Hydro

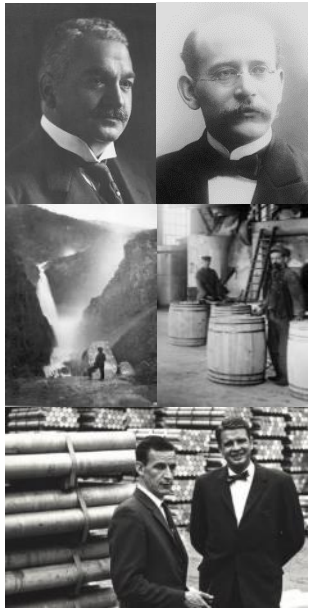
Nordea Sustainability Discussion

October 8 2020

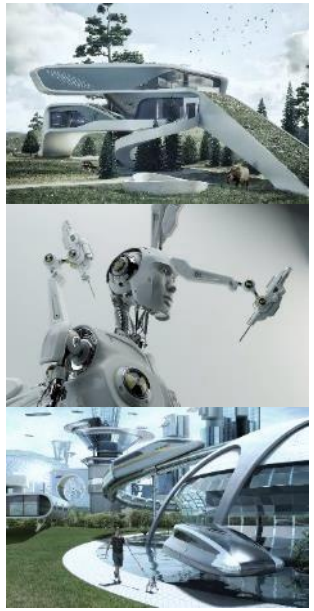
Hydro: the global and complete aluminium company

"…create a more viable society by developing natural resources into products and solutions in innovative and efficient ways"

114 years of industrial development and responsibility

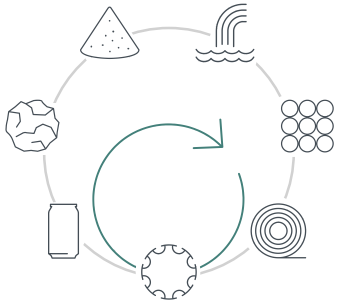


Aluminium – metal of the future



Hydropower – infinitely renewable energy

Engaged in the entire value chain – R&D, innovation and tailormade solutions



Global reach, local presence

35,000
employees

150
locations

40
countries

Involved and engaged

wbcsd

THE GLOBAL COMPACT

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM

ICMM International Council on Mining & Metals

GRI

asi

CDP

EITI Extractive Industries Transparency Initiative

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Pioneer:
3 decades of environmental reporting

Cut electrolysis emissions by 70% since 1990

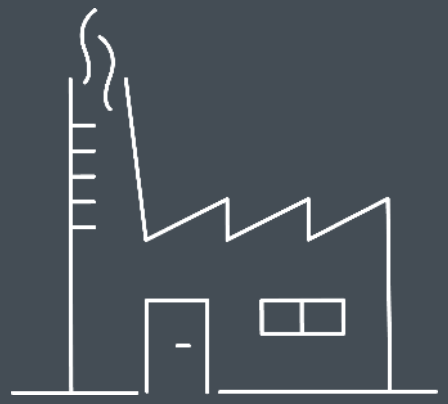
Karmøy technology pilot 15% more energy efficient

