



Hydrogen from Grid Scale Electrolysis: The Enabler for a Decarbonized Economy

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About Nel Hydrogen...

NEL HYDROGEN



10 employees – Oslo Norway
Corporate office

HYDROGEN FUELING



120 employees – Herning Denmark
Sales, R&D, manufacturing and service



12 employees – California USA
Sales, installation and service



10 employees – Korea
Sales and service

ELECTROLYSERS



30 employees – Notodden Norway
Alkaline electrolyser Sales, R&D and manufacturing



90 employees – Connecticut USA
PEM electrolyser Sales, R&D, manufacturing and service



Nel Hydrogen US Operations

PEM Electrolyzer Manufacturing Plant

- The worldwide market and technology leader in PEM electrolysis
- A U.S. subsidiary of Nel ASA, based in Oslo, Norway
- All manufacturing done in Wallingford, CT, USA
- 100 employees, 100,000 ft² (9,300 m²) facility
- cTÜVus & TÜV approved for CE mark
- 2,700+ PEM Systems installed in 75+ countries

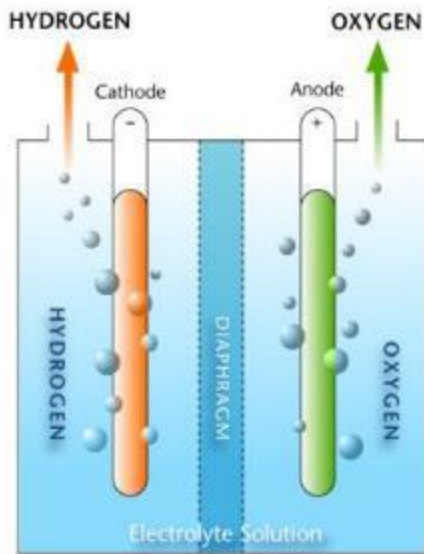


ISO 90001 certified

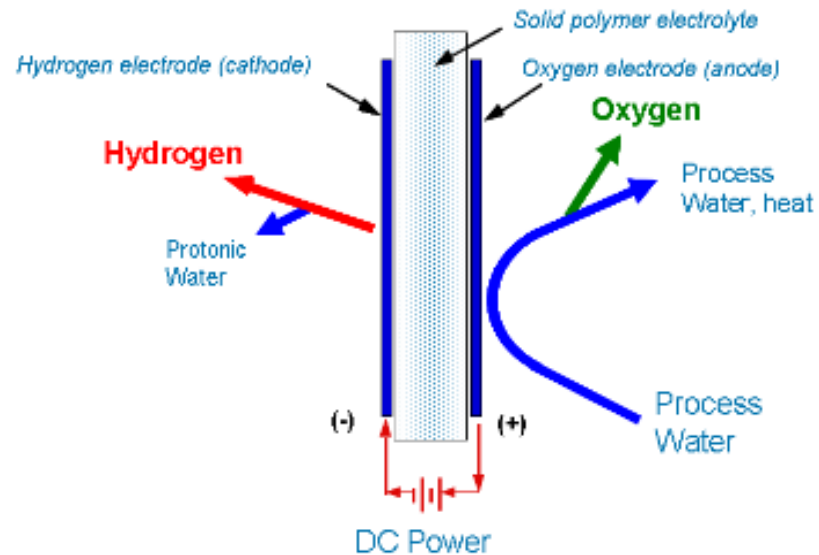


Nel's electrolysis technologies...

