



Toyota Mirai fueling at H2Station® in Copenhagen

NEL – Acquisition of H2 Logic

June 2015



“NEL buys the world’s largest independent hydrogen refuelling station company H2 Logic”

H2 LOGIC INVESTMENT ATTRACTIONS



ESTABLISHED MARKET LEADER IN HYDROGEN REFUELLING STATIONS

- Largest independent Hydrogen Refuelling Station (HRS) company with 20 deliveries in 7 different countries
- Early involvement with major stakeholders, car manufacturers and policy groups

FUEL CELL ELECTRIC VEHICLES MARKET AT A TIPPING POINT

- Major car manufacturers introducing high performance emission-free Fuel Cell Electric Vehicles (FCEVs)
- Infrastructure development well underway in markets with large potential

BEST IN CLASS HRS TECHNOLOGY

- Significant R&D, investment and testing behind the company's product portfolio
- Technology used daily for fuelling of FCEVs from leading car manufacturers

CREATES A UNIQUE INVESTMENT CASE FOR NEL

- First publicly listed company with both hydrogen production and HRS exposure
- Attractive growth prospects, with underlying profitable business

NEL ASA & the Transaction

H2 Logic

Introduction

Products and references

Market overview

Financials

- Established in 1927 by Norsk Hydro
- World leading supplier of hydrogen production systems based on water electrolyser technology
- Decades of competence in designing hydrogen energy systems and refuelling stations
- More than 500 large scale electrolysers sold to clients in more than 50 countries
- Significant opportunities for hydrogen as an energy carrier, serving as a 100% “clean battery” for solar and wind energy production applications



NEL CUSTOMER REFERENCES



NEL has delivered electrolyzers to more than 50 countries across the world in a wide span of industries

ALSTOM



ArcelorMittal

Reliance
Industries Limited

GUARDIAN
Glass • Automotive • Building Products

Cargill

IBERDROLA

SUGAR
ILLOVO
LIMITED

YARA
YARAPRAXAIR

Maire
Tecnimont

Borregaard

HYUNDAI
ENGINEERING & CONSTRUCTION

ESSAR
STEEL

PILKINGTON

SANDVIK

wilmar
We Invest • You Harvest

GRASCO

AIR LIQUIDE

GlencoreXstrata

AkzoNobel
Tomorrow's Answers Today

AIR
PRODUCTS

NATPET

VATTENFALL

Statoil

AFROX

THE LINDE GROUP
Linde

AGA

team

CHIYODA

ALFA
LAVAL

e-on

edf

RATIONALE FOR ACQUIRING H2 LOGIC



1

By acquiring H2 Logic, NEL will be positioned as a world leading supplier of Hydrogen Refuelling Stations

2

World leading car manufacturers are introducing fuel cell electric vehicles, which will drive substantial demand for refuelling stations

3

Synergies with hydrogen production from low cost electricity from solar and wind – to high value hydrogen fuel

NEL owns the Hydrogen Refuelling Station technology developed by Norsk Hydro and Statoil

HRS delivered:

- Reykjavík, Iceland (world's first public Hydrogen Refuelling station)
- Hamburg & Berlin, Germany
- Porsgrunn, Kjellstad & Økern, Norway



NEL – BUSINESS STRATEGY – 3 PILLARS



Hydrogen Production: NEL Hydrogen



Hydrogen Refuelling Stations: H2 Logic



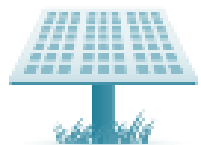
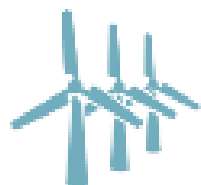
Energy Storage: New business

NEL'S POSITION IN THE HYDROGEN VALUE CHAIN



Addressing all end markets post transaction

Electricity production



Renewable energy

Electrolysis



Electrolyser = H₂



Hydrogen production from water and electricity

Energy storage



Hydrogen as a “battery” for renewable energy

Distribution methods



Onsite



Trucked in



Pipeline

End markets

Hydrogen Refuelling Stations



Industrial end markets



NEL ASA & the Transaction

H2 Logic

Introduction

Products and references

Market overview

Financials

H2 LOGICS COMPETITIVE POSITION

Established leading position

The worlds largest independent Hydrogen Refuelling Station company with 20 deliveries in 7 different countries

Participant/supplier to all major European hydrogen transport projects since 2008, active member of FCHJV¹

Conducting fuelling of vehicles from all major car manufacturers on a daily basis in Europe

Performance

Fast refuelling in 3-5 minutes and highest reported average operation availability in the world (close to 100%)

Early mover

First in the world to operate a country-wide Hydrogen Refuelling Station network on daily basis (Denmark)

First to achieve German approval for HRS operation according to latest standards²

Early collaboration with Shell, Air Liquide, Daimler, Hyundai, Toyota, Honda and BMW