Primary production: 70% based on renewable power

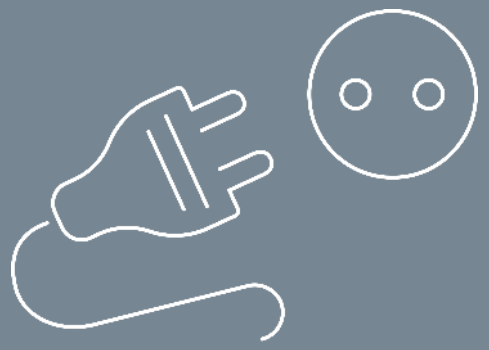
Climate neutral by 2020

in a lifecycle perspective

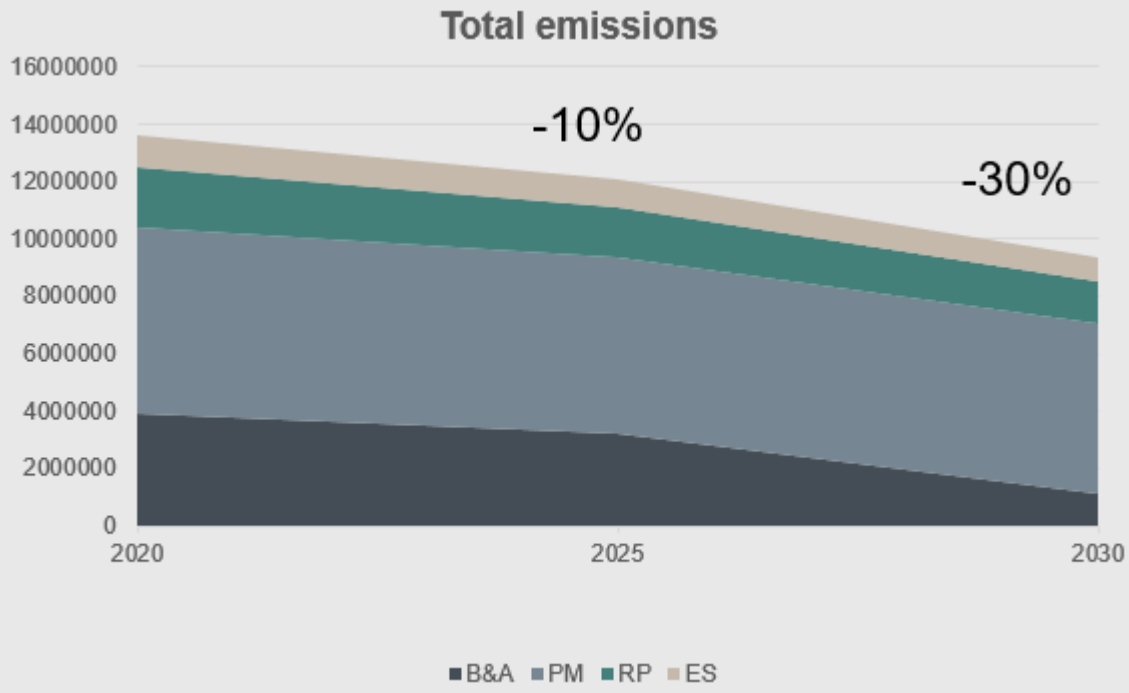
2030 Ambition: Cut CO_2 emissions by 30%



-36%



-22%



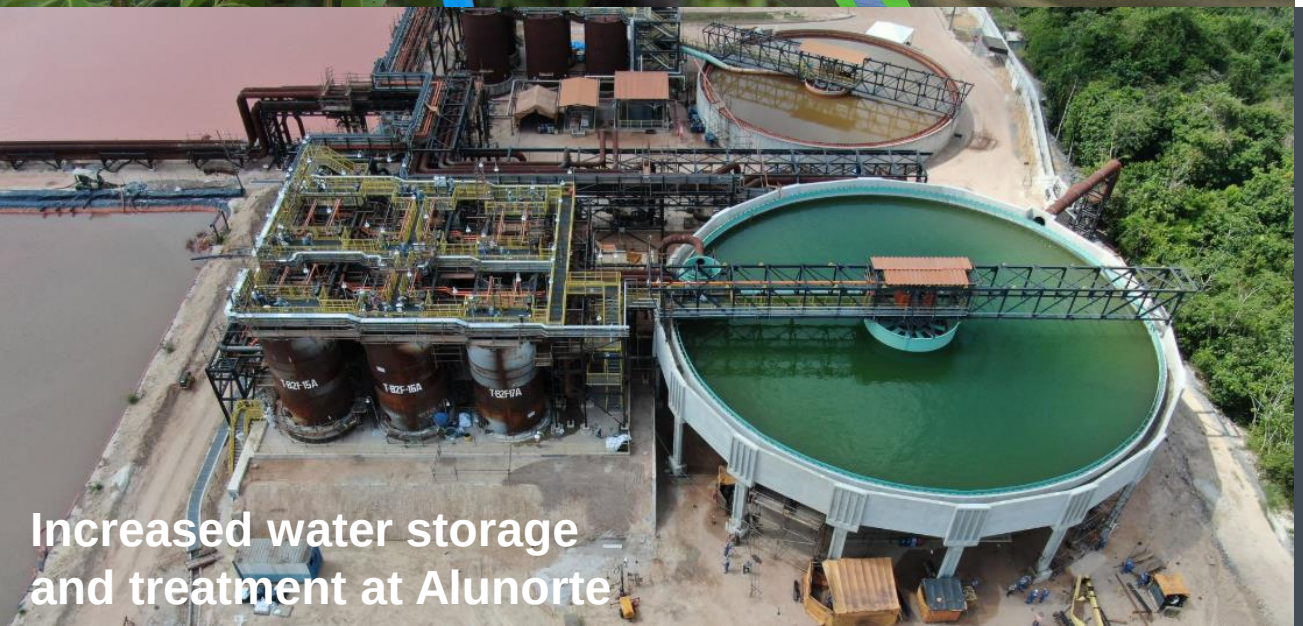
But continued progress requires a technology shift