- Alkaline
 - Liquid KOH electrolyte



- Proton Exchange Membrane (PEM)
 - Solid polymer electrolyte

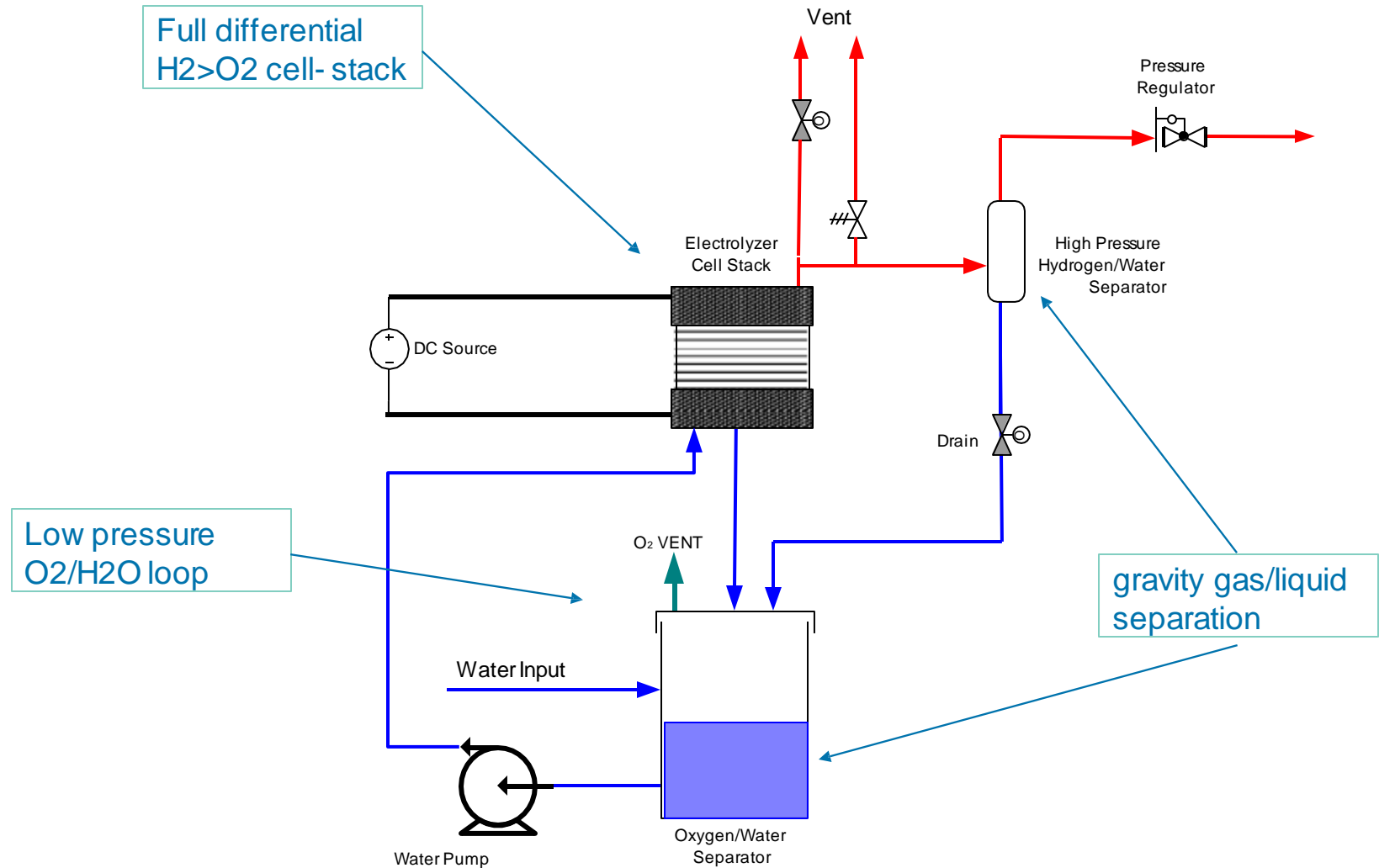


Our Legacy – Ultimate Reliability and Safety for Mission Critical Applications



Nel is the exclusive supplier of PEM electrolyzer cell stacks for all new U.S., U.K., and French nuclear submarines...

