

# Q2 2019

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# Forward-looking information

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- **Q2 highlights**
- **Nel in brief**
- **The Kjørbo incident**
- **Key developments**
- **Secured location for low-cost electrolyzer manufacturing**
- **Summary/outlook**
- **QA**

## Financial results and financing

- Revenues of NOK 122.5 million in Q2'19, compared to NOK 135.8 million in Q2'18, in line with company outlook:
  - All-time high pipeline
  - Strong order intake positively affecting 2H production
- Extraordinary provision of NOK 35.0 million following the Kjørbo incident
- All-time high order backlog of NOK 568 million at end of Q2'19
  - Up ~40% from Q1'19
- Completed a successful subsequent offering of 12.5 million new shares, raising NOK 68.1 million in gross proceeds
- Cash balance of NOK 697.7million (Q2'18: 478.7)

## Operations and sales

- PO from Shell for additional H2Station® units for heavy duty fueling in California, USD ~7 million
- PO for a 4.5 MW alkaline electrolyzer solution from Hybrit Develop. AB
- PO for six H2Station® hydrogen fueling stations in Korea, EUR ~8 million
- PO for H2Station® from Canada
- Contract for H2Station® solution for hydrogen buses in London
- Establishes consortium to commercialize fuel cell electric buses in Europe
- Awarded USD 2 million grant to develop mass manufacturing processes of key electrolyzer components

## Subsequent events

- Launched new product, the A1000 alkaline electrolyzer
- Closed agreements with Everfuel and signed an exclusive sales and service agreement
- Proposed for USD 2 million funding on project for fueling of heavy-duty hydrogen vehicles with Nikola
- Agreement with Yara to develop a green and efficient ammonia and fertilizer production based on a next generation pressurized alkaline electrolyzer

# Financial highlights

Nel ASA Q2 2019

(NOK million)	2019 Q2 Adj*	2019 Q2	2018 Q2	2019 Q1	2018	2017
Operating revenue	122.5	122.5	135.8	122.4	489.0	302.2
Total operating expenses	213.3	228.7	173.0	174.4	685.1	419.4
EBITDA	-26.3	-72.6	-20.6	-34.8	-131.6	-77.4
EBIT	-44.4	-90.7	-37.2	-52.0	-196.1	-117.2
Pre-tax loss	-48.4	-94.7	-41.5	-53.2	-197.5	-124.4
Net loss	-46.5	-92.8	-38.8	-51.3	-189.0	-52.4
Net cash flow from operating activities	-81.4	-81.4	-22.6	-33.1	-142.6	-113.0
Cash balance at end of period**	697.7	697.7	478.7	743.2	349.7	295.0

- *\*EBITDA negatively impacted in Q2'19 by extraordinary provision of NOK 35.0 million related to the Kjørbo incident:*
  - *Investigations, stations inspections, site clean-up, station replacement and other extraordinary costs*
  - *The extent of insurance coverage and other issues will impact the final costs*
- *In addition, non-recurring and ramp-up costs of NOK 11.3 million has been booked in the quarter*

# Nel in brief

# Nel ASA

- Pure play hydrogen technology company listed on the Oslo Stock Exchange (NEL.OSE)
- Manufacturing facilities in Norway, Denmark and U.S. & global sales network
- World's largest electrolyzer manufacturer, with >3500 units delivered in 80+ countries since 1927
- World leading manufacturer of hydrogen fueling stations, with ~50 H2Station® solutions delivered to 9 countries



## Alkaline and PEM electrolyzers

Converting water and electricity to hydrogen and oxygen – for industry, mobility and energy purposes



## Compact hydrogen fueling stations

Hydrogen fueling stations capable of fueling any kind of vehicle. World's most compact – simple to integrate with other fuels & standardized

# Strong field know-how & manufacturing capacity

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Wallingford, USA

**PEM electrolyzers**

**2,700+ systems delivered**

Production capacity:

**>40MW/year**



Notodden/Herøya, Norway

**Alkaline electrolyzers**

**800+ systems delivered**

Production capacity:

**40MW → 360MW/year**



Herring, Denmark

**Hydrogen refuelling stations**

**50+ stations delivered**

Production capacity:

**300 HRS/year**

# The Kjørbo Incident

For more information, see Q&A & full presentation on Kjørbo incident:

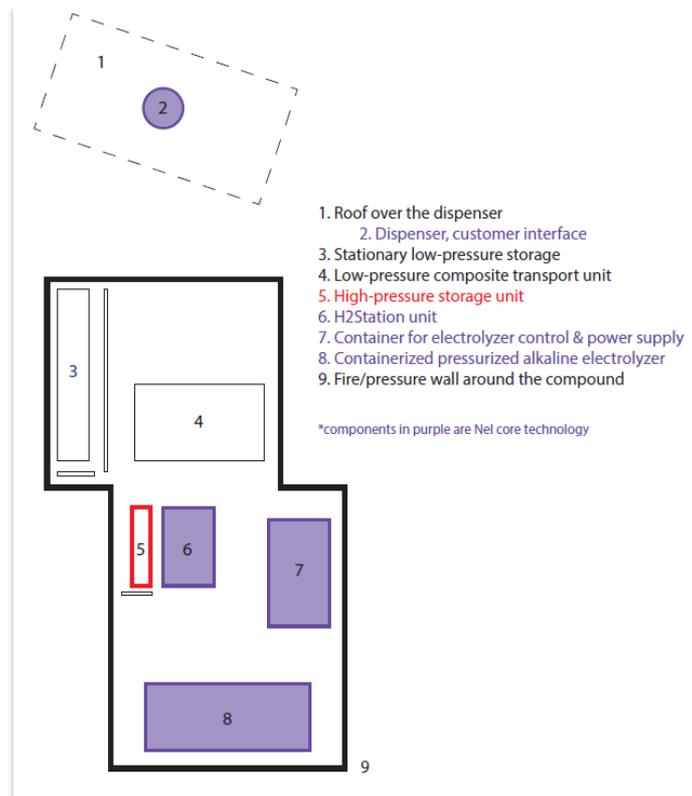
**Q&A:** <https://nelhydrogen.com/status-and-qa-regarding-the-kjorbo-incident/>

**Presentation:** <https://nelhydrogen.com/assets/uploads/2019/06/2019-06-28-Nel-ASA-Kjorbo-press-conference.pdf>

# The Kjørbo site and incident

## Background

- Opened 2016 & owned by Uno-X Hydrogen
  - JV between Uno-X, Nel, and Nippon Gases Norway (formerly Praxair)
  - Nel H2Station® with on-site hydrogen production from electrolysis
- Incident on June 10 2019 after leak from high pressure storage ignited in open air
- Root cause of leak was identified as an assembly error of a specific plug in a hydrogen tank in the high-pressure storage unit



# Clear ambition: no accidents at sites with Nel technology

## Background

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### All hydrogen solutions from Nel are certified by third parties and comply with all relevant international standards for Europe, including directives below:

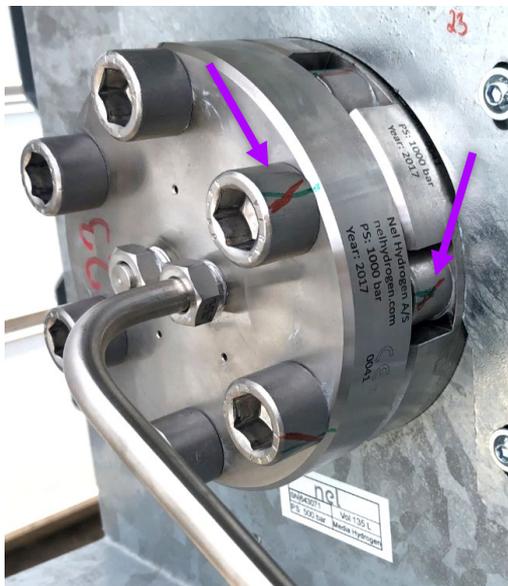
- Mechanical and Safety Instrumented System IEC61511
- DIRECTIVE 2014/68/EU Safety of pressure vessel equipment and material
- DIRECTIVE 2014/34/EU Equipment used in potentially explosive atmospheres (ATEX)
- DIRECTIVE 2014/30/EU Electromagnetic compatibility
- DIRECTIVE 2014/35/EU Low-voltage electrical equipment
- DIRECTIVE 2006/42/EC Machinery Directive
- ISO/TS 19880-1:2016 Gaseous hydrogen -- Fueling stations -- Part 1: General requirements
- SAE J2601\_201407 Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles



# Actions to be taken by Nel

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## Process and actions



1

### Inspection/retorquing of verified plug solution

- Inspect all high-pressure storage units in **Europe**
- Check/re-torque all plugs

2

### Updated routines for assembly of high-pressure storage units

- Introduce new safety system/routines (aerospace standard)
- Torque verification, double witness and documentation/markings

3

### Improved leak detection

- Software update to increase leak detection frequency
- Consider additional detection hardware/modifications

4

### Ignition control measures (site dependent)

- Smooth surface/no gravel around high-pressure storage unit
- Additional ventilation in compound & higher extent of EX-equipment

# Timeline for various market segments

Green light given to operators

Station locations	Action Check site	Action Update site	Action Component update	Action Root cause correction	Action Green light from Nel to operators
Denmark	✓				COMPLETED
USA	✓	✓			IN PROGRESS
Korea	✓	✓			COMPLETED
Europe incl. ASKO	✓	✓	✓	✓	IN PROGRESS
Norway	✓	✓	✓	✓	TBD

# Key developments

## Good traction on HDV applications in the US

- Received purchase order for two H2Station® solutions for fueling of heavy-duty vehicles in California from Shell
  - Order issued under earlier announced framework agreement between Nel and Shell Global Solutions International B.V.
  - First orders for a HDV station from Shell – have already delivered several LDV stations
- Contract value exceeding 7 MUSD
- Nel will upgrade existing H2Station® technology to better accommodate the HDV requirements as well as further improving uptime/reliability of station equipment



Photos: Toyota, The Sun

## Nel's first H2Station® to be delivered in the Canadian market

- On May 3<sup>rd</sup> awarded a PO for a H2Station® fueling station from (Hydrogen Technology & Energy Corporation)
  - First H2Station® from Nel in Canada, opening up a new market
  - Will be installed in Vancouver, British Columbia (BC) during 2020
- HTEC is a leading developer and provider of hydrogen supply solutions
  - Opened first retail hydrogen refueling station in Canada in 2018, actively planning and building additional stations in Vancouver and Quebec in collaboration with key retail operators



# Received additional purchase orders for H2Stations in Korea & invests in HyNet

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## Key developments

### Breakthrough for the Nel hydrogen fueling solutions in the Korean market

- National target in Korea of 310 hydrogen stations by 2022
- Nel Korea has received following purchase orders in 2019:
  - 2 H2Station® from Gangwon Technopark (Q1-19, ~2.8 MEUR)
  - 6 H2Station® from KOGAS-Tech (Q2-19, ~8 MEUR)
  - 2 H2Station® from HyNet (Q3-19, ~2.7 MEUR)
- Nel made investment of ~0.8 MEUR into HyNet, a special purpose company for expanding the Korea's hydrogen infrastructure
  - HyNet aims to establish 100 hydrogen stations in Korea by 2022, as a part of the national targets



Nel Korea fully established with local office in Gangnam, Seoul & taking active part in the Korean hydrogen development

## Hydrogen industry leaders establishing consortium to commercialize hydrogen buses in Europe

- Nel, Hexagon Composites, Ballard Power Systems, Ryse Hydrogen, Everfuel and Wrightbus are part of the H2Bus Consortium
- Members are committed to deploying 600 hydrogen fuel cell electric buses, along with supporting infrastructure, in European cities at commercially competitive rates
- Closed agreement with Everfuel as an owner/operator of infrastructure for busses throughout Europe
  - Nel minority investor into Everfuel
- Nel signed equipment sales and service contract with Everfuel with a potential value up to EUR 100 million



# H2BUS



# Receives contract for H2Station® solution for hydrogen buses in London

Key developments

## Delivering next generation, high capacity H2Station® for HDV applications

- Received ~2.5 MEUR contract for a bus H2Station® solution from Transport for London (TfL)
- New H2Station® solution reduces fueling time down to 5 minutes, equal to that of traditional buses
- Will serve a fleet of 20 hydrogen fuel cell buses at the Metroliner's Perviale bus depot in London
- London has 9 000 buses in operation and plans to make all of them zero emission by 2037