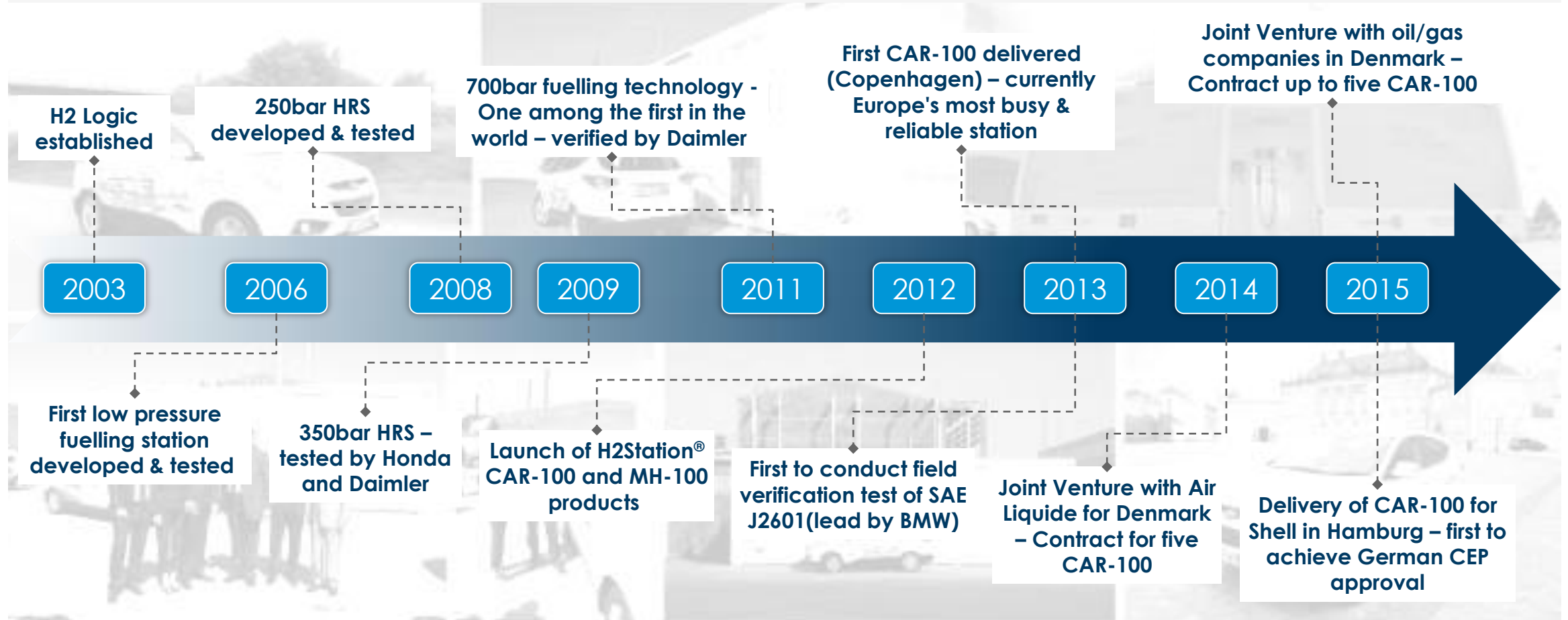
Focused and profitable

Strong continuous R&D effort on hydrogen fuelling with 15+ R&D employees and a growing patent pipeline

Only Hydrogen Refuelling Station company in the world to achieve accumulated profits since inception

COMPANY HISTORY

Track record of continuous innovation and partnership with all leading players



MANAGEMENT AND ORG. STRUCTURE



Jacob Krogsgaard

Co-founder and CEO

Experience: Current position in H2 Logic since 2003. CEO & Board member of Danish Hydrogen Fuel A/S and board member of Copenhagen Hydrogen Network A/S.



Mikael Sloth

Co-founder & Business Development Manager

Experience: Current position in H2 Logic since 2003. Board member 2008-2015 of the €2,5 billion European Joint Technology Initiative for Hydrogen and Fuel Cells.



Jørn Rosenlund

COO

Experience: Former management positions on supply chain topics in EagleBurgmann (2013-2015) and Danfoss (2000-2013) in Denmark, Germany and USA.

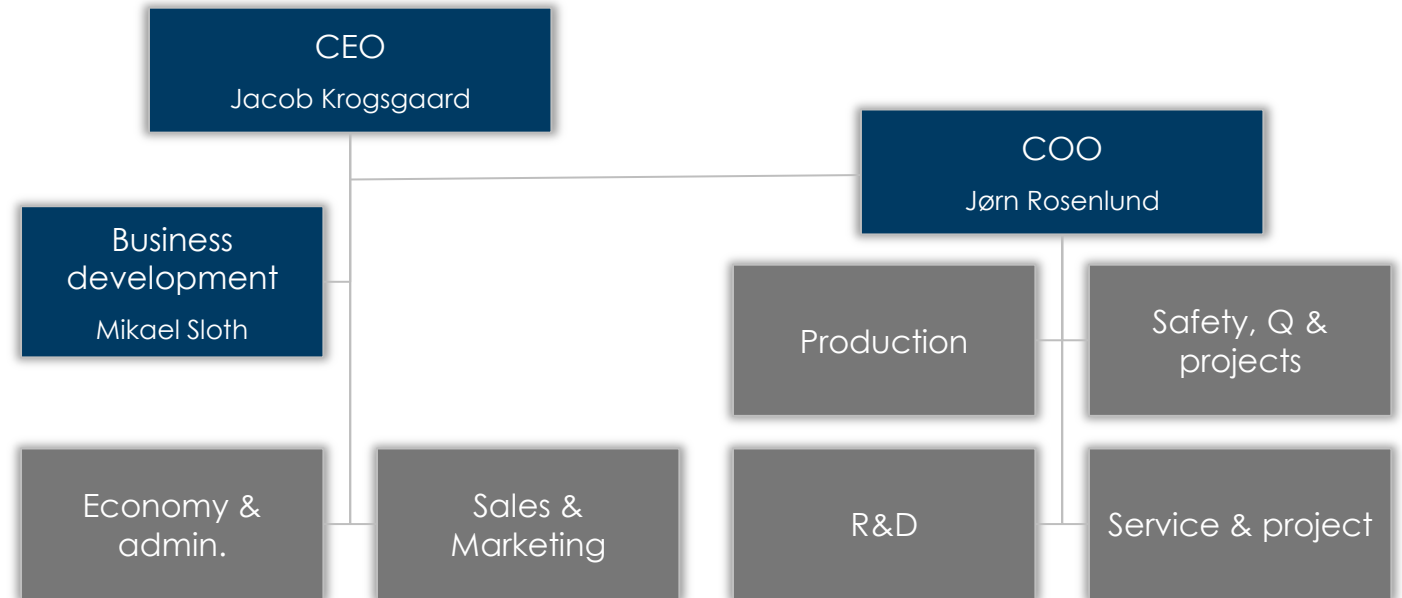
Other members of management team:

Jesper Boisen: Co-founder and R&D Manager

Thomas Luckmann: Co-founder and Service Manager

Martin Poulsen: Financial Manager

Karsten Poulsen: Production Manager



1. Experienced team with long track record in Hydrogen Refuelling Stations and renewable energy
2. Presence in several international hydrogen policy groups
3. Dedicated to, and key opinion leaders in, the HRS market
4. Marketing know-how and customer relationships
5. Advised by experienced board through commercialisation phase, including Svend Sigaard¹, Flemming Hansen² and Mogens Filtenborg³

Notes

(1) Former CEO and CFO Vestas Wind Systems ; various present/past board positions: Wrist Group, BoConcept, Aalborg Industries

(2) Former Danish Minister of Transport and MP; various present/past board positions: Arealudviklingsselskabet, Copenhagen Malmö Port

(3) Former MD Boel Living and CTO Vestas Wind Systems; various past/present board positions: DEIF, Stirling Denmark, Kemp&Lauritzen

