



Hydro Batteries

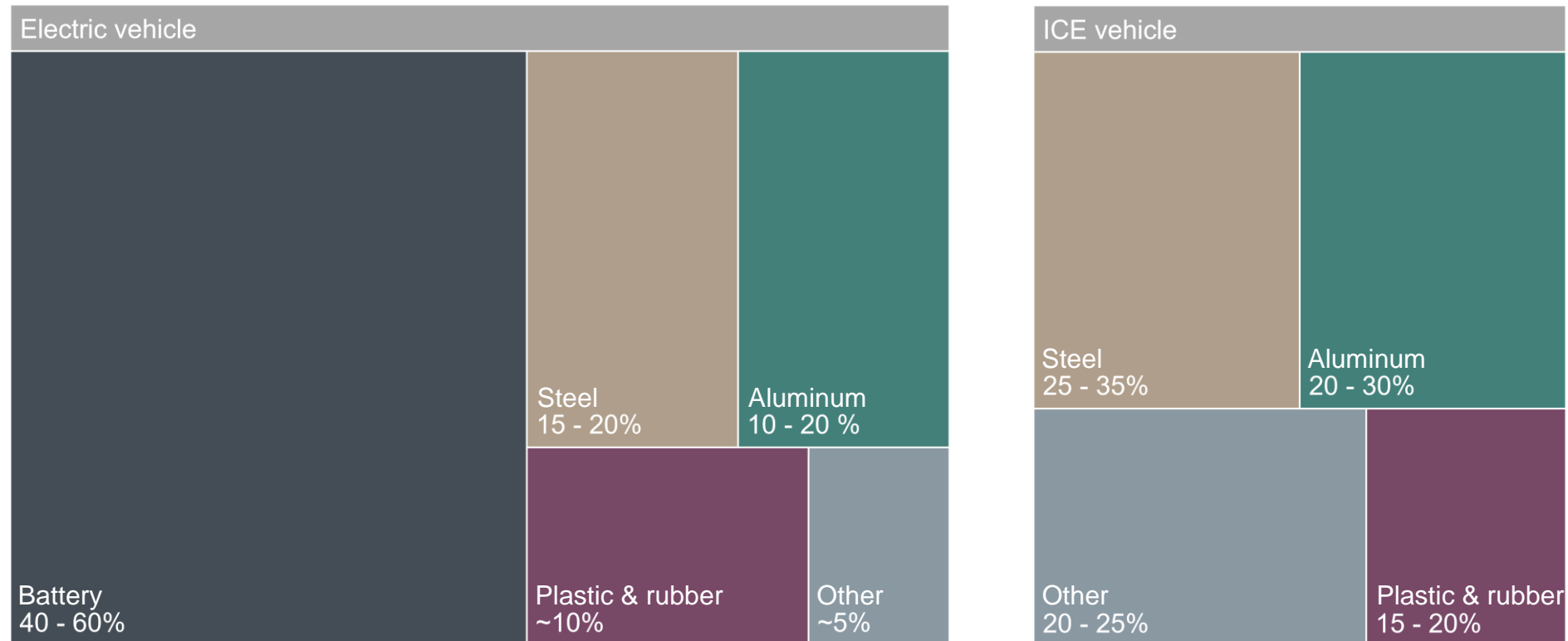
*Empower the future of green mobility
with sustainable battery materials*

Elise Must, Head of Sustainability & Strategy / Acting Head of Batteries
Pareto Securities' 30th Annual Energy Conference

The challenge

*Batteries crucial to reach **climate targets**, focus shifted from **user phase** to **production***

Typical upstream battery-electric-vehicle vs. ICE emissions, in percentage. Tailpipe for ICE not included



