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HYDROGEN KEY DRIVERS, OPPORTUNITIES AND NEL'S POSITION IN THE MARKET

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- 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 electrolyser manufacturer, with >3500 units delivered in 80+ countries since 1927
- World leading manufacturer of hydrogen fueling stations, 50+ H2Station[®] solutions delivered to 9 countries



Alkaline and PEM electrolysers

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. Nel compressor, chiller & dispenser.

Financial highlights

(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)



Majority of shareholders from Norway, however only 47.7% of company owned by Norwegians

	Investors	Investors Holdings		
Country	Number	Percentage	Number	Percentage
NOR (Norway)	19,740	97.93610%	579,389,256	47.70800%
LUX (Luxembourg)	13	0.06450%	240,023,850	19.76402%
USA (United States)	58	0.28776%	111,070,695	9.14577%
DNK (Denmark)	35	0.17365%	105,355,124	8.67514%
GBR (United Kingdom)	54	0.26791%	42,227,402	3.47708%
CHE (Switzerland)	16	0.07938%	40,717,311	3.35274%
SWE (Sweden)	64	0.31752%	40,517,454	3.33628%
BEL (Belgium)	17	0.08434%	17,440,003	1.43604%
IRL (Ireland)	35	0.17365%	13,695,916	1.12775%
FRA (France)	36	0.17861%	9,003,630	0.74138%
AUT (Austria)	7	0.03473%	4,962,203	0.40860%
DEU (Germany)	15	0.07442%	3,521,486	0.28997%
MCO (Monaco)	2	0.00992%	2,722,012	0.22414%
FIN (Finland)	6	0.02977%	898,834	0.07401%
HKG (Hong Kong)	2	0.00992%	655,851	0.05400%

Hydrogen – the key drivers, and the market opportunity



Necessary for electrifying the transport sector – commercially available today Hydrogen = 100% zero emission, and technology is ready for commercial rollout



Renewable hydrogen can be competitive with diesel – already today Cost reductions in the entire value chain – from power to dispenser – makes hydrogen competitive with fossil alternatives



Hydrogen enables increased share of intermittent renewables and can balance the grid Electrolysis based hydrogen production can balance the grid and increases the value/use of the electricity



Large industry sectors are making the first moves to transition to renewable hydrogen Fertilizer and steel industry alone account for about 10% of global emissions – have no other feasible alternatives



An already big market is set to grow significantly, fuelled by current megatrends Hydrogen market today 56 M tons/year – and set to grow 10x in the coming 30 years

Hydrogen is key to electrify the transport sector



Hydrogen as preferred future fuel alternative:

- True zero emission from production to use
- Can beat fossil fuel applications on a TCO-basis
- 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

Expected to double by 2050

- Heavy duty vehicles responsible for 47% of CO₂ emissions from land-based mobility and ~8% of total global CO₂ emissions
- Freight activity (ton-km) projected to double by 2050
- Hydrogen most promising zero-emission fuel for heavy trucks



Sale of diesel has stabilized on a high level despite transition to electrical vehicles



New sales of passenger vehicles in Norway BEVs at >30% share in 2018



Sales of petroleum products in Norway total decrease 2% since 2014, diesel up 4%

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Cost of wind and solar has dropped by 69% and 88% during the last decade – renewable hydrogen following on the same path

Unsubsidised levelized cost of energy (\$/MWh)²)

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

Solar PV LCOE

Wind LCOE

Unsubsidised levelized cost of energy (\$/MWh)²)



- With falling LCOE¹⁾ of wind and solar prices, renewable hydrogen follows the same path, as electrical power constitute 70-80% of the total cost of hydrogen
- Record low auction prices for solar PV and wind has seen prices as low as \$17.7/MWh and \$17.86/MWh respectively (as of 2017) ³⁾
- Prices are expected to drop further, LCOE of solar PV and onshore wind are expected to fall by 71% and 58% respectively by 2050⁴⁾
- At \$50/MWh renewable hydrogen is becoming competitive with fossil fuels and at \$30/MWh renewable hydrogen is becoming competitive in most markets

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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

Growth in renewable hydrogen will accelerate with reduced capex for electrolysers



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

LCOE of new-build wind and solar is now competitive with the alternatives



LCOE of new build wind and solar vs coal and nuclear [\$/MWh], Source: LAZARD 13

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



- 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

Overall hydrogen demand is set to grow 10x by 2050 – representing massive opportunities for electrolysis



Global hydrogen market until 2050, by end use (mill tons)¹⁾



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Thanks for the ride, dinosaurs! We'll take it from here.

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