Investing in R&D for low- or zero-carbon technology toward 2050

Brazil-Norway Biodiversisty Research Consortium

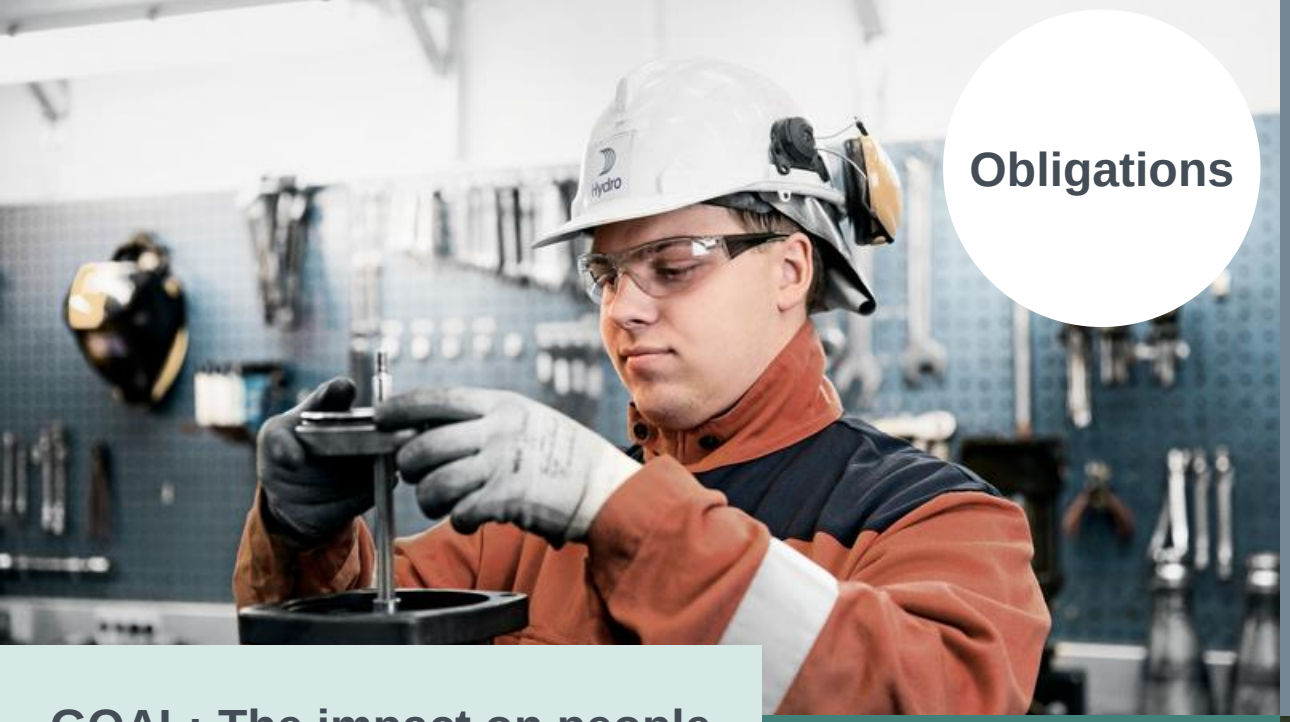
Key targets towards 2030

- 1 to 1 rehabilitation of available mined areas (ongoing)
- Utilise 10% of bauxite residue output (2030)
- Recycle 65% of spent pot lining (2030)
- 50% reduction in fossil fuel related, non-GHG emissions (2030 on 2017 baseline)



Increased water storage and treatment at Alunorte

- Brazil-Norway Biodiversity Research Consortium
- Bauxite residue rehabilitation and dry stacking
- Increased water storage and treatment at Alunorte