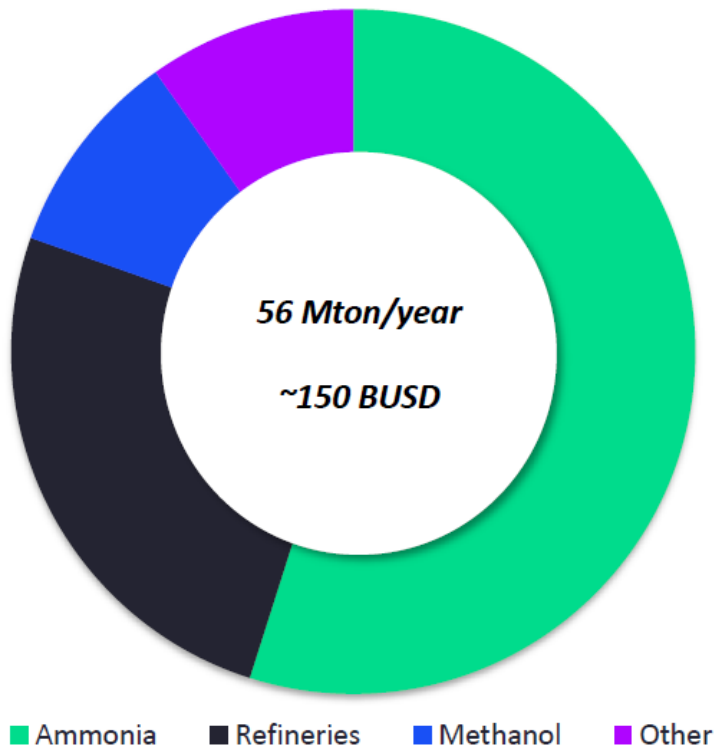
Full Differential Pressure System Design: the safety and reliability attribute required by the Navy



GRID SCALE ELECTROLYZERS: APPLICATIONS THAT DRIVE SCALE

Addressable hydrogen markets are huge

Global hydrogen market, by end-use:



Large potential for growth, driven by increasing focus on climate and renewable energy, decreasing electricity prices and decreasing electrolyser capex

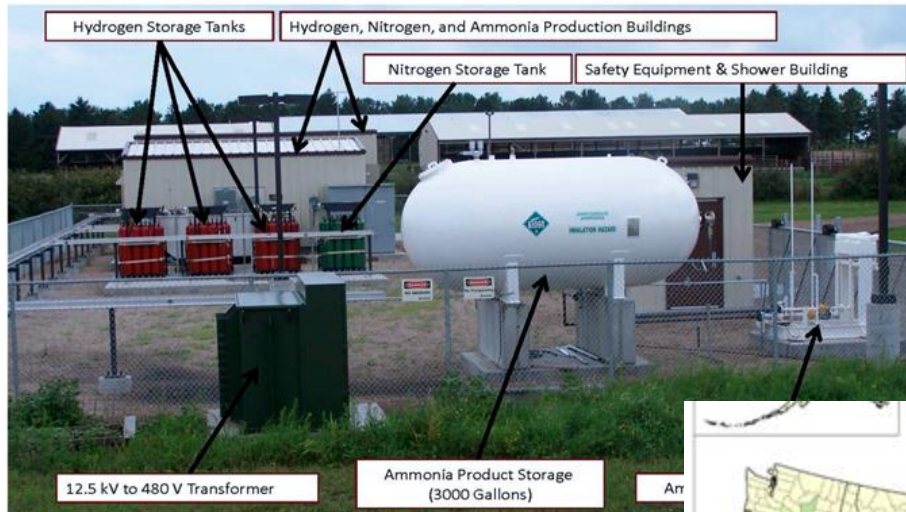
Special focus on refineries and green ammonia accounting for ~80% of the market

Market potential for electrolysis within the existing industry sector alone is 400 – 600 GW (~20 B\$/year)

With new opportunities within the steel industry, the addressable industry market has more than doubled