NEL ASA & the Transaction

H2 Logic

Introduction

Products and references

Market overview

Financials

INVOLVED IN THE ENTIRE VALUE CHAIN

H2STATION® PRODUCTS



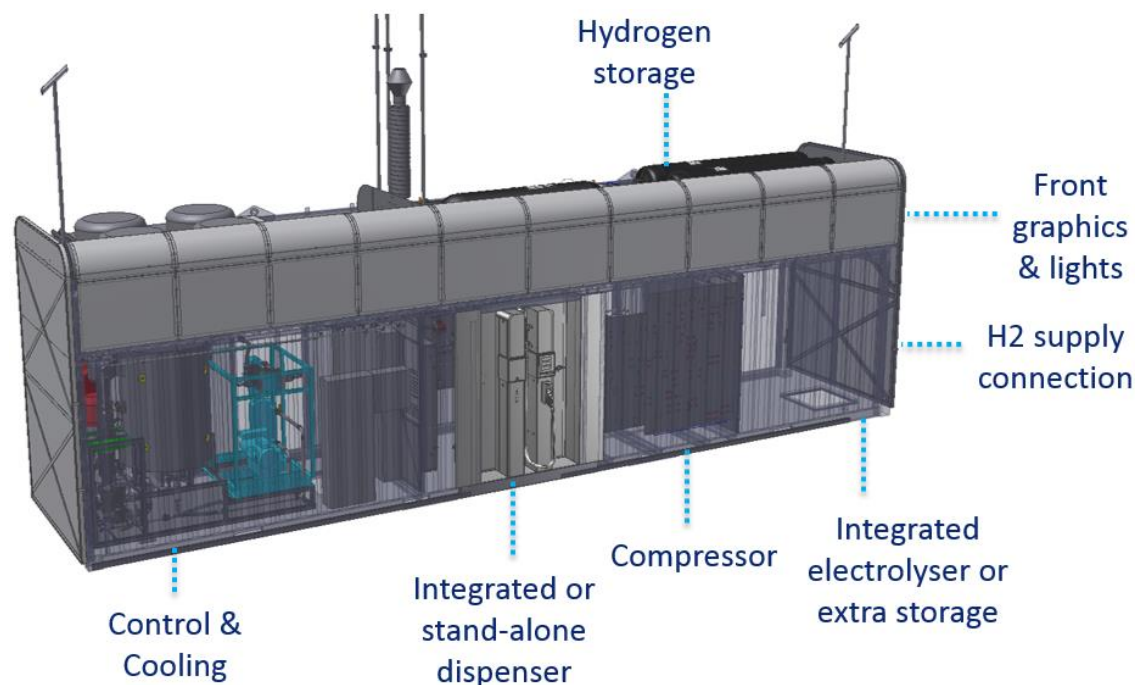
H2Station® CAR-100 for cars



H2Station® MH-100 for industrial vehicles

H2STATION® SERVICES

1. Planning & procurement
 - Station & network planning
 - Hydrogen supply handling
 - Site integration & planning
2. Delivery & installation
 - Handling of permitting process
 - Handling of installation and civil works
 - Project management
3. Operation & maintenance
 - Periodic maintenance
 - Monitoring of operation
 - Instant service response



KEY FEATURES

- Turn-key one-module system with installation down to 48 hours
- Fast refuelling in 3-5 minutes giving 500+ km range
- Up to 200 kg/day capacity or ~400 vehicles in a network
- Flexible hydrogen supply – integrated onsite electrolyser or delivered
- Patented technology

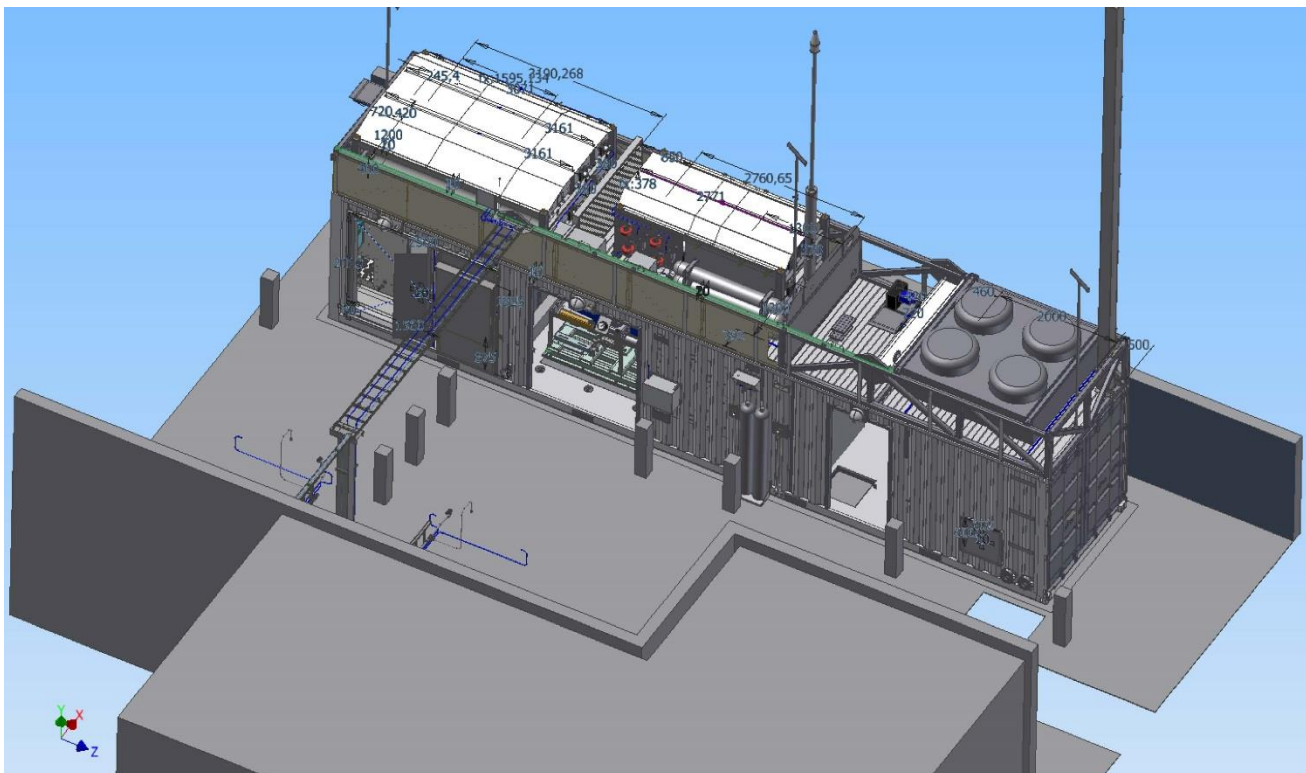
**“Must win battles”
for H2Station[®]**

Same fast refuelling
& long range as
gasoline

Hydrogen pump
price competitive
to gasoline

Profitable payback
of station for
owner/operator

98% availability in
countrywide
networks



Site integration of H2Station® at Shell gasoline station in Hamburg

H2 Logic assists customers in the early HRS planning phase:

- Site selection via extensive analysis of local/regional area
- Detailed site integration planning – preparing civil works
- Hydrogen supply engineering - onsite or delivered hydrogen
- Designing customizations to fit customers specific needs

H2 Logic is currently designing projects across Europe



Installation of H2Station® at a gasoline station in Denmark

H2 Logic manages the entire delivery & installation process:

- Managing the civil works conducted by contractors
- Handling authority permitting process – securing required permits to operate
- Installation and commissioning of H2Station® at site

Installation experience from 7 different countries in Europe



H2Station® service inspection at Shell in Hamburg

H2 Logic offers a wide range of H2Station® aftersales services:

- Periodic maintenance conducted at site by technical H2 Logic personnel
- Online monitoring of operation – remote addressing of events
- Instant service response at site addressing operation events
- Operation reporting
 - Key Performance Indicators
 - Logbooks and repair reports
 - Hydrogen sales data for invoicing

H2 Logic handles daily operation of the entire Danish HRS network

PROJECT REFERENCES

- 20 H2Station® units delivered in 7 countries
- Operational partners include Shell, Air Liquide and leading car manufacturers such as Daimler, Hyundai, Toyota, Honda, and BMW
- Since 2008, H2 Logic stations have provided 11,577 refuellings and 20 tons of hydrogen without any reported safety events



H2Station® at fuelling station in Denmark



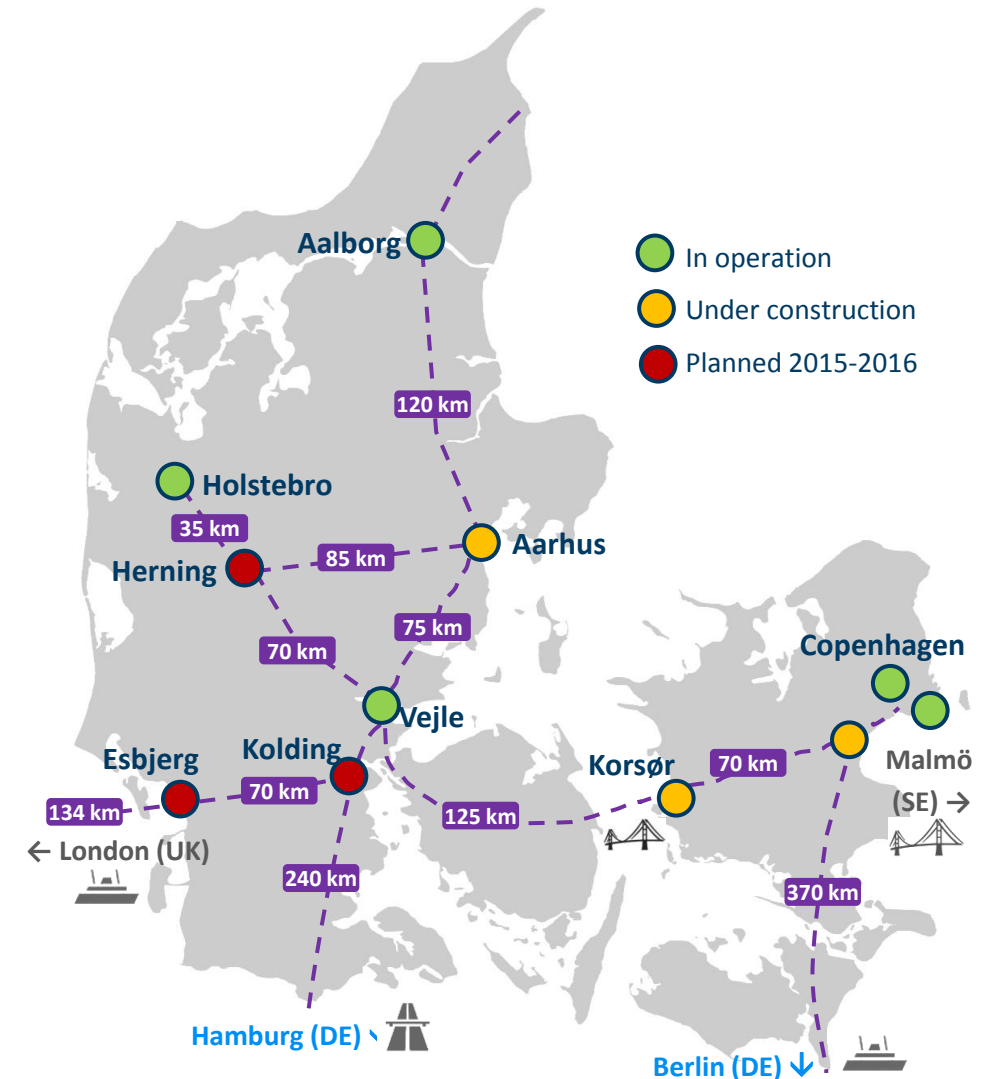
H2Station® at fuelling station in Germany



DELIVERED THE ENTIRE DANISH NETWORK

The world's first country wide network in daily operation:

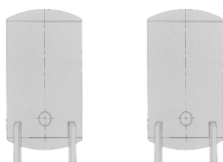
- H2 Logic services and operates the entire network
 - The network is operated in collaboration with leading oil, energy and gas companies
- 5 Hydrogen Refueling Stations in operation - additional 6 planned for 2015/2016
- Joint venture(s) with oil, energy & gas companies with regards to building and operations
- 100 % renewable hydrogen supply
- Hydrogen pump price same as gasoline (fuel cost per km)



H2STATION® FOR SHELL IN HAMBURG

- Turn-key Hydrogen Refueling Station with onsite production and storage for grid balancing
- Stand-alone dispenser at 50m distance - forecourt integrated next to conventional fuels
- First station in Germany to achieve approval according to the latest refueling standards

**Hydrogen storage
for grid balancing**



**H2Station® CAR-100
Integrated PEM Electrolyser**



**50 meter
hydrogen pipeline**

**Stand-alone
Dispenser**



NEL ASA & the Transaction

H2 Logic

Introduction

Products and references

Market overview

Financials

HYDROGEN VEHICLES ARE BEING INTRODUCED



- Hyundai, Toyota, Honda, BMW, Daimler, GM, Nissan, Ford and Volkswagen are all expected to launch hydrogen fuel cell electric vehicles (FCEV) before 2020
- Formidable cost reductions enable introduction: *"The Toyota Mirai's powertrain is 95% cheaper to build than the fuel-cell system in the 2008 Highlander fuel cell SUV"*¹



TOYOTA



HONDA



2014

2015

2016

2020

HOW A FUEL CELL ELECTRIC VEHICLE WORKS

POWER CONTROL UNIT

Manages the fuel cell stack and battery.