Automakers shape demand




OEMs exceed regulators expectations

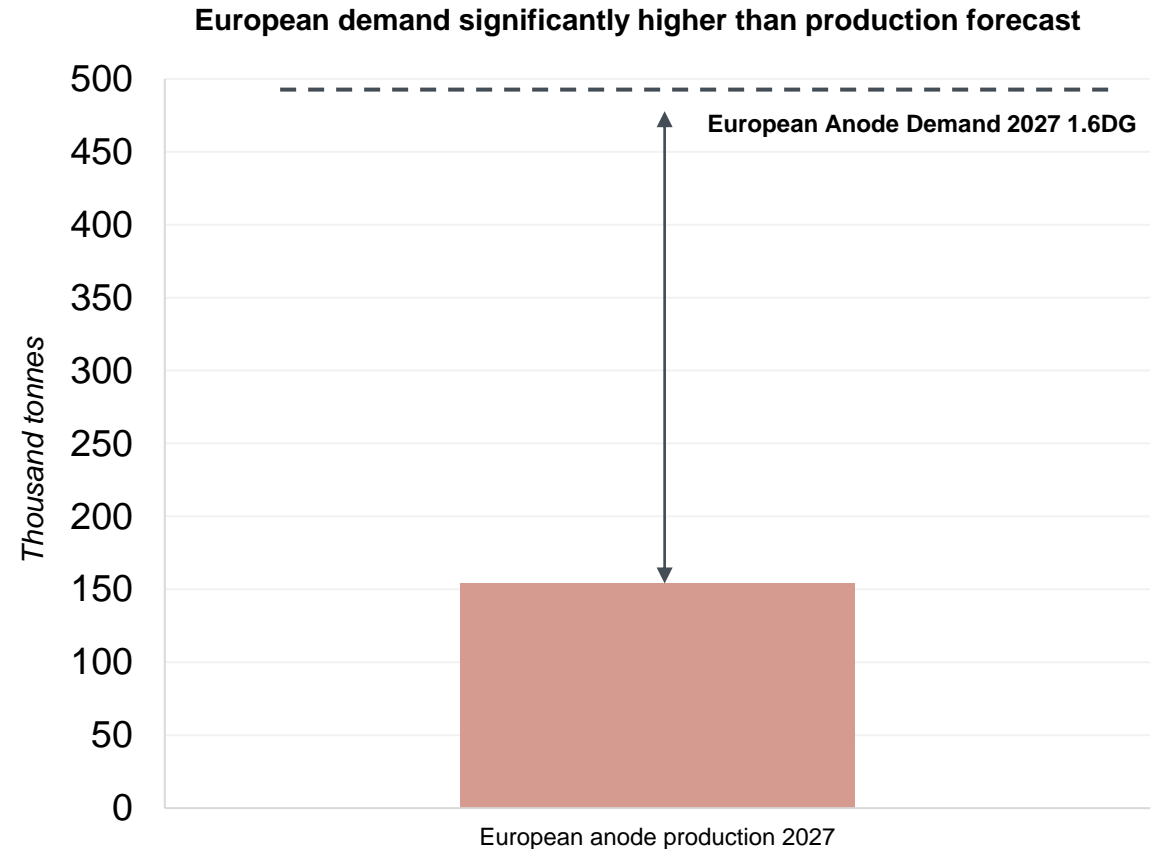
“Porsche wants to have a CO₂-neutral balance sheet throughout the entire value chain in 2030”

- Oliver Blume, Chairman Porsche



China dominates, while EU struggles on supply

Chemical processing/refining			
			
Nickel	13%	1%	65%
Cobalt	17%	0%	82%
Graphite	0%	0%	100%
Lithium	0%	4%	59%
Manganese	7%	0%	93%
Cell manufacturing			
Cells	6%	10%	73%



Source: BMI conference presentation, March 2022

*End-user demand based on 1.6 DG scenario – by year of finished cell products and not adjusted for time lag from cathode to finished products
Source: Rystad Energy research and analysis

What we want to achieve



STRATEGIC DIRECTION

Empower the Future of Green Mobility with Sustainable Battery Materials

Anode materials

Vianode planning giga scale factories for synthetic graphite in Europe and North America.

