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# Q1 2019

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- QA

### Q1 highlights

### **Financial results and financing**

- Revenues of NOK 122.4 million in Q1'19, up from NOK 112.5 million in Q1'18, representing a growth of 8.9 %:
  - 40% growth in Fueling segment Electrolyser segment -8%
  - All-time high pipeline
- Order backlog of NOK 406 million at end of Q1'19, have added close to NOK 200 million of new orders in Q2'19
- Completed a successful private placement of 84 906 560 new shares, raising NOK 462.7 million in gross proceeds
- Cash balance of NOK 743.2 million (Q1'18: 250.8), not including NOK 68 million in gross proceeds from subsequent offering

#### **Operations and sales**

- Awarded USD 6.5 million contract for the delivery of H2Station<sup>®</sup> solution for fueling of heavy-duty vehicles in the U.S. from Shell
- >3 oversubscribed private placement
- Purchase Order ("PO") for two hydrogen fueling stations in Korea
  - Joins HyNet aim to establish 100 hydrogen fueling stations in South Korea by 2022
- USD >3 million PEM electrolyser order from H2Energy for heavy duty trucking

#### **Subsequent events**

- PO from Shell for additional H2Station<sup>®</sup> 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<sup>®</sup> hydrogen fueling stations in Korea, EUR ~8 million
- PO for H2Station<sup>®</sup> from Canada

### Financial highlights

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(NOK million)	2019 Q1 Adj*	2019 Q1	2018 Q1	2018 Q4	2018	2017
Operating revenue	122.4	122.4	112.5	124.9	489.0	302.2
Total operating expenses	174.4	174.4	144.3	185.6	685.1	419.4
EBITDA	-20.1	-34.8	-15.8	-41.9	-131.6	-77.4
EBIT	-37.3	-52.0	-31.9	-60.7	-196.1	-117.2
Pre-tax loss	-38.5	-53.2	-32.9	-55.8	-197.5	-124.4
Net loss	-36.6	-51.3	-30.1	-54.5	-189.0	-52.4
Net cash flow from operating activities	-33.1	-33.1	-37.9	-44.6	-142.6	-113.0
Cash balance at end of period**	743.2	743.2	250.8	349.7	349.7	295.0

- \*EBITDA negatively impacted in Q1'19 by non-recurring and ramp-up costs of NOK 14.7 million
  - The high cost levels mainly due to significant ramp-up activities in California, South Korea, and Notodden
  - In addition, there are high costs related to certain projects, legal assistance, BD activities and non-cash costs of NOK 3.3 million related to stock options
- \*\* The figures do not include NOK 68.1 million in gross proceeds from the subsequent offering (oversubscribed 3.5 times)



## Nel in brief

- 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<sup>®</sup> solutions delivered to 9 countries



#### **Alkaline and PEM electrolyzers**

Converting water and electricity to hydrogen and oxygen – for industry 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



Wallingford, USA **PEM electrolyzers 2,700+ systems delivered** Production capacity:

>40MW/year



Notodden, Norway Alkaline electrolyzers 800+ systems delivered Production capacity: 40MW → 360MW/year (2020)



Herning, Denmark Hydrogen refuelling stations 50+ stations delivered Production capacity: 300 HRS/year



## The H2 opportunity

### The large opportunity for electrolysis just got a lot bigger

The H2 opportunity



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

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### The steel industry is one of the largest industries globally

The H2 opportunity

### Accounts for 7% of the global emissions, and industry is growing

- 1.6 1.9 tons of CO<sub>2</sub> emitted per ton of steel produced
- Currently 1 200 million tons of ore-based steel produced per year
- CO<sub>2</sub>-emissions primarily come from the blast furnace, where coal is used to release oxygen from the iron ore
- Possible to exchange input from fossil to renewable
  - 60 75 kg H<sub>2</sub> necessary per ton steel output



Sources: HYBRIT & IEA

The H2 opportunity

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- Conventional industries represents "traditional" hydrogen markets
- Steady demand for hydrogen

