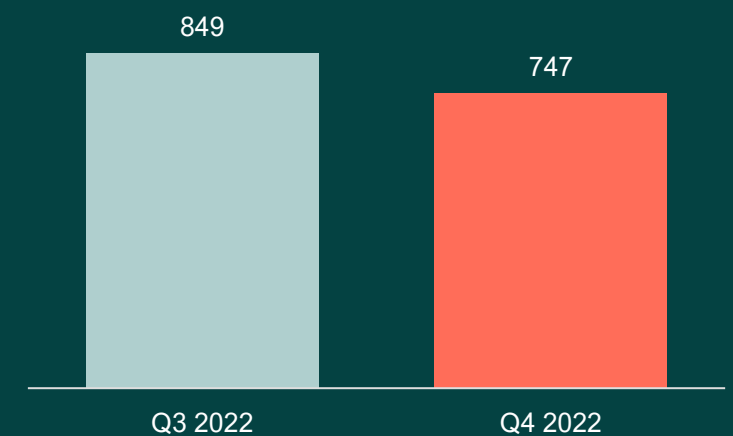
## Adj. EBITDA<sup>1</sup>

(NOK mill)



## Backlog

(NOK mill)



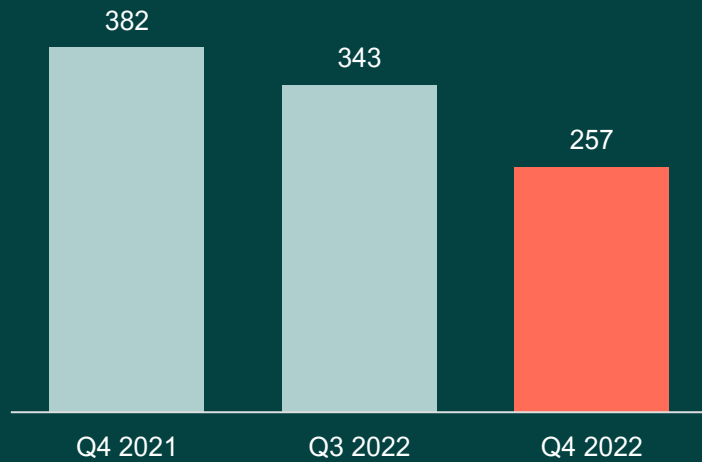
- Q4 2022 results impacted by R&D expenses (through increased COGS), organisational build-up to deliver on purchase orders and COVID-19 measures in China
- Change in backlog is mainly impacted by negative FX fluctuations of NOK 76 mill. and recognised revenues of NOK 26 mill.

# Q4 2022 financials (cont.)

UNAUDITED FIGURES

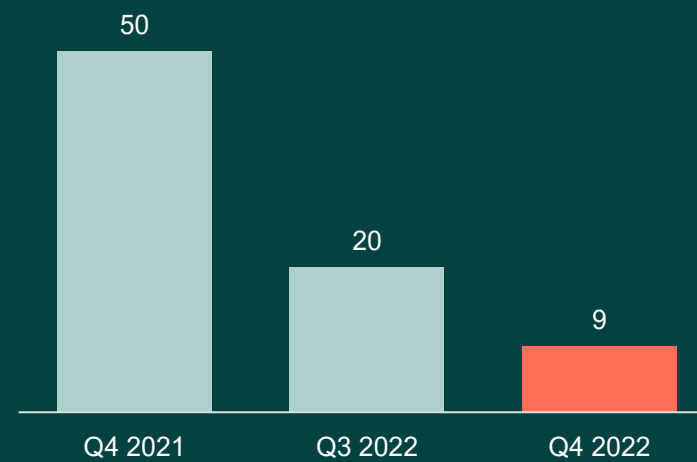
## Cash balance

(NOK mill)



