Pure Performance | Pure Efficiency | Pure Power

Hydrogen pro

Pareto Securities' 26th annual Power & Renewable Energy Conference

18 January 2024

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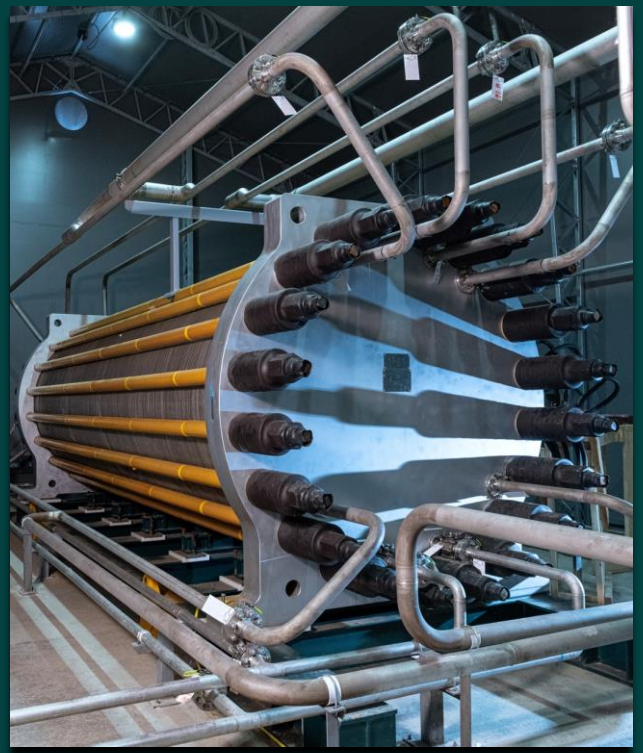
HydrogenPro is a global provider of market-leading, large-scale green hydrogen technology & systems



1

The world's largest electrolyser

- *5.5 MW single stack suitable for renewable energy input*
- *A modular system that can be scaled to any size for large-scale industrial applications*
- *Pressurised hydrogen ready for industrial use*