MOTOR

Runs on electricity from the fuel stack and the battery.

FUEL CELL STACK

Generates electricity from hydrogen fuel.

BATTERY

Stores energy from deceleration.

HYDROGEN TANK

Stores hydrogen fuel under high pressure.

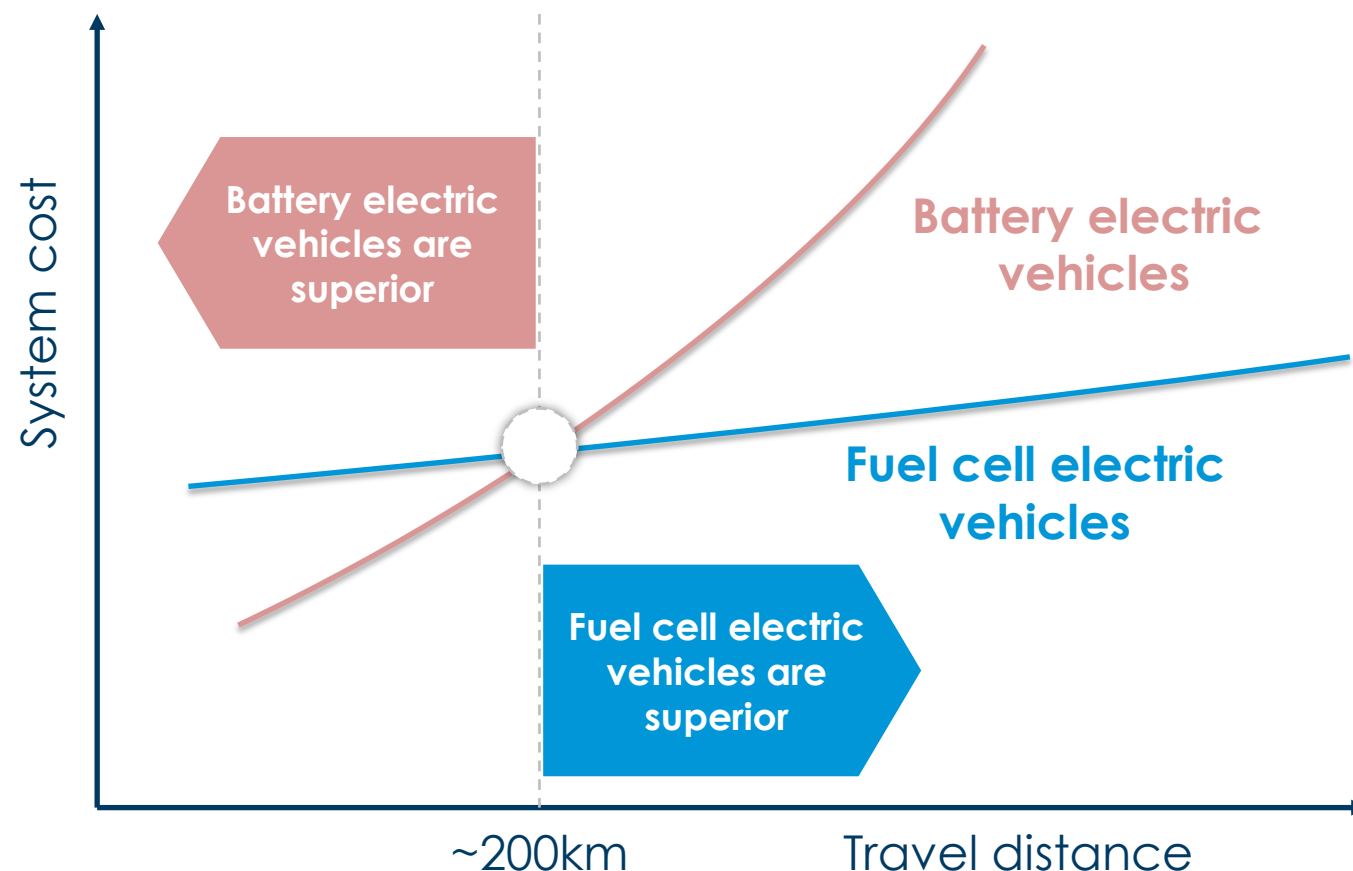
- Battery electric vehicles and FCEVs are both electric vehicles
- FCEVs run on hydrogen which is converted to electric power in a fuel cell
- FCEVs provide the convenience of conventional cars, along with:
 - Zero tail-pipe emissions
 - Refueling in 3 – 5 minutes
 - 500 km+ range

BEST COMPROMISE BETWEEN RANGE & COST

SIZE MATTERS:

- Small and medium sized cars used for short trips account for **50%** of vehicles and **25%** of emissions
- Medium/large cars used for longer trips account for **50%** of vehicles and **75%** of emissions
- FCEVs most cost efficient alternative for medium/large vehicles