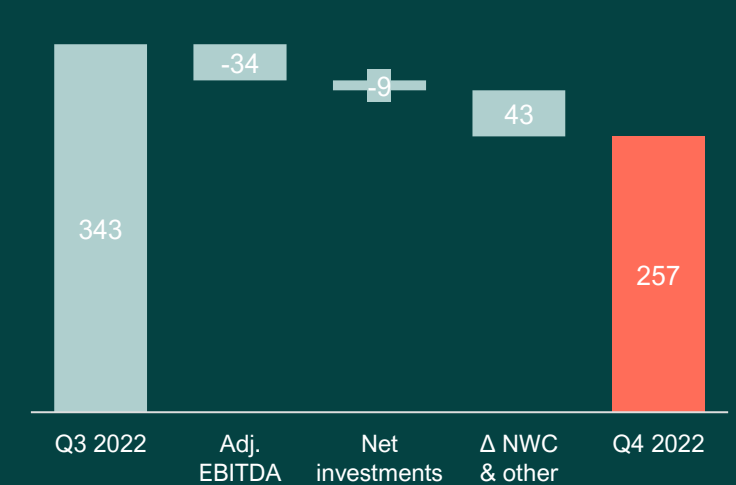
## Net investments

(NOK mill)



## Change in cash balance

(NOK mill)



- Build-up of inventory of NOK 34 mill during the quarter for manufacturing on awarded purchase orders

# 2023 financials outlook

- Gradual step-up in revenue recognition as manufacturing activity ramps up to full capacity
- Re-iterating guidance: HydrogenPro to recognise ~90% of the ACES contract revenues (>\$50M) by the end of 2023 - with a positive margin impact
- Working capital need to deliver on purchase orders in H1 2023, but adequate cash position at current activity level

# Well positioned to *scale up* and generate *industry-leading returns*

## *Lean and cost competitive set-up*

- Cost leadership through highly competitive global manufacturing cost
- Standardized product offering enabling cost savings through larger deliveries and continued improvement
- Lean administrative set-up
- Administrative, commercial and technical resources in close proximity to major end-users



## *Focused capital deployment plan*

- Global manufacturing & assembly capacity
- Technology and innovation front-runner
- Scale-up of the organisation
- Working capital on large-scale projects



# V. Summary

*State-of-the-art technology with a proven track record & strong growth drivers*

# Executive summary



Proof-of-concept for world's largest electrolyser

Backlog of NOK 747 million & active sales pipeline of 18.5 GW as of YE 2022

Establishing manufacturing capacity in Texas, US. Global electrolysis capacity target of >5 GW p.a. within five years.

Guidance: Recognise ~90% of the ACES<sup>1</sup> contract revenues by the end of 2023 - with a positive margin impact

Offtake agreements on entire volume for DG Fuels' SAF plant in Louisiana secured

## Hydrogen pro

Pure Performance | Pure Efficiency | Pure Power





# VI. Appendix


# Record-high number of hydrogen orders being placed

## Recently announced hydrogen projects and contracts



**January 2023**

- Size: 120 MW
- Green hydrogen for industrial applications, transportation and heat
- Germany's largest-ever order for green hydrogen production



**May 2022**

- Size: 1 GW
- Green hydrogen fuel for fuel-cell heavy duty trucks in Denmark
- First ever gigawatt-scale electrolyser order



**September 2022**

- Size: 500 MW (Phase I)
- Production of 500k tonnes per year of green hydrogen to be combined with nitrogen to produce green ammonia
- Part of First Ammonia's total 5 GW electrolyser target




**November 2021**

- Size: 100 MW
- Production of 90k tonnes of green ammonia per year at chemical company Egyptian Basic Industries Corporation's existing ammonia plant in Egypt



**October 2022**

- Size: 290 MW (Phase I)
- Production of 90 tonnes per day of liquid hydrogen for the heavy transport sector
- Part of Woodside's H2OK project with a total capacity of 550 MW