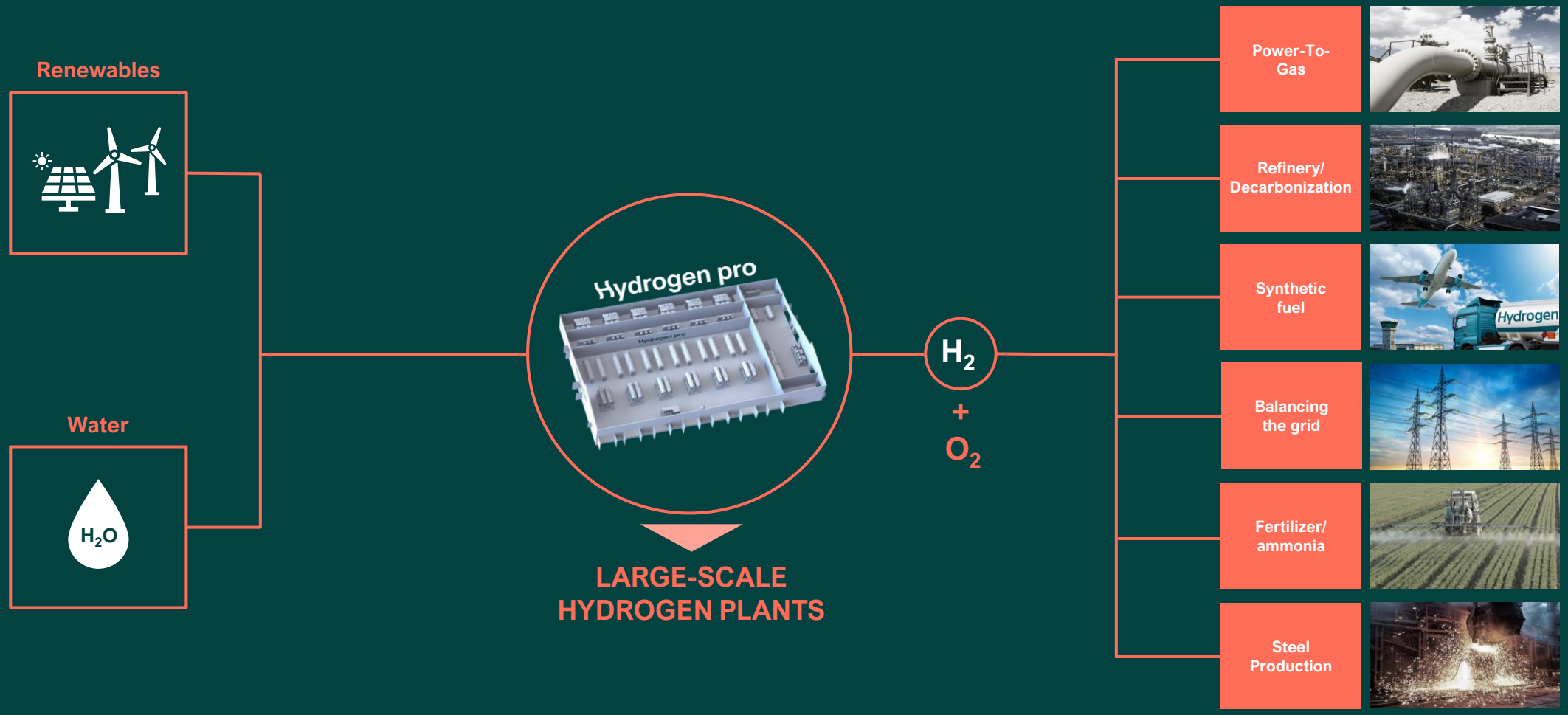
2

Game-changing electrode technology

- *14% lower electricity need for same H2 output*
- *Reduced cooling water need*
- *Reduced OPEX from H2 production*

Market-leading levelised cost of hydrogen

HydrogenPro targets industrial applications and hard-to-abate sectors – enables the energy transition through hydrogen

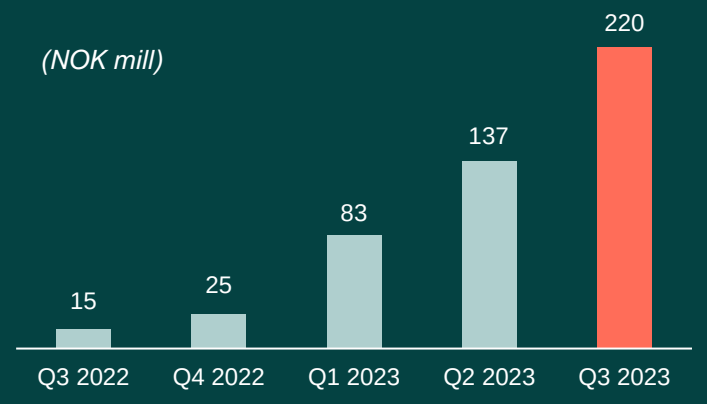


Revenues, gross profit, and Adj. EBITDA

UNAUDITED FIGURES

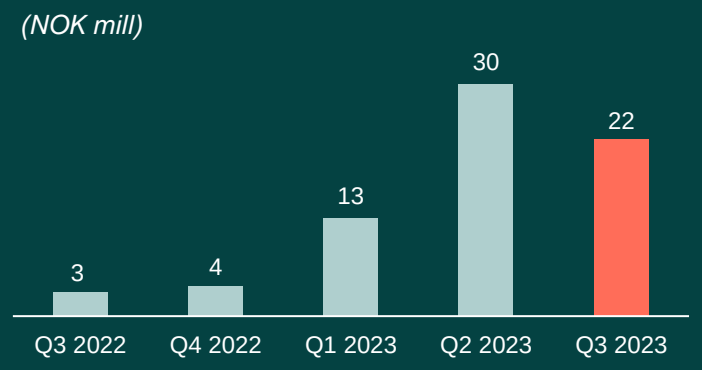
Revenues

- Revenues are up 61% from last quarter and >14x same quarter last year
- Outlook: HydrogenPro to recognise ~90% of the ACES contract revenues (>$50M) by the end of 2023 - with a positive project margin