SYSTEM COST COMPARISON



FCEV VERSUS BATTERY ELECTRIC VEHICLES

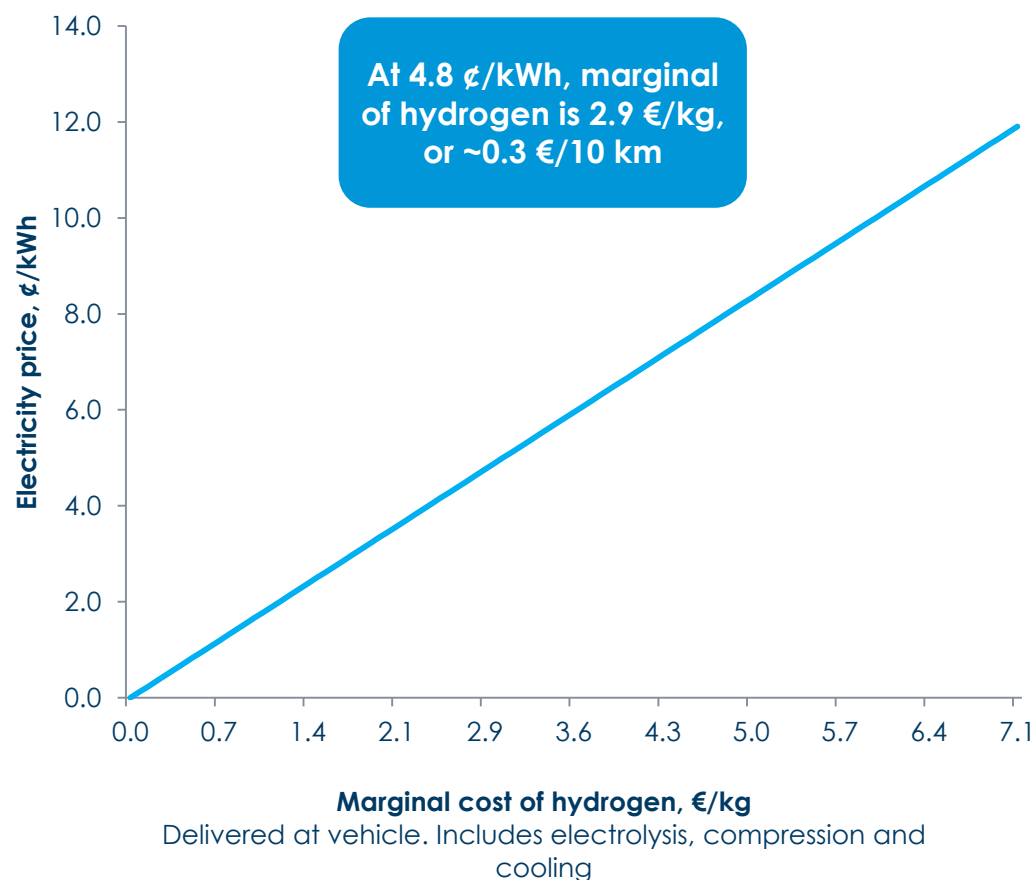
FCEVs provide the advantages of conventional and battery electric vehicles - combining the best from both worlds



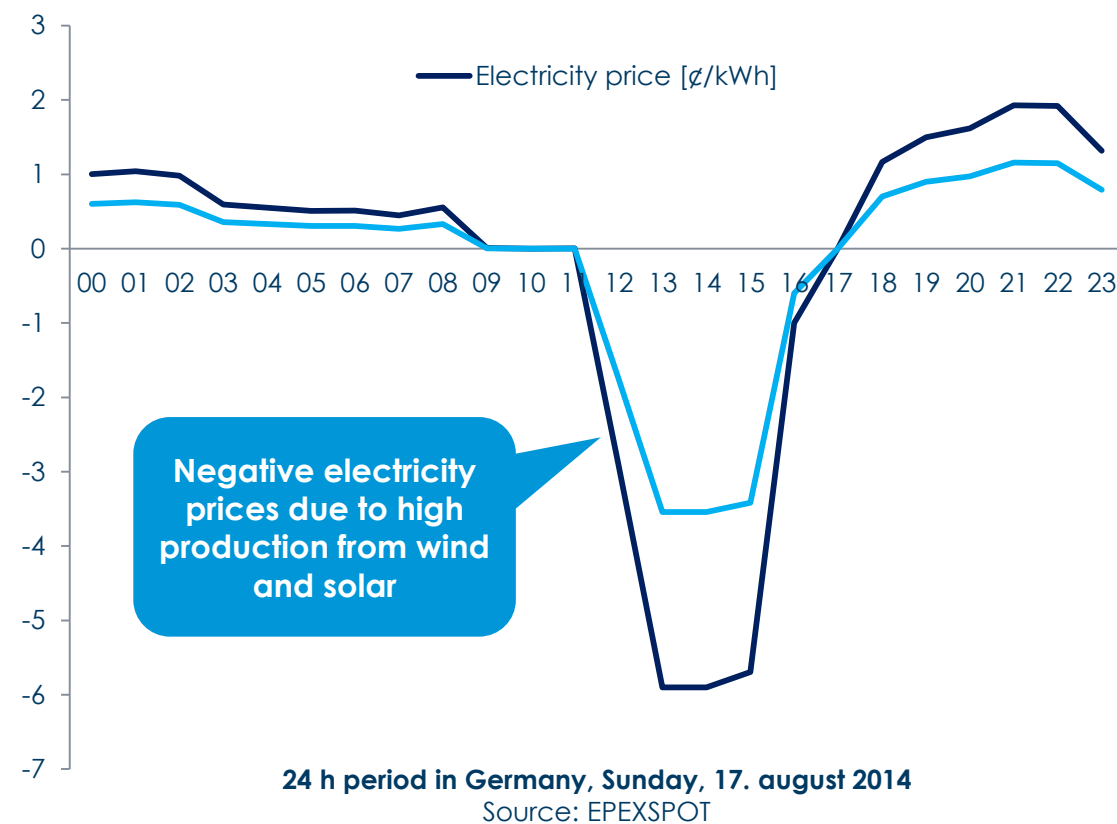
Model	Toyota Mirai	Tesla Model S 85D	Commentary
Price in the US: [\$]	57,500	80,000	Without subsidies (FCEVs have 2x BEV subsidy in the U.S.)
Range: [km]	500	500	FCEV range less affected by cold weather
Refuelling time fast: [min]	3	75	Fast charge, 0 - 100% for 85 kWh battery (120 kW)
Refuelling time slow: [min]	5	1,680	Slow charging 85 kWh battery at home (3 kW)
System weight [kg/car]:	195	570	Battery system (BEV). Tanks, fuel, fuel cell & battery (FCEV)
System weight, 2x range: [kg/car]	288	1,140	Only extra tanks & 5 kg H ₂ for FCEV

COST OF PRODUCING HYDROGEN

PRODUCTION COST VERSUS ELECTRICITY PRICE



EXAMPLE: 24HR PERIOD IN GERMANY



EXAMPLE: ELECTRICITY PRICE OF 40 øre/kWh

- **CAPEX, HRS + electrolyser:** ~15 MNOK
- **OPEX (electricity) hydrogen:** 24 NOK/kg
- **OPEX (O&M) HRS+electrolyser:** ~5 NOK/kg
- **e-price of OPEX > 80%**
- **HRS refueling capacity:** 200 kg/day
- **Sales price:** NOK 90/kg
 - 1kg of hydrogen gives ~100km of range