Wrightbus's double decker hydrogen fuel cell electric bus, Photo: Wrightbus

# Nel and Nikola proposed for USD 2 million award

Key developments

## Nel and Nikola = Hydrogen @Scale

- Selected by the Department of Energy (DOE) on a proposed 2 MUSD funding for continued development of the hydrogen station technology together with Nikola
- Target to further develop the H2Station® technology to better cater for heavy duty vehicles through greater capacity and cost reductions
- Nikola and Nel continue the work to define details in longer-term station roll out plan, and it may still take some time to finalize POs related to full scale commercial stations



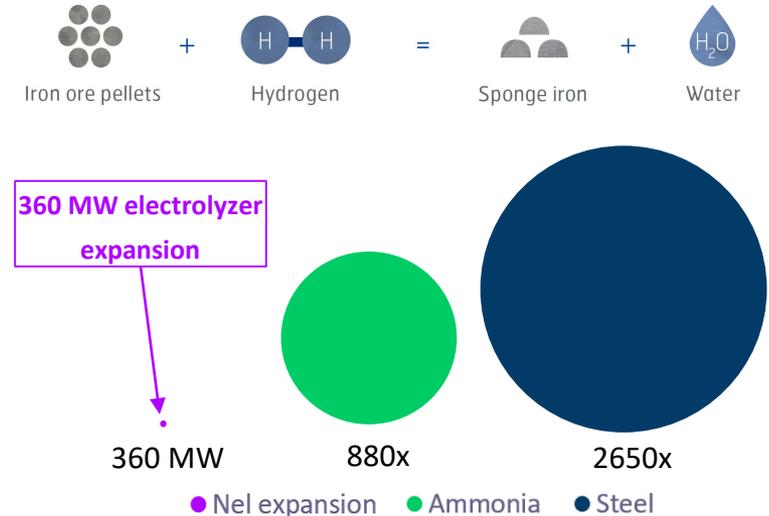
*Nikola Two and Nikola fueling station, Photos: Nikola*

# Received purchase order for a 4.5 MW electrolyzer from HYBRIT

## Key developments

### HYBRIT aims to develop fossil free steel production for the future

- 4.5 MW alkaline electrolyzer solution 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
- Steel industry accounts for 7% of global and 10% of Swedish CO<sub>2</sub>-emissions
- Pilot plant will operate in Luleå, Sweden from 2021 – 2024, with target of full-scale implementation by 2035
- Steel industry represents a massive market opportunity for electrolysis, ~3x the size of ammonia



Sources: HYBRIT, IEA & Nel | Assumption: 60% electrolyzer capacity utilization

# Signs collaboration agreement with Yara on green fertilizer project

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Key developments

## Landmark project on green fertilizer initiated

- Project for developing next generation green (renewable) ammonia and fertilizer production supported by the PILOT-E program
- Nel role in project: developing next generation alkaline electrolyzer
  - Tailored for large scale hydrogen production for industrial applications w/direct connection to renewables
  - Development targets: lower unit cost, higher level of flexibility, higher pressure, lower footprint, equal efficiency to current Nel electrolyzers
  - Electrolyzer for pilot plant will have a capacity of ~5MW
  - Will supply equal to ~1% of hydrogen needed by Yara at Herøya facility
- Ammonia represents >50% of hydrogen market, currently based on fossil sources – significant market opportunity for electrolysis

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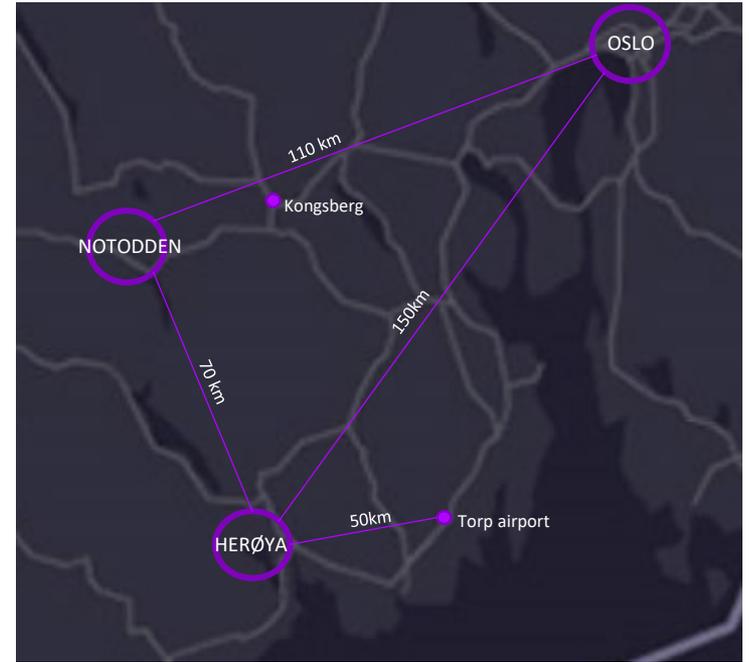
*Jon André Løkke, CEO in Nel and Tove Andersen, EVP Production in Yara signing the collaboration agreement. Photo: Yara*