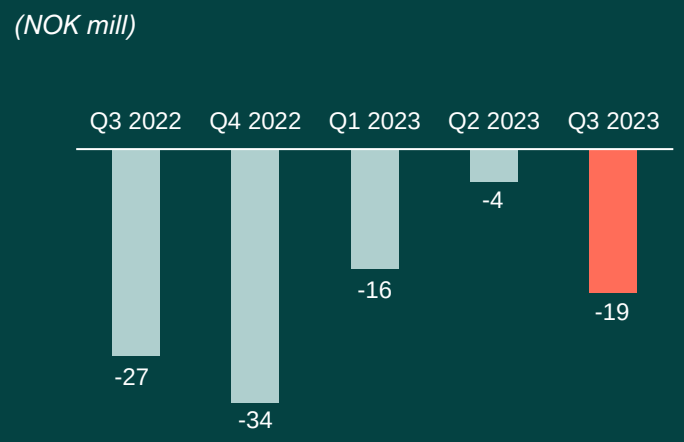
Gross profit

- COGS increased in the quarter following variation orders and write-downs of obsolete goods due to temporarily challenges in manufacturing process
- Gross margin of 10.2% percent in Q3, 14.6% year to date



Adj. EBITDA

- Personnel expenses increased due to an increase in number of employees and increased social security and pension costs
- Other OPEX impacted by:
  - Recognition of R&D grants
  - Warranty provisions of NOK 11.5 million



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

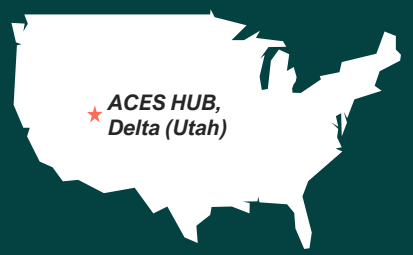
Technology Leader

Global Footprint

Scalability

Life Cycle Partner

Completed manufacturing of the *world's largest* (220MW) electrolyser purchase order



THE PROJECT

ACES[1] hub provides a complete end-to-end solution to produce, store, and convert renewable hydrogen to support carbon-free year-round power for Western US

THE CONTRACT

- **>50$M** contract value for 220MW electrolysis plant
- In addition: a **10-year service** and support agreement
- High-pressure alikaline electrolysers, suitable for **renewable energy** input

DELIVERY MILESTONES

- ✓ April 2022 – firm purchase order signed
- ✓ August 2023 – first batch of equipment delivered on site
- ✓ December 2023 – manufacturing process completed
- ○ H2 2024 - Installation and commissioning

HydrogenPro electrolysers at the ACES project site in Utah, US

1) Advanced Clean Energy Storage

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Delivering 100MW (18 electrolysers) to Andritz for low-CO_2 steel production at Salzgitter, Germany

- Contract value estimated to approx. EUR 18 million
- The confirmed Purchase Order equals 18 of HydrogenPro's 5.5 MW cell stacks (100 MW)
- ANDRITZ will build a 100 MW electrolysis plant at the Salzgitter Flachstahl GmbH site on an EPC basis, incorporating pressurized alkaline electrolyzer technology from HydrogenPro
- First stage of project expected to be operational by 2026. Manufacturing during H1 2024

ANDRITZ

ANDRITZ GROUP | NEWSROOM

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Newsroom / Metals / Salzgitter orders one of Europe's largest green hydrogen plants from ANDRITZ

Salzgitter orders one of Europe's largest green hydrogen plants from ANDRITZ

2023/09/20

- Salzgitter AG has ordered a 100 MW green hydrogen plant for low-CO_2 steel production from ANDRITZ GROUP.
- Hydrogen will be used instead of coal on an industrial scale.
- This contract completes the orders for all plants and systems for the first stage of Salzgitter's SALCOS® sustainable transformation program.

The Salzgitter Group has selected technology group ANDRITZ to supply one of Europe's largest green hydrogen plants for the SALCOS® program, which aims to achieve virtually CO_2-free (green) steel production.