- Key market going forward both within hydrogen production and fueling
- Heavy duty sector developing faster than anticipated – hydrogen now relevant fuel for all forms of mobility
- Decreasing cost of renewables & electrolyzers is accelerating market
- Vast opportunities within existing & new sectors

#### Steady growing market

#### Markets expected to see fast growth going forward

### Hydrogen is becoming relevant in all forms of mobility

The H2 opportunity



#### Hydrogen as preferred future fuel alternative:

- True zero emission from production to use
- Can beat fossil fuel applications on a TCObasis
- Low weight (compared to e.g. batteries), especially relevant in the heavy duty segment
- Fast recharging (fueling) time
- Long driving range
- Low/no need for electric grid upgrades
- Not dependent on rare earth metals (e.g. cobalt, lithium)
- Global standards for fueling established
- Same quality fuel used for small to large applications
- Cleans the surrounding air

Photos: Hyundai, ALSTOM, Brødrene AA, Ruter, FedEx, Viking Cruises, Nikola Motor Company, Toyota, Norled

### Decreasing cost of renewable hydrogen (and oxygen) opening up new business areas

The H2 opportunity



Photos: Yara, Equinor, IAV, Tizir, SSAB, Nexofin, TU, DN, SinkabergHansen

- Wide variety of existing and new markets where electrolysis can play a major role
  - Exchanging fossil hydrogen with renewable hydrogen (f.ex fertilizer)
  - Exchanging coal with renewable hydrogen (f.ex steel manufacturing)
  - Oxygen & heat adds value
- Electrolysis "bridges the gap" between the power and industry sector, increasing the value of electrons
- Ability to adapt to diverse and intermittent renewable energy sources becoming increasingly important

Nel ASA Q1 2019

### Cost of wind and solar has dropped by 69% and 88% during the last decade

The H2 opportunity

#### Wind and solar is on a trajectory to become the cheapest form of electricity



- Falling LCOE<sup>1)</sup> of wind and solar, renewable hydrogen follows same path, as electrical power constitute 70-80% of total cost of hydrogen
- Record low prices for solar PV and wind, \$17.7/MWh/\$17.86/MWh respectively (as of 2017)<sup>3)</sup>
- Prices are expected to drop further, LCOE of solar PV and onshore wind are expected to fall by 71% and 58% respectively by 2050<sup>4)</sup>



Note: 1) LCOE = Levelised cost of energy, which is a way of calculating the total production cost of building and operating an electricity-generating plant Source: 2) Lazard; Renewables Now, 3) IRENA (International Renewable Energy Agency); 4) BloombergNEF New Energy Outlook 2018

### Scale & automation will reduced CapEx for electrolyzers

The H2 opportunity

Source: Nel

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- SMR "steam methane reforming" dominating hydrogen production today, using natural gas
- Nel is establishing a >40% cost reduction
  - Expect to see further reduction in CapEx with increase production volume, and further size scaling of products
- Electrolysis expected to be preferred method if OpEx (i.e. power prices) are low enough (or at parity) with the alternative production methods

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## Latest developments

### Awarded USD >13 million purchase orders for HDV H2stations from Shell Latest developments

- Since new year, received two purchase orders for H2Station<sup>®</sup> 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
- Total value of approximately USD 13.5 million
- Nel will upgrade existing H2Station<sup>®</sup> technology to better accommodate the HDV requirements as well as further improving uptime/reliability of station equipment



### Awarded PO for PEM electrolyzer and enters a 30 MW framework contract

Latest developments

### First containerized megawatt PEM electrolyzer from Nel in Europe

- Awarded a USD >3 million PO for containerized 2 MW Proton PEM electrolyzer as part of new 30 MW framework contract with Hydrospider AG, an affiliated company of H2 Energy AG
  - Represents phase 1 of the 60 80 MW needed to supply green hydrogen to the 1600 expected trucks from Hyundai over the coming years
  - Will be first containerized M-series PEM electrolyzer from Nel to be installed in Europe
- H2 Energy is working together with partners to establish a nation-wide network of hydrogen stations and hydrogen supply chain in Switzerland