Obligations

Assess and **mitigate** risks to people

“Hydro is committed to respecting and promoting human rights of all individuals potentially affected by our operations”
-Hydro’s Code of Conduct

GOAL: The impact on people

Empowering 500.000 people with education and skills development by end 2030

Beyond compliance

Closer to our local communities – building trust

We succeed when the communites around us succeed

Social responsibility

2018 **2030**

Empowering 500,000 people with education and skills by 2030

Human rights impact assessment

Developing master plan to prioritize actions

Partnership with UNICEF signed

Work with education and skills development for children and adolescens

Social projects

10 programs and projects targeting education and income generation

In 7 municipalities
#16. 700 people reached 2018/19

Stakeholder engagement

200+ stakeholder dialogues in 2019

Sustainable Barcarena Initiative

12 projects awarded, value 730K BRL

Community Response to COVID-19

Collaboration with local authorities

Information and awareness

Donations of funds, property, mineral water, food, test kits, PPE

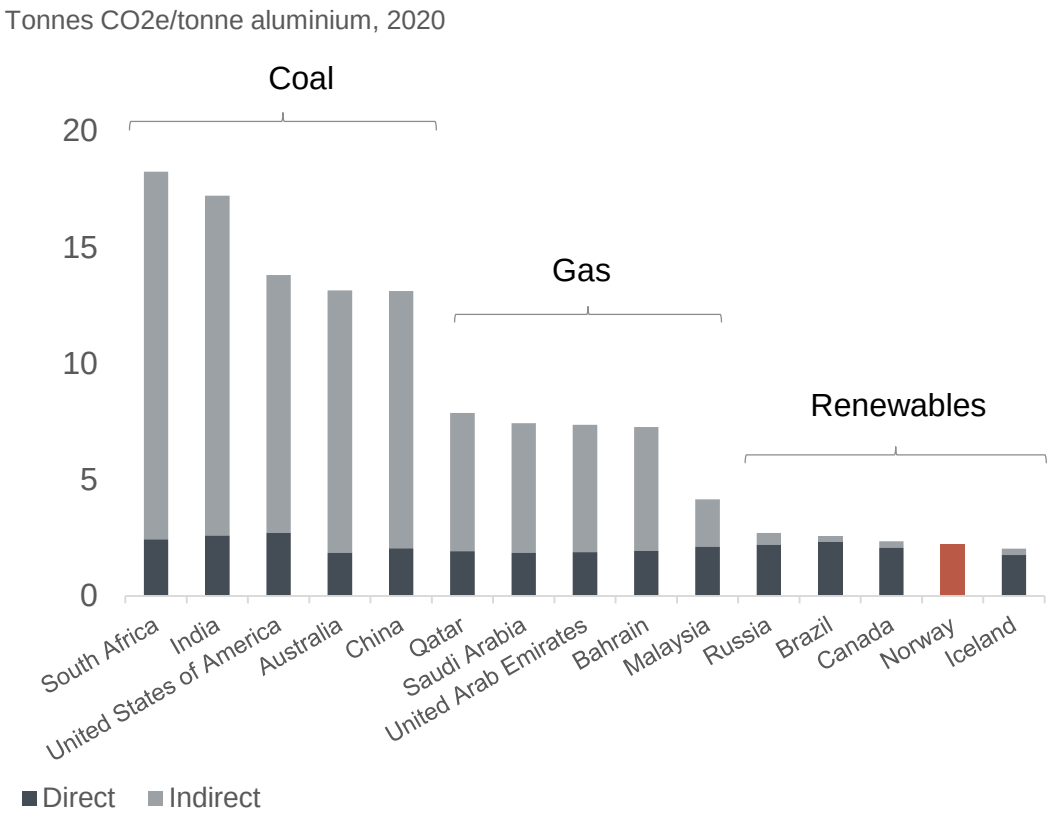
Coalition for responsible business

Collaboration with businesses, trade unions, and other organizations to support a national binding human rights law for business in Norway.