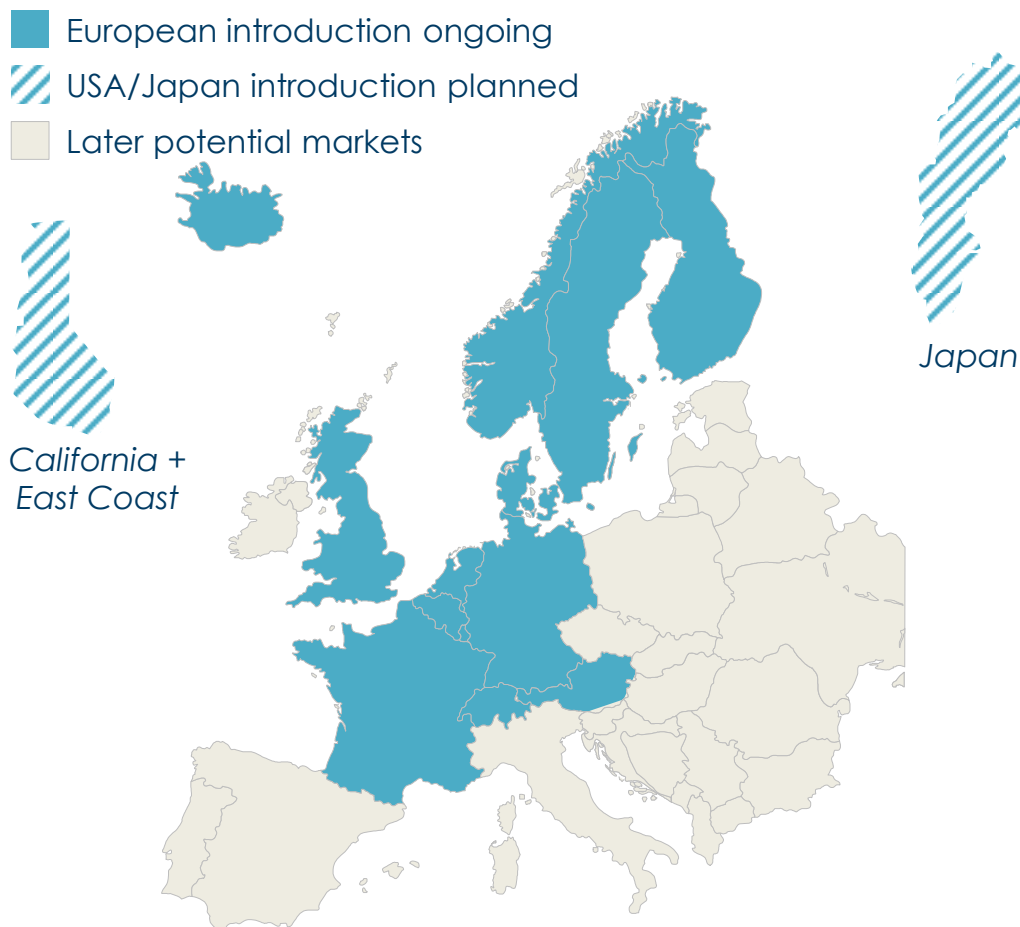
Business case highly dependent on electricity/hydrogen price & number of customers


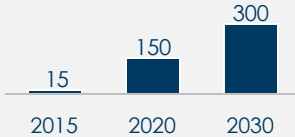

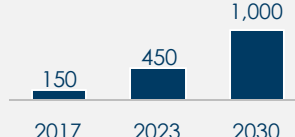

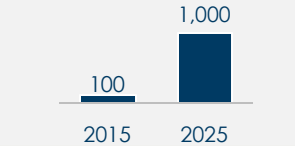

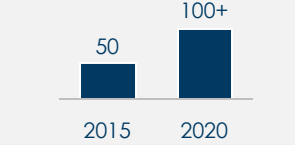

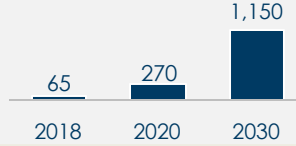


Good business case in Oslo-region: >10,000 FCEVs

HRS MARKET DEVELOPMENT AND STRATEGY

H2 Logic is targeting markets where major car manufacturers plan to launch FCEVs



Market	Expected HRS roll-out	H2 Logic (NEL) activity / strategy
Scandinavia 		<ul style="list-style-type: none"> To date, NEL/H2 Logic has delivered 90% of all HRS in operation throughout Scandinavia In a position or has secured contracts for ~75% of HRS's planned for 2015/2016
Germany 		<ul style="list-style-type: none"> H2 Logic has 3 H2Station® delivered for German customers H2 Logic was the first to achieve CEP approval for HRS operation
Japan 		<ul style="list-style-type: none"> Design adaption of the CAR-100 for Japanese market ongoing HRS introduction preparations ongoing
USA 		<ul style="list-style-type: none"> Design adaption of H2Station® technology Californian market ongoing Efforts currently focused on California, in particular Los Angeles and surrounding areas
UK 		<ul style="list-style-type: none"> First H2Station® for UK market is undergoing final commissioning at customer site Continuous customer outreach with the aim to secure deliveries in the coming years

Ensuring commercial introduction of hydrogen in the Oslo-region

- 2014 – 2018: 400 MNOK (high public funding: Oslo/Akershus/Enova/EU)
- 2019 – 2025: 1,000 MNOK (gradually lower public funding)
- Government proposed national strategy for hydrogen in Norway (Feb. 2015)
- Enova responsible for governmental support to make transport sector more energy efficient and environmentally friendly
- EU's hydrogen program: €1.4B until 2020
- Hydrogen Infrastructure going forward will be commercial grade:
 - Higher capacity & availability/redundancy
 - Lower CAPEX & OPEX



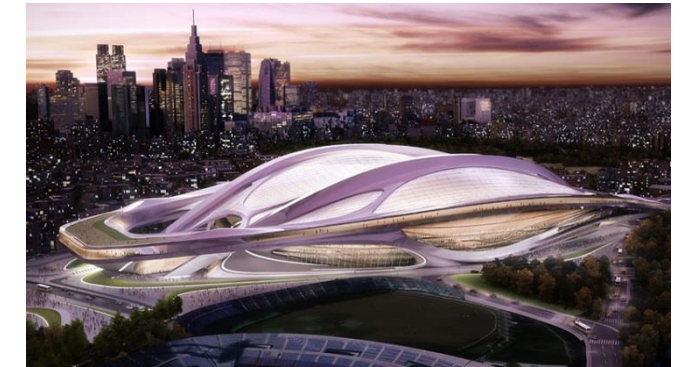
JAPAN, AN EARLY AND STRONG MOVER

Japanese market within hydrogen and fuel cells:¹

- 2030: \$ 10 billion
- 2050: \$ 80 billion

2020: Olympic Games

- Heritage from 1964 Olympic Games was the bullet train, “Shinkansen”
- **Heritage from 2020 Olympics will be hydrogen**
 - Hydrogen vehicles
 - “Hydrogen Olympic Village” for power & heat
- Japanese government pledged \$385 million support for FCEVs and HRSs until 2020²