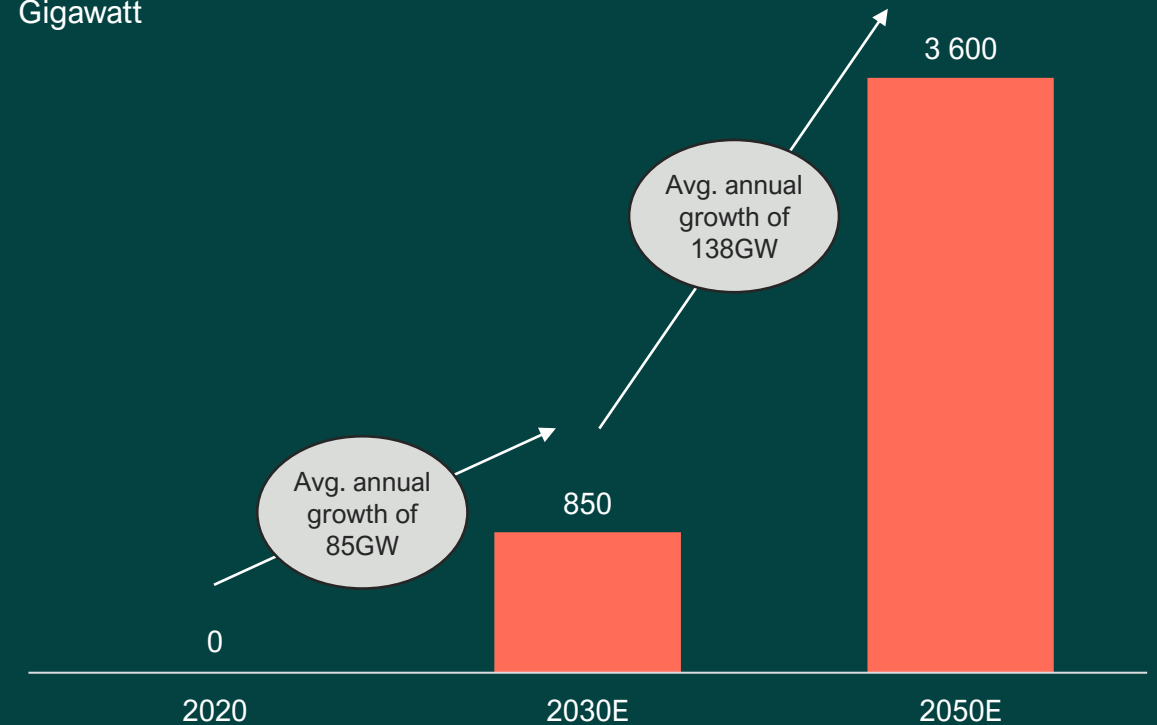


**Sustainable aviation fuel**

- Major order from Delta Airline and DG Fuels for at least 839 MW electrolyser capacity for production of sustainable aviation fuel in the US