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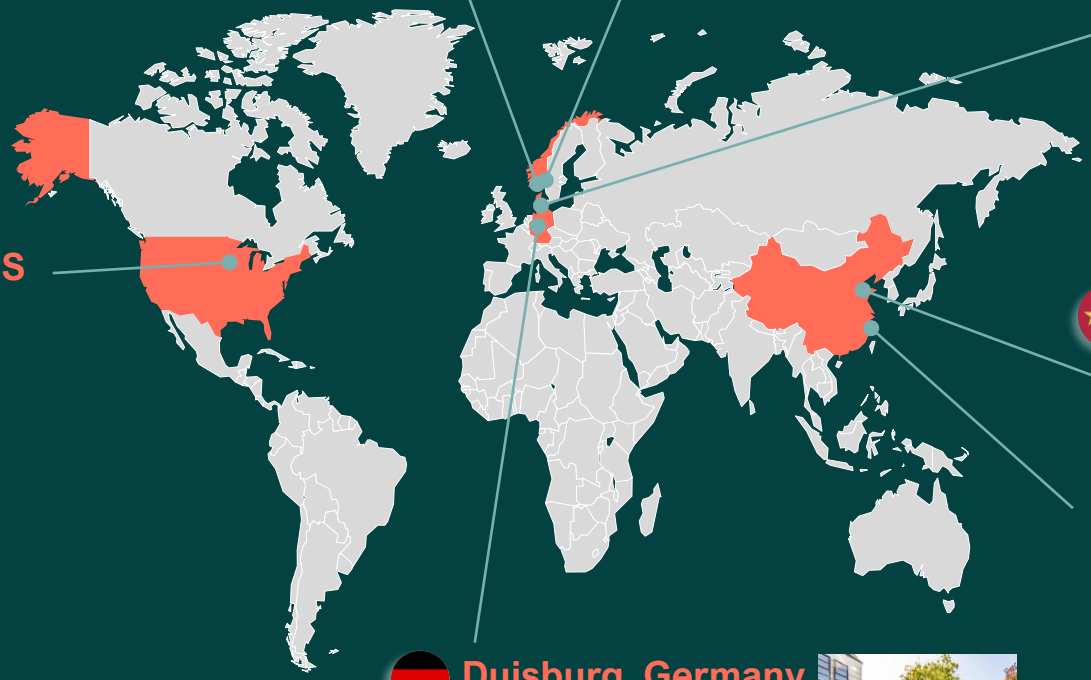
Building a global brand

Norway

Porsgrunn:
HQ &
Technology center

Oslo:
Admin office



Aarhus, Denmark
R&D and Electrode manufacturing

Minneapolis, US
Sales/admin office

China

Tianjin: Electrolyser manufacturing, 500 MW capacity

Shanghai: Sourcing

Duisburg, Germany
Sales office

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Efficient manufacturing of high quality products meeting international standards

International certifications

- ASME
- ISO9001
- ISO 14001
- ISO 45001

Manufactured in line with international standards

- ASME (US)
- EN, CE (Europe)
- KHK (Japan)