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# Secured location for low-cost electrolyzer manufacturing

## Alkaline electrolyzer manufacturing plant with possibility to grow beyond 1 GW/year

- Herøya secured as location for manufacturing:
  - Industrial park w/state-of-the-art infrastructure already in place
  - Closer proximity to harbor and Yara
  - Initial target capacity: 360 MW/year
  - Opportunities for scaling up beyond 1 GW/year in existing facilities
- Notodden continues as main location for remaining functions:
  - Proximity to leading engineering competence (Notodden, Kongsberg)



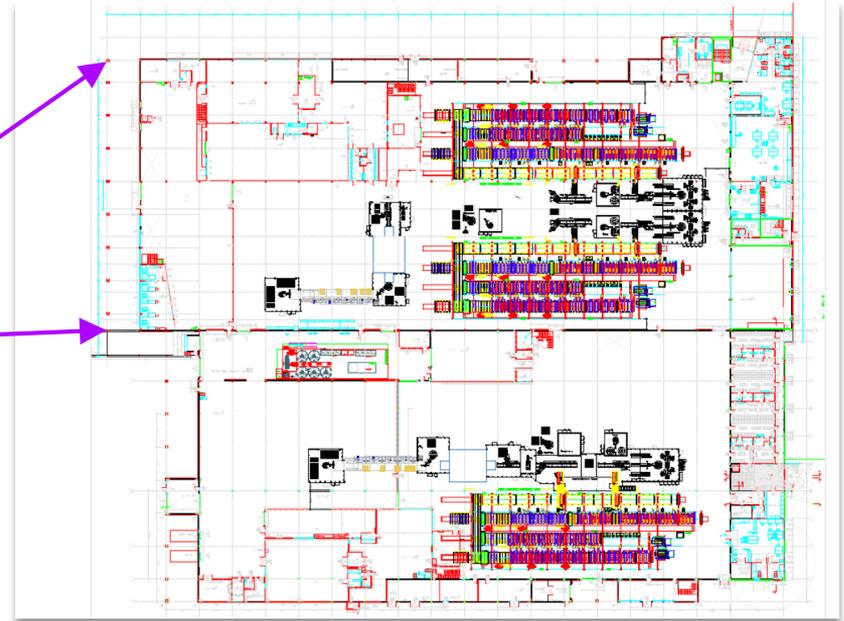
# Herøya – existing facilities have potential for >1 GW/year capacity

Key developments

## Examining opportunities for more advanced production lines – potential to increase significantly beyond 1 GW/year



The new manufacturing facilities are located in Herøya Industrial Park, in a 15,000m<sup>2</sup> building in one of the largest industry parks in Norway



Possible set-up for 3 production lines at the Herøya facilities

# Summary/Outlook

# Creating a rapidly growing billion NOK company

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Levering on the arising opportunities within energy storage and hydrogen fueling

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**Global presence**

**Leading safety**

**Strong financing**

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**Leading technology**

**Preferred partner**

**Cost leadership**

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# Outlook

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- Ongoing growth initiatives and focus on long term high value orders will have a negative impact on Nel's ability to deliver positive EBITDA in the short term
- Continued development of state-of-the art safety solutions and processes
- Development of x10 electrolyzer factory expansion to support deliveries to Nikola and other customers
- Leveraging the fast-growing Heavy Duty Vehicle (HDV) opportunities
- Developing next generation electrolyzer technology for industrial applications, such as ammonia, refineries, etc.
- Significant tender activities for larger projects for electrolyzers and H2Stations
- Continue to develop the Nel organization

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number one by nature