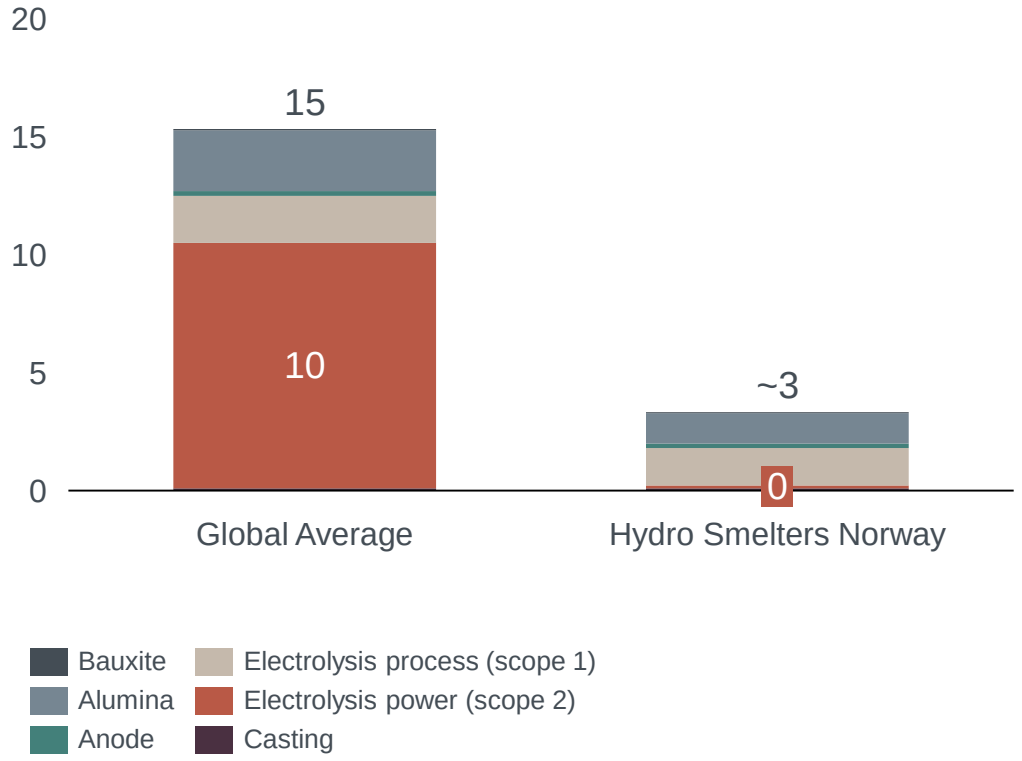
Some social investments efforts during Covid19 are redirected towards humanitarian response