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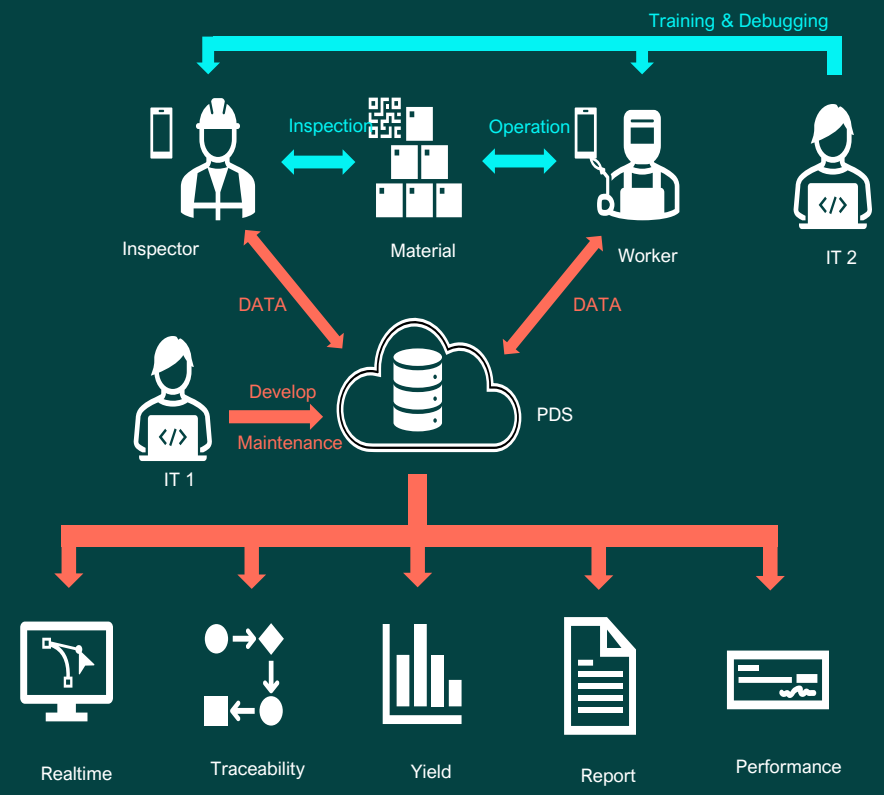
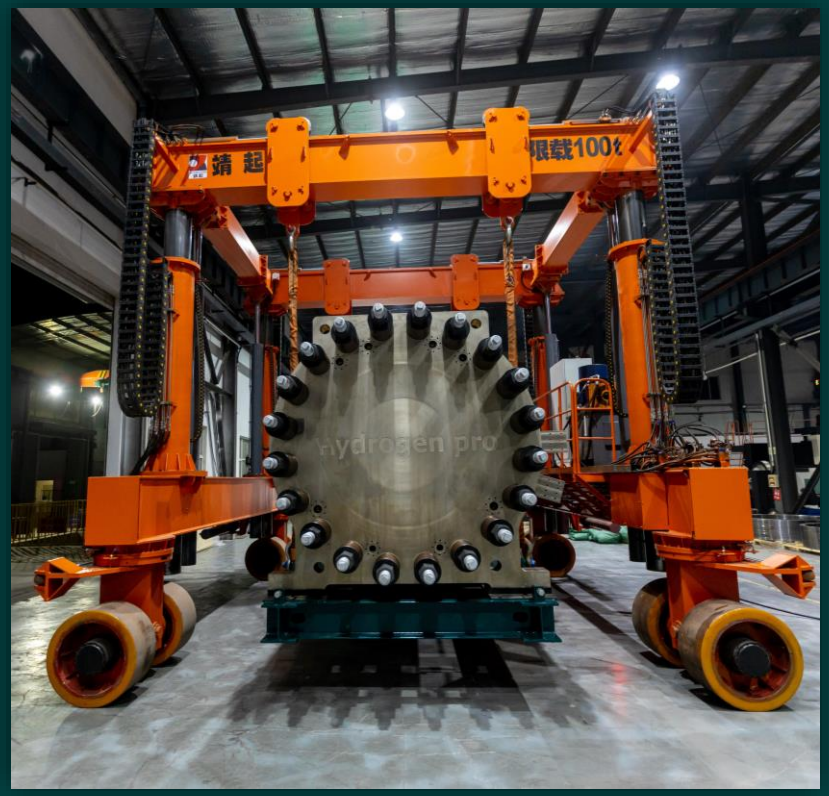
Advanced Production Data System



- **Full traceability of all aspects of components, process and products by use of QR/bar-codes and scanners**
- **Real-time insight into quality and production parameters**
  - ✓ **Paper-less production**
  - ✓ **Cloud based database (Amazon)**
  - ✓ **Flexible and scalable system**



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Delivering to projects across geographies and industries

340 Awarded

>1755 FEED

Porsgrunn, Norway
Test facility, operational

Kokkola, Finland
Woikoski, Power-to-X, operational

Kristinestad, Finland
Koppö [ANDRITZ], power-to-X, FEED

Raahe, Finland
Fortum, green steel, FEED completed

Europe
Undisclosed energy company, refinery, FEED completed

Japan
Takasago Hydrogen Park, Mitsubishi, power-to-gas, operational

Salzgitter, Germany
Salzgitter SALCOS [ANDRITZ], green steel, delivering

Utah, US
ACES, Mitsubishi, power-to gas, delivering

Louisiana, US
DG Fuels, Sustainable Aviation Fuel, FEL 3

Texas, US
Undisclosed, green ammonia, FEED

Spain
Undisclosed, Ammonia, FEED

9
5.5
200
>200
>5
100
200
5.5
220
>800
>300

Additionally, final negotiations for FEED:

North America
1100MW power-to-gas
>300MW ammonia

Northern & Central Europe
>100MW hydrogen plant
>200MW hydrogen plant

Southern Europe
>100MW power-to-X
>150MW power-to-X

All numbers in MW

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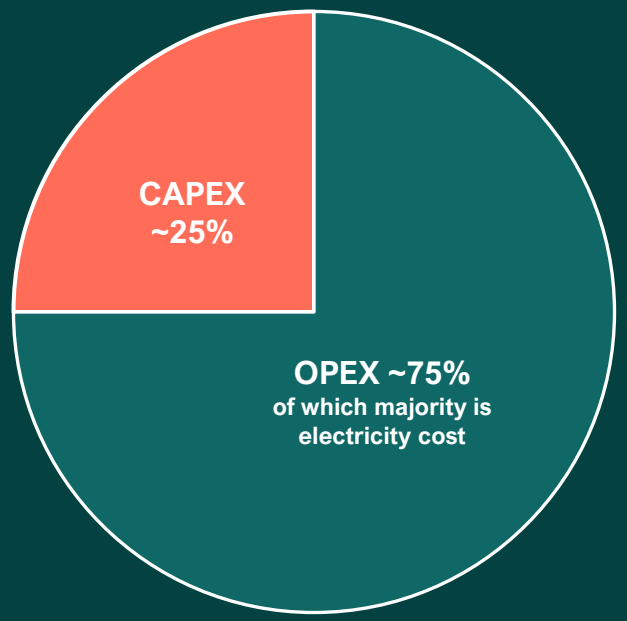
HydrogenPro technology leadership

	PEM	Alkaline	Alkaline	Hydrogen pro
	High-pressure	*Atmospheric pressure*	*High-pressure*	*3rd Gen*
Plant efficiency	Low	Medium	Medium	High
Suitable for renewable energy input	Yes	No	Yes	Yes
Cooling need	High	Medium	Medium	Low
Use of noble materials	Yes	No	No	No
High pressure on O_2	Medium	No	Yes	Yes

HydrogenPro's 3rd Gen electrode technology increases efficiency and reduces OPEX

Levelised cost of hydrogen



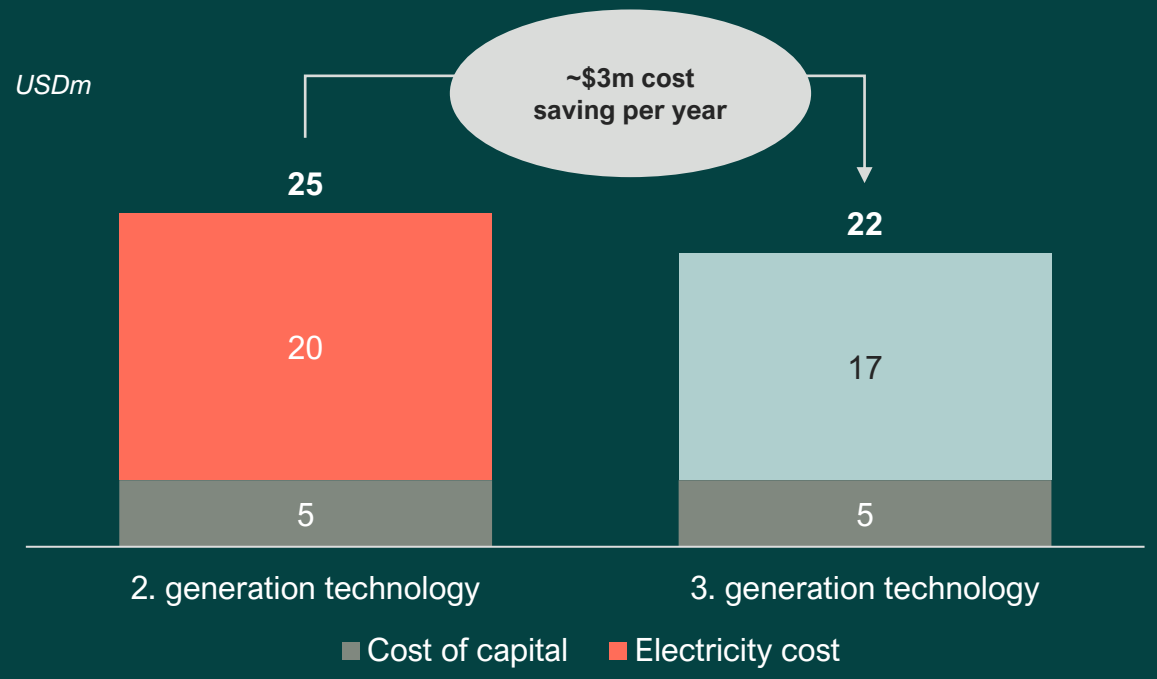
Advanced electrodes is a *game changer* for production of green hydrogen