Vianode
30% owner share

E-magy looking to commercialize next-generation silicon anode material.

E-MAGY
5M EUR invested

Circular Solutions

Hydrovolt targeting 25% market share within EV battery recycling in Europe. Batteries evaluating downstream integration.

hydrovolt
50% owner share

Lithium

Lithium de France (LdF) developing sustainable Lithium production through direct lithium extraction (DLE), targeting to become a leading supplier of Lithium in Europe

Lithium de France
GEOTHERMAL
12% owner share

Industrialize sustainable battery material businesses in strong partnerships

PORTFOLIO HOLDINGS

Active industrial owner in marine systems segment leader

Corvus
24.1% owner share

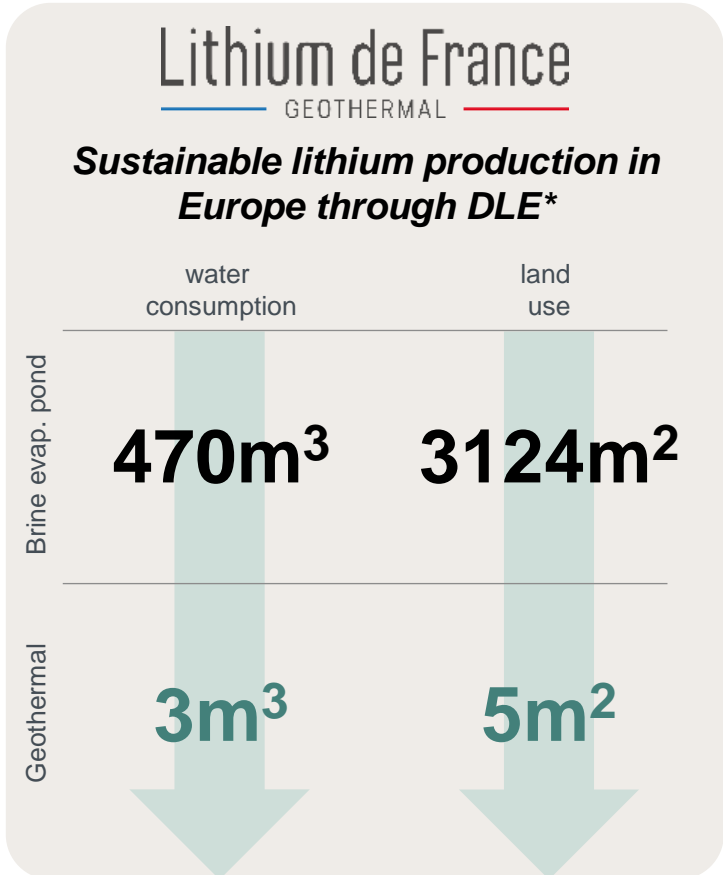
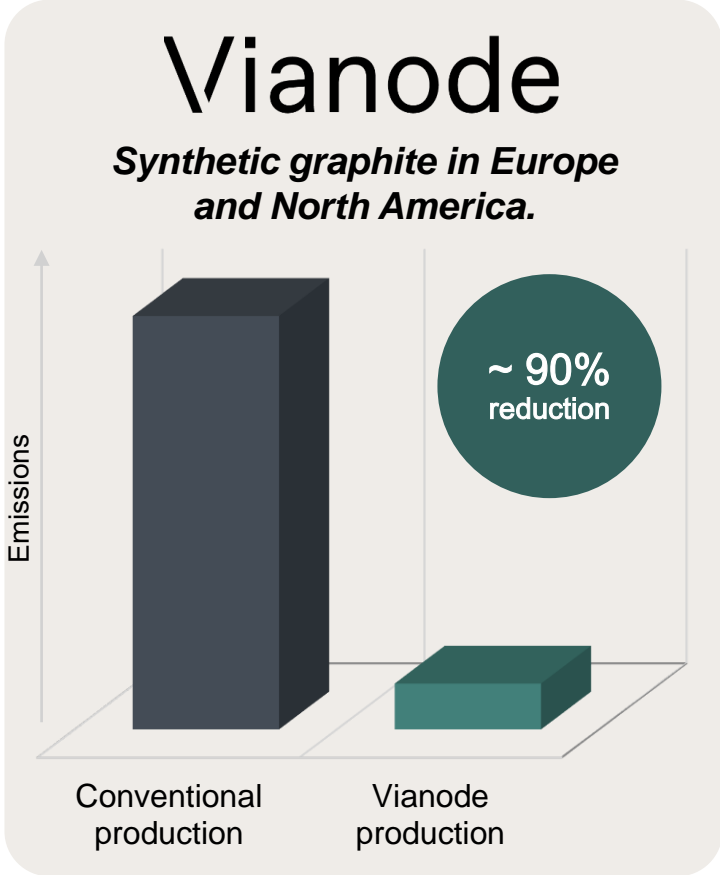
Financial holding in leading European cell manufacturing