Morris, MN Ammonia Pilot Plant

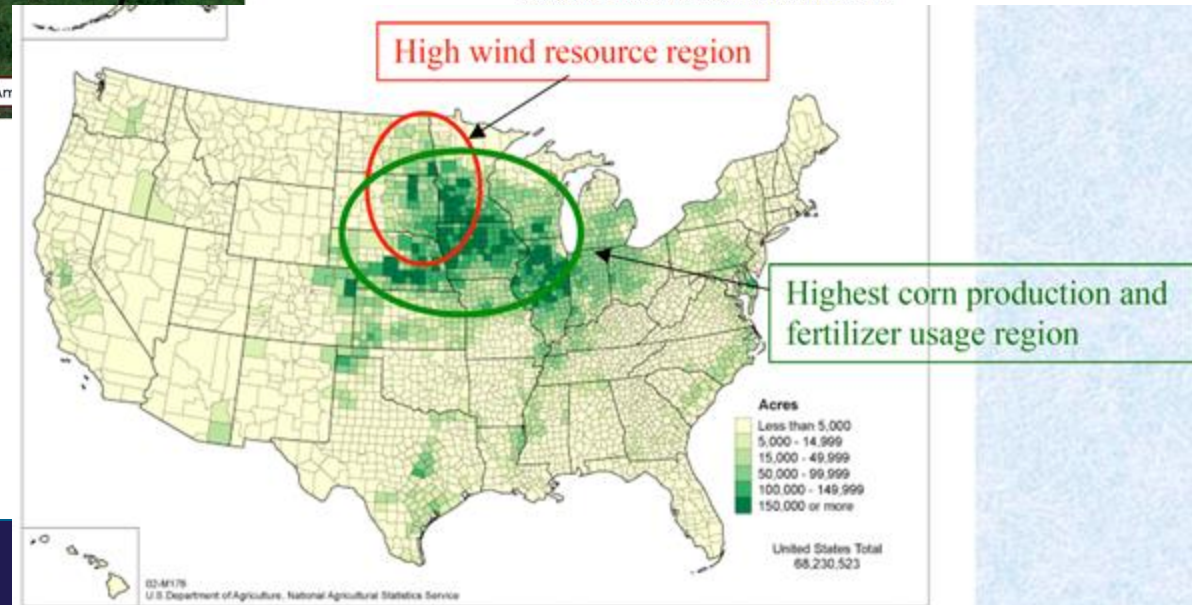
Scaled down conventional Haber-Bosch process, 25 ton/yr capacity



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Jon André Løkke, CEO in Nel and Tove Andersen, EVP Production in Yara signing the collaboration agreement. Photo: Yara



Green steel production: HYBRIT pilot plant in Sweden

- Nel has received a purchase order for a 4.5 megawatt alkaline electrolyzer which will be used in a pilot plant for fossil free steel production
- Hybrit Development AB (HYBRIT) is a joint venture owned equally by SSAB, LKAB and Vattenfall
- The steel industry accounts for 7% of global and 10% of Swedish CO₂-emissions



Green Chemical Production



Chemicals ($1,940\text{Nm}^3/\text{h}$, 9.2MW) – Norway

Green Polysilicon Production



25 MW/5,500Nm³/h – Malaysia

Fueling Transit Bus Fleets



2 MW PEM plant
900+ kg/day
26 bus capacity
SunLine Transit
Thousand Palms, CA



Green Hydrogen for Truck Fueling

Framework Agreement with H2 Energy for 30 MWs of PEM electrolysis



Hyundai Motor and H2 Energy Will Bring the
World's First Fleet of Fuel Cell Electric Truck
into Commercial Operation



M Series MC400
Containerized 2 MW PEM

Case Study: Nikola Motors supply agreement drives massive cost reduction



OVER 8,000 TRUCKS
ON ORDER
800 TRUCK ORDERS
FROM ANHEUSER-
BUSCH INBEV
TRUCKS ARE LEASED
ACCORDING TO
MILEAGE WITH ALL
FUEL INCLUDED



Source: Nikola



Nel's 8 ton/day (18 MW) electrolyzer plant provides the hydrogen production for each station site. New factory in Norway will enable 40% reduction in stack cost.