Hyundai fuel cell electric truck, to be deployed in Switzerland

### Received purchase orders for 8 H2Stations in Korea, 9 in total

Latest developments

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

- Nel Korea has received following PO's
  - Two H2Station<sup>®</sup> from Gangwon Technopark
    - Value contract EUR ~2.8 million
  - Purchase orders for six H2Station<sup>®</sup> from Korea Gas Technology Corporation (KOGAS-Tech)
    - Value contract is around EUR ~8.0 million
- Korea has ambitions of 310 hydrogen stations by 2022
- Nel has joined HyNet, a special purpose company for expanding the country's hydrogen infrastructure is under development
  - Target to establish 100 H2 stations in South Korea by 2022



Members of South Korean Government and the Ministry of Trade, Industry and Energy having signed agreement to build hydrogen fueling stations

Source: FuelCellWorks.com (April 25, 2018)

### Awarded PO for H2Station<sup>®</sup> from HTEC in Canada

Latest developments

### Nel's first H2Station<sup>®</sup> to be delivered in the Canadian market

- On May 3<sup>rd</sup> awarded a PO for a H2Station<sup>®</sup> fueling station from HTEC (Hydrogen Technology & Energy Corporation)
  - First H2Station<sup>®</sup> 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 the first retail hydrogen refueling station in Canada in 2018 and is actively planning and building additional stations in Vancouver and Quebec, in collaboration with key retail operators





### Entered into MoU for HDV standardization

Latest developments

### Heavy duty fueling technology and standards reaching a mature stage

- Entered MoU together with Air Liquide, Hyundai, Nikola Motor, Shell and Toyota to develop and test 70 Mpa hydrogen fueling hardware for heavy duty vehicles
  - Standardization will enable cost reductions and allow different makes of trucks to utilize the same infrastructure
- Supported by R&D grant of EUR 1 million from the Danish Energy Technology Development and Demonstration Program (EUDP) for continued H2Station<sup>®</sup> hydrogen technology development
  - Support efforts in development and demonstration of increased hydrogen fueling capacity, especially for heavy duty applications







### Successful Nikola World event

Latest developments

### Nel and Nikola = Hydrogen @Scale

- Nel awarded contract as part of Nikola's development of a hydrogen station infrastructure owned and operated by Nikola in the U.S.
  - Multi-billion NOK 1 000 MW electrolyzer and fueling station contract, to be deployed from 2021 – largest electrolyzer contract ever awarded
- Nikola + Nel are vertically integrated
  - Nikola producing Fuel Cell Class 8 Trucks at the end of 2022
  - Nikola using Nel technology for 8 tons H<sub>2</sub> / day @ Scale Stations
- Nikola currently has 13,000+ trucks in pre-orders





### HYBRIT video

Latest developments



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Latest developments

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

- 4.5 megawatt 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
- The 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
- Full scale implementation of the HYBRIT project will consume 15 TWh of renewable energy



Source: Hybrit Development AB (HYBRIT) is a joint venture owned equally by SSAB, LKAB and Vattenfall

### Massive future potential from CO<sub>2</sub>-free steel production

Latest developments

### Total potential for CO<sub>2</sub>-free steel is around 3x that of ammonia

- Both green ammonia and fossil-free steel is less mature market, will only start to develop at large scale after 2025
- But, market potential is massive important for Nel to be well positioned for the future
- To illustrate the size, we have compared our 360MW electrolyzer expansion project to these future potential markets
- If the HYBRIT and similar pilot projects are successful, opens up a huge new market



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



## Summary/Outlook

Levering on the arising opportunities within energy storage and hydrogen fueling



- 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
  - Orders booked will primarily affect revenue growth from the second half of 2019
- Continue work on the 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





## Number one by nature