northvolt
0.6% owner share

Sustainability and security of supply as strategic core



Hydro Batteries aims to reduce footprint in **all impact areas** – and enhance security of supply of critical raw materials

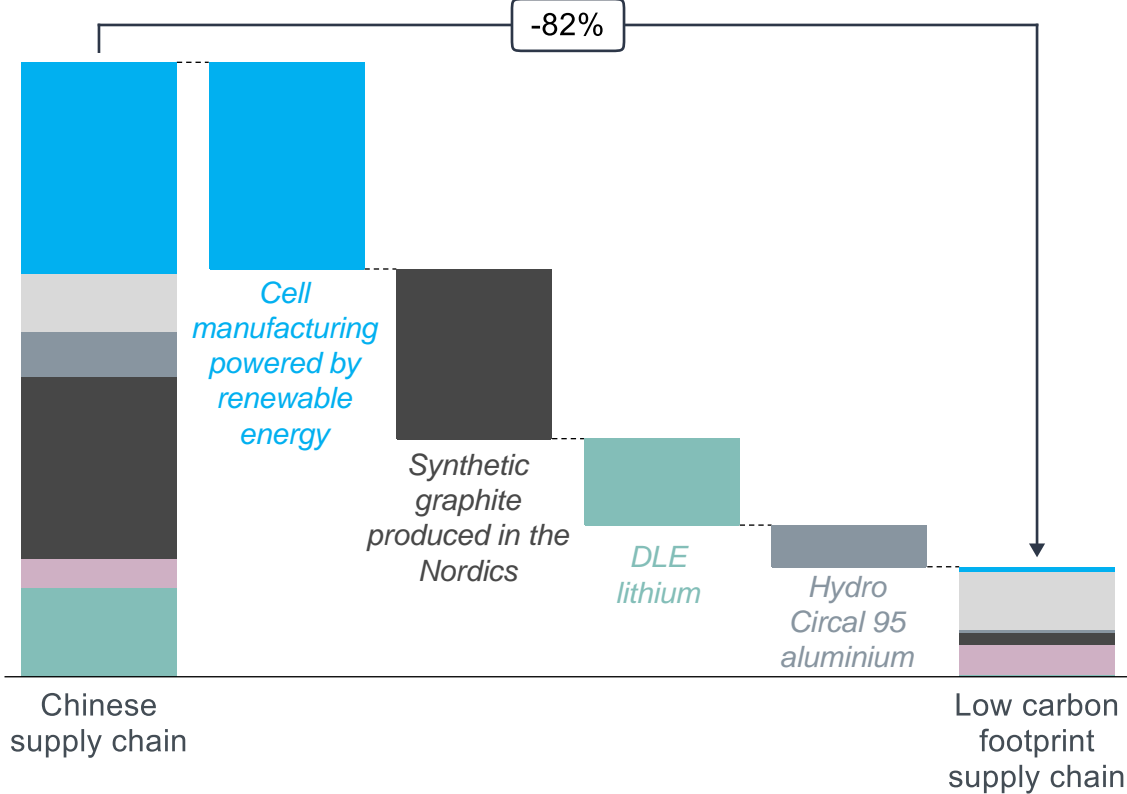


* Lithium figures are from Hatch 2022 and general for direct lithium extraction, not specific to Lithium de France