“It’s time to introduce a hydrogen era.” – Prime Minister Shinzo Abe, Jan. 15, 2015

Note (1) Estimates by NEDO (New Energy and Industrial Technology Development Organization)

Note (2) http://www.japantimes.co.jp/news/2015/01/20/business/tokyo-to-spend-%C2%A545-billion-on-hydrogen-stations-subsidies-ahead-of-olympics/#.VV7wo_mqpBc

NEL ASA & the Transaction

H2 Logic

Introduction

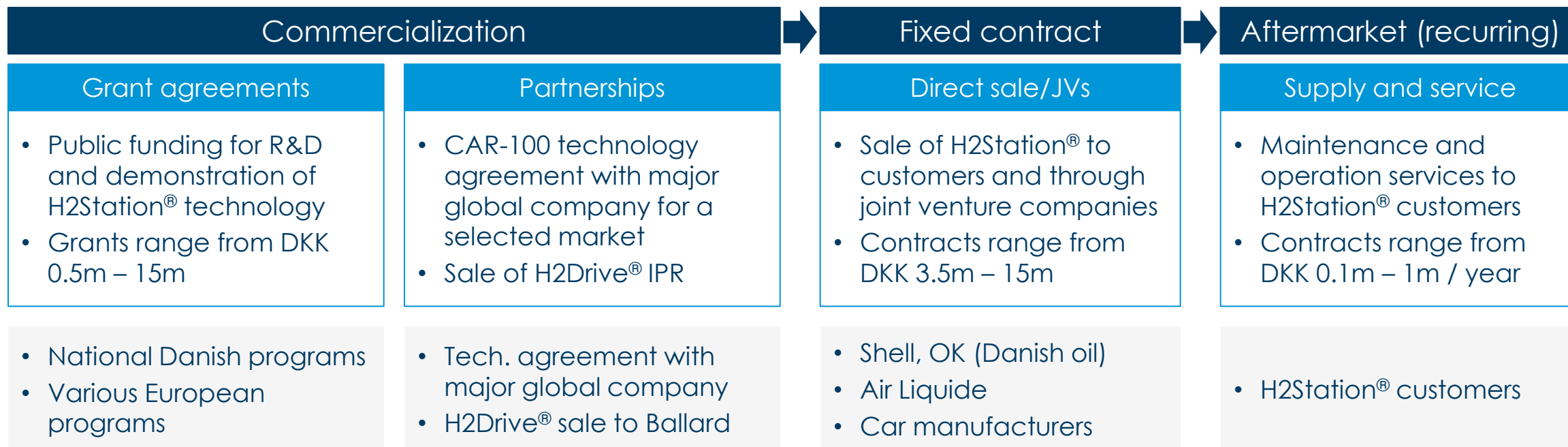
Products and references

Market overview

Financials

INCOME MODEL

Through a diversified income model, H2 Logic has been able to achieve growth and profitability since inception in 2003



FINANCIAL SUMMARY (1/2)

KEY INCOME STATEMENT DETAILS

Income statement (DKKt)	Note	2012	2013	2014
Revenue	1	31,439	47,758	34,452
Other operating income	2	2,000	6,838	11,533
Total operating income		33,439	54,596	45,986
Cost of goods sold		-16,119	-25,103	-35,429
Gross profit		17,320	29,493	10,557
Salary expense		-12,873	-12,211	-14,103
D&A		-2,798	-3,666	-2,184
Other operating expenses	3	0	0	-2,980
Total operating expenses		-15,671	-15,877	-19,267
Operating profit (loss)		1,648	13,616	-8,710
Income from investments in subsidiaries	4	-1,011	-12,968	13,197
Financial income		110	5	7
Financial expense		-398	-383	-280
Net financial income (expense)		-1,299	-13,346	12,924
Pre-tax profit		350	270	4,214
Tax expense		-355	-3,231	1,587
Net profit		-5	-2,962	5,802

COMMENTS

1. Revenue derived from sale of H2Station® products and services
2. Income from public R&D grants, sale of infrastructure and H2Drive® assets (2014)
3. Provision for warranties in connection with joint venture transaction in 2014
4. Elimination of internal profit between related subsidiary (2013) and reversal in 2014 when subsidiary changed to a joint venture with minority share

FINANCIAL SUMMARY (2/2)

KEY BALANCE SHEET DETAILS

Balance sheet (DKKt)	Note	2012	2013	2014
Completed development projects	1	2,303	733	4,083
Development projects in progress	2	4,654	9,277	4,168
Total intangible assets		6,957	10,010	8,250
Land and buildings		0	0	8,915
Other fixed assets		3,578	1,300	1,365
Total fixed assets	3	3,578	1,300	10,279
Inventories		3,097	1,979	4,553
Total receivables		12,763	31,238	19,803
Cash and cash equivalents	4	11,112	1,169	10,532
Total current assets		26,972	34,386	34,888
Total assets		37,507	45,696	53,417
Total provisions	5	2,585	18,728	6,946
Total long term debt (mortgage loan)		0	0	4,674
Trade and other payables		10,657	6,992	12,440
Prepaid subsidies and payments recognized as debt	6	10,328	13,538	15,795
Other short term liabilities		4,659	123	1,445
Total short term liabilities		25,644	20,653	29,680
Total liabilities		28,230	39,381	41,300
Total equity		9,277	6,316	12,117
Total liabilities and equity		37,507	45,696	53,417

COMMENTS

1. From 2014 all intangible assets are related to after sale of H2Station® IPR (fuel cells)
2. Decrease in 2014 is related to the sale of H2Drive® IPR to Ballard Power Systems Inc.
3. Increase in 2014 due to investment in production and office premises (property)
4. Increase in 2014 is related to payments received from receivables
5. Provision for deferred tax and other provisions. The significant decrease in 2014 is related to reversal of internal profit related to disinvestment in subsidiary
6. Prepayments received related to contract work in progress and prepayments on public grants