- HydrogenPro's 3rd 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

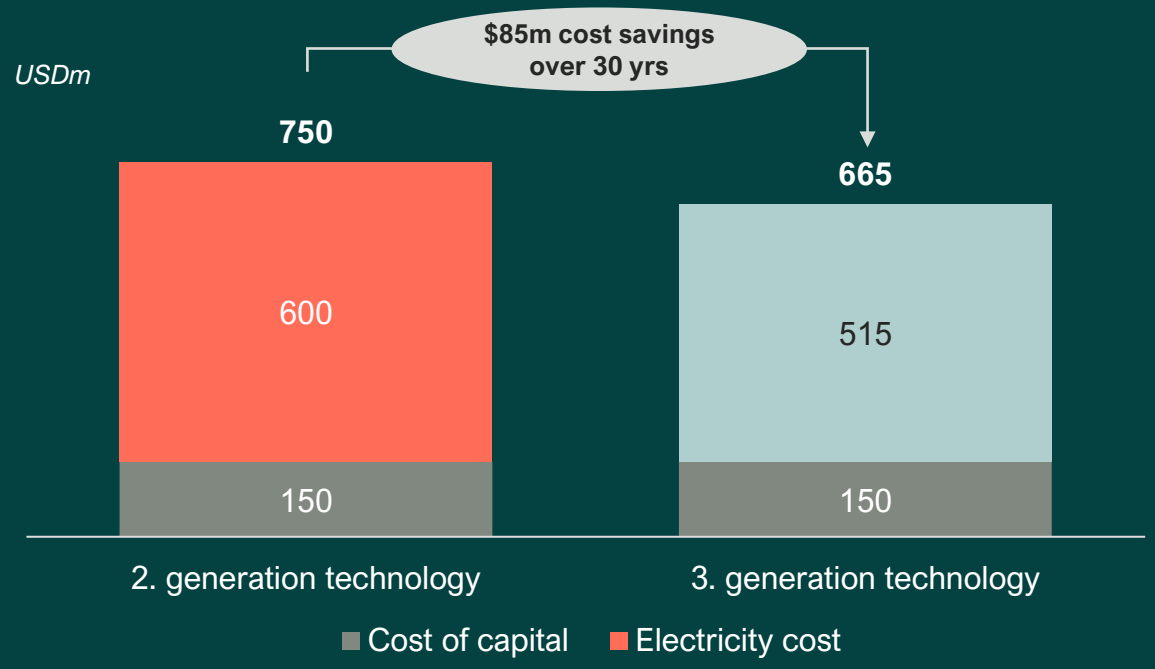
Total *annual* cost of operations

OPEX SAVING (~$3M) / CAPITAL COST ($5M) > 50%



Total *lifetime* cost over 30 years

OPEX SAVING ($85M) / CAPITAL COST ($150M) > 50%



Assumptions: 100 MW plant, USD 60M in total capex and equipment overhauls during lifetime of operation (30 years), electricity price of USD20/MWh, Cost of capital includes 30 years depreciation & 10% interest rate on depreciated value

Hydrogen pro

Taking a leading role in the global electrolyser industry

Large-scale track record	✓ Completed manufacturing of world's largest (220MW) purchase order ✓ Awarded 100 MW purhcase order with Andritz, to be manfucatured H1 '24
Technology frontrunner	✓ Strong focus on technology leadership with next generation electrolyser technology
Positioned for rapid growth	✓ Focused strategy and technology offering to scale up fast with no dependence on noble metals
Global presence	✓ Building a global brand seeking to optimize global supply chain competitiveness
Cost competitiveness	✓ Focused capital deployment plan & global cost competitiveness: positioned to generate industry-leading returns
Significant market opportunities	✓ Momentum building up with several FEED studies currently. ✓ A very clear market trend with increased demand for large-scale offerings.

#1

provider of large-scale green hydrogen technology & systems

Hydrogen pro