## Estimated required electrolyser capacity

Gigawatt



**Global roll-out and scaling plans for manufacturing capacity crucial in short-to-medium term**

# Executive management and Board of Directors

## Executive management



**Tarjei Johansen**  
*CEO*



**Martin Thanem Holtet**  
*CFO*



**Erik Chr. Bolstad**  
*CCO*



**Karoline Aafos**  
*CPO*



**Richard Espeseth**  
*Head of BD and Technology*



**Tormod Kløve**  
*Chief Legal Officer*

## Board of Directors



**Ellen Hanetho**  
*Chair*



**Jarle Tautra**  
*Board member*



**Donna Rennemo**  
*Board member*



**Jarle Dragvik**  
*Board member*

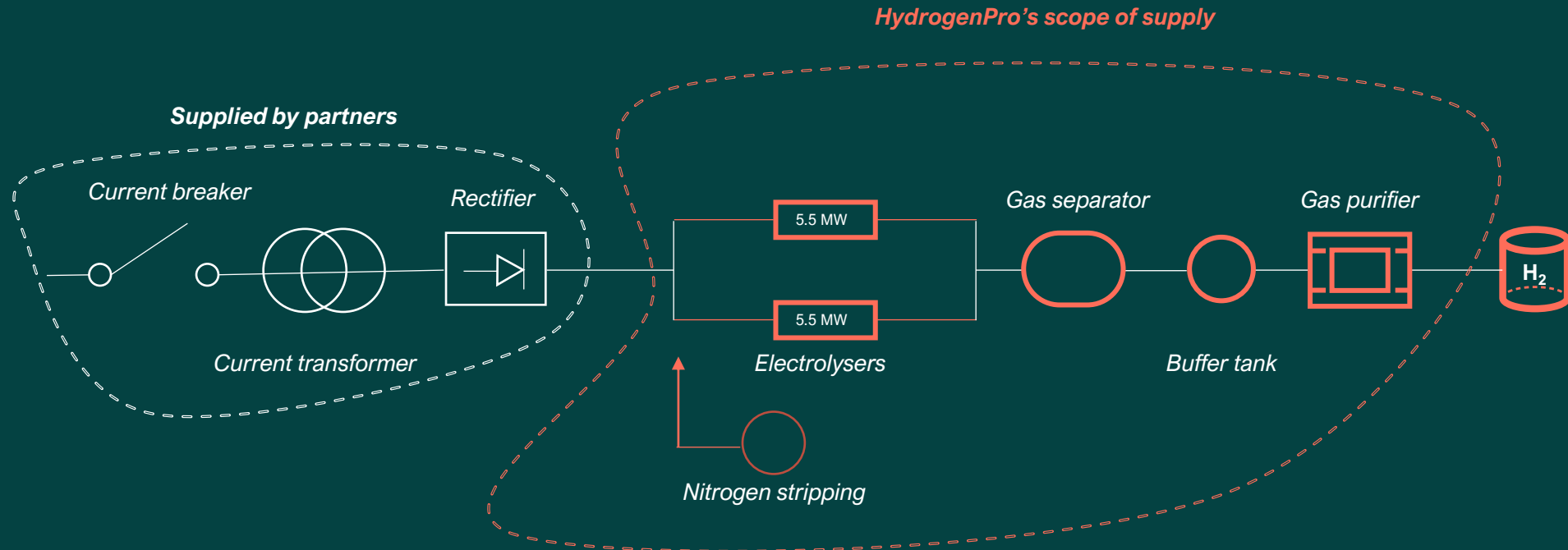


**Vivian Espeseth**  
*Board member*

# Shareholders as of 16 March 2023

Shareholder	Number of shares	% of shares
Richard Espeseth	11,424,125	19.69
TM Holding AS	9,635,182	16.60
Clearstream Banking S.A.	7,886,879	13.59
Mistubishi Heavy Industries Ltd	5,381,165	9.27
Espeseth Vivian Yanjin Chen	3,173,571	5.47
Ctibank Europe Plc	1,600,000	2.76
Nordnet Bank AB	1,580,968	2.72
Avanza Bank AB	1,523,939	2.63
Enern Invest AS	1,408,433	2.43
Danielsen Tor	1,313,872	2.26
Others	13,100,037	22.58
<b>Total</b>	<b>58,028,171</b>	<b>100.00</b>

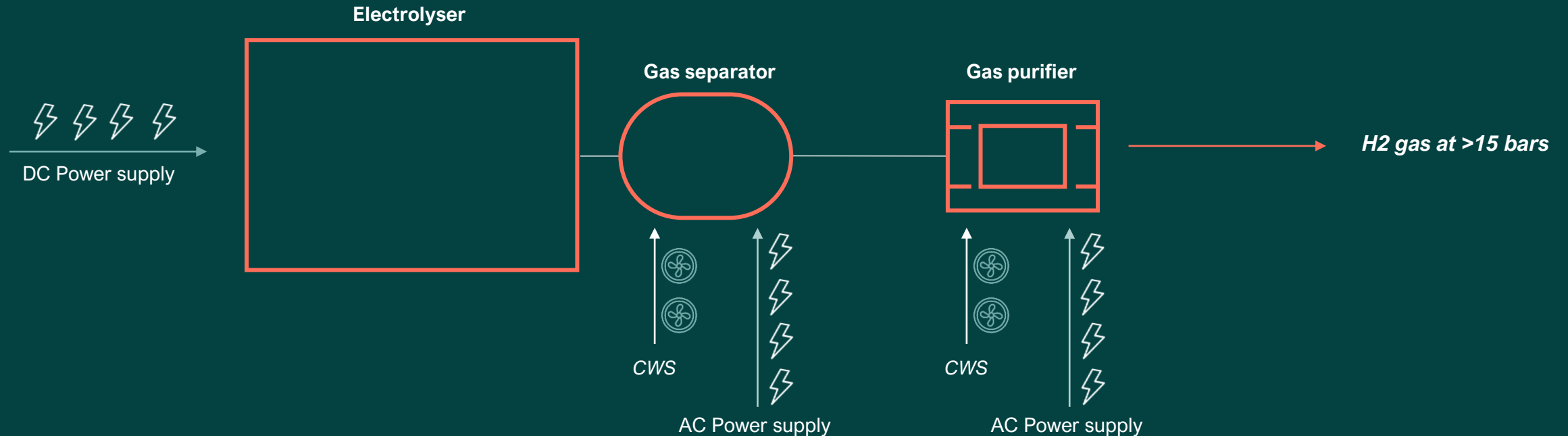
# Main components in a hydrogen factory



*Illustration of electrolyser system for green hydrogen production*

# 3<sup>rd</sup> Gen product technology and plant improvements

## HydrogenPro's R&D focus areas





# Hydrogen pro

[www.hydrogen-pro.com](http://www.hydrogen-pro.com)