Sustainable materials are key to reach CO2-targets

CO₂ hot spot analysis of LFP battery cell production

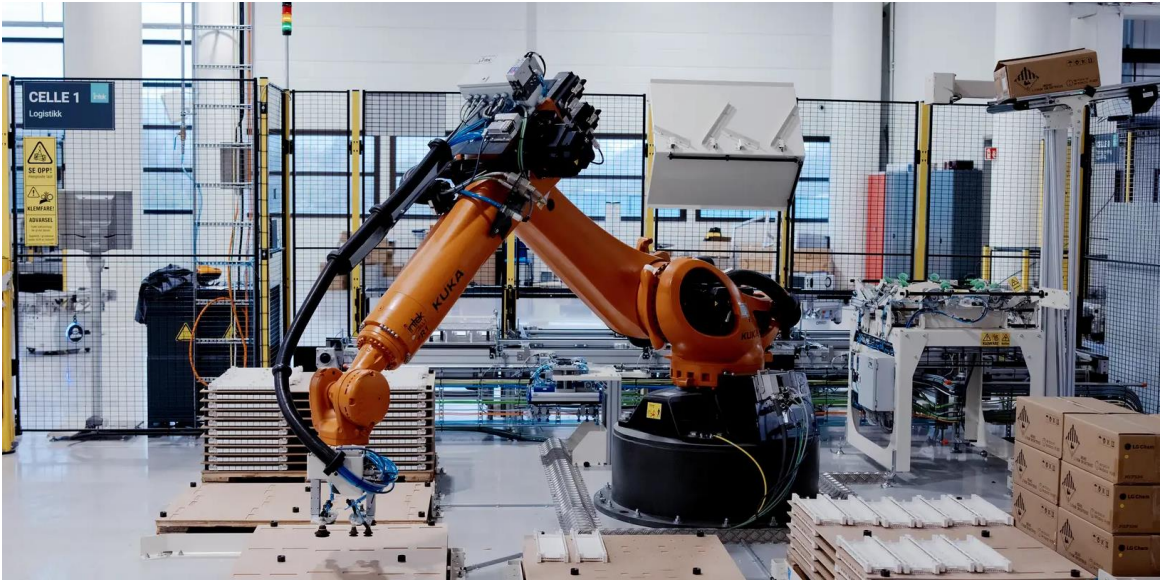
kg CO₂ per kWh battery cell storage capacity



Source: Life cycle assessment of LFP battery production (Minviro, 2022)



Comprehensive set of core capabilities to create value



Where we are

Driving value creation in assets – focus on execution and commercialization

Selected targets

NOK 3 billion
Capital allocated 2020-2025

3x
Value uplift in 2027 on equity invested by 2025

Selected achievements in assets so far

Hydrovolt
Europe's first EV recycling plant in operations

5000+
New jobs created in Hydro Batteries invested companies

Vianode
Fast-track production facility under construction

Corvus
Deployed ESS in 875+ ships, ports and subsea installations

Lithium de France
Reached key milestones on long-term offtake agreement

Corvus
Awarded battery supply for the world's largest Battery Electric Ship

Corvus awarded battery supply for the world's largest Battery Electric Ship.



Driving change together with Porsche

“Access to sustainably sourced raw materials is a key challenge for the automotive industry.”

- Barbara Frenkel - Executive Board Member Porsche AG





Hydro

Industries that matter