Fuel source most important differentiator

CO2e emissions from primary aluminium production

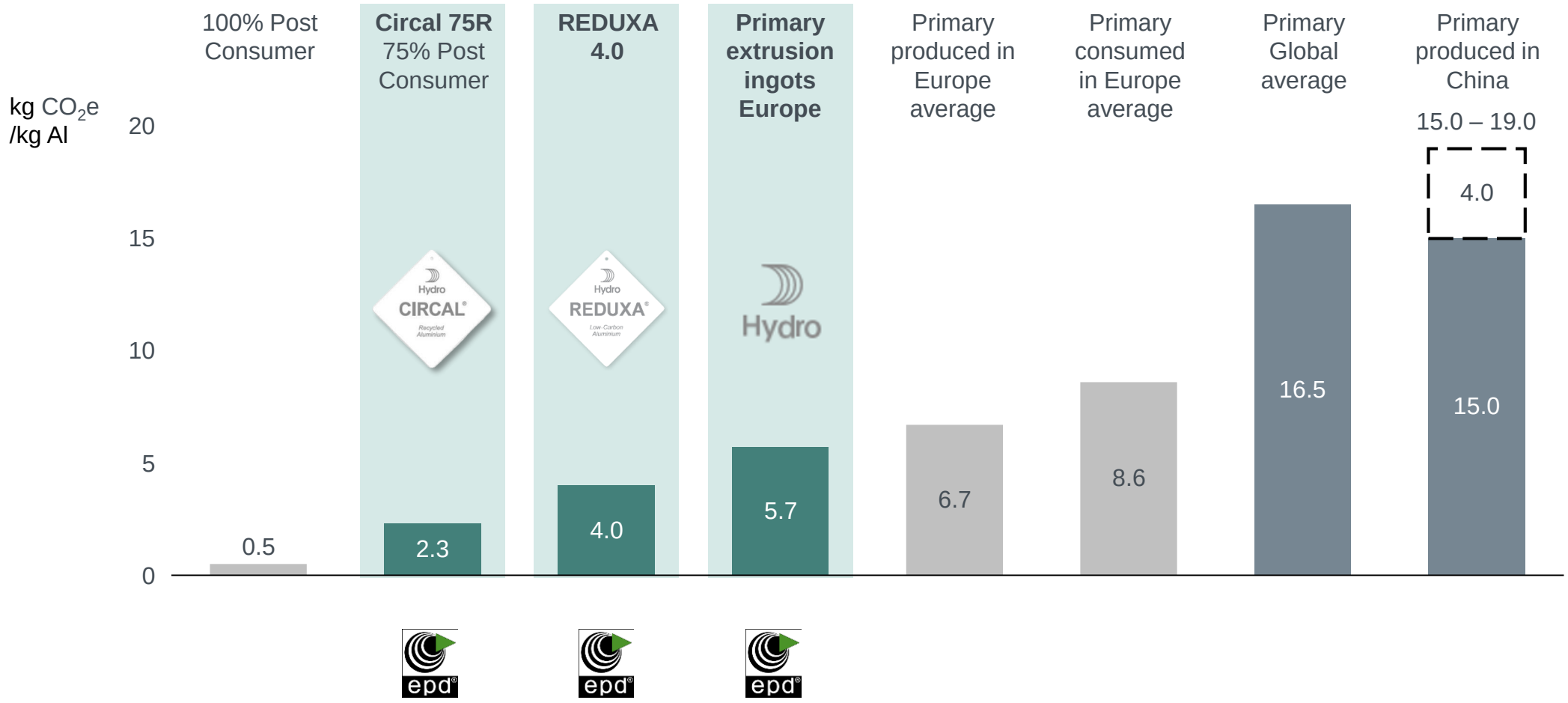


CO2e emissions from primary aluminium full value chain



Source: CRU, IAI, Hydro Analysis

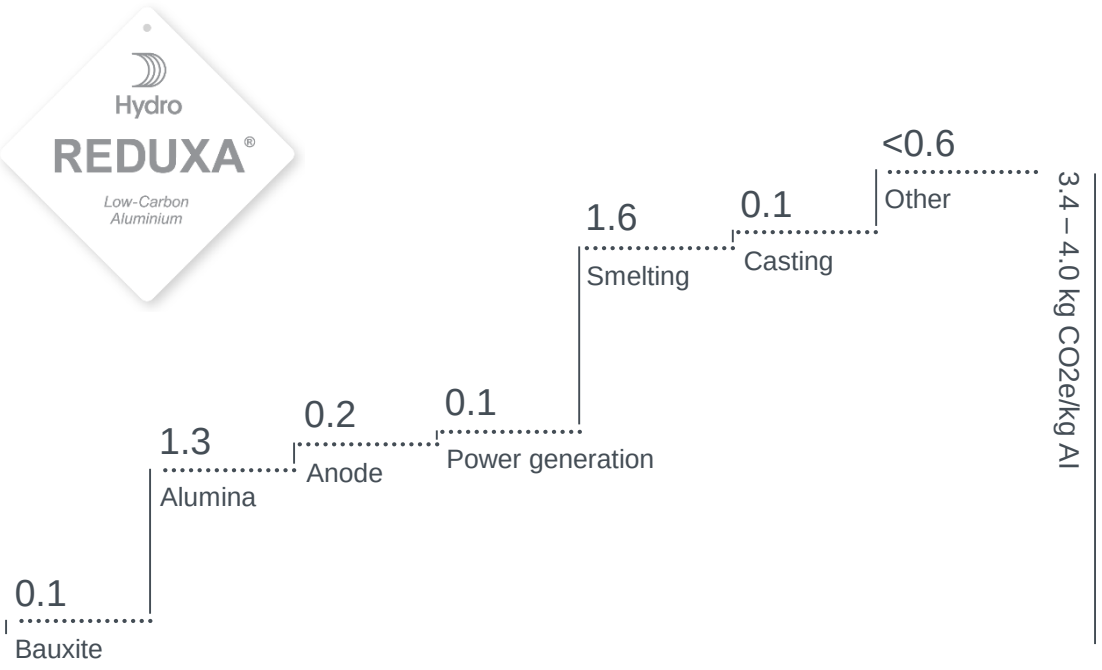
Aluminium CO2 footprint by origin



Greener products: From REDUXA 4.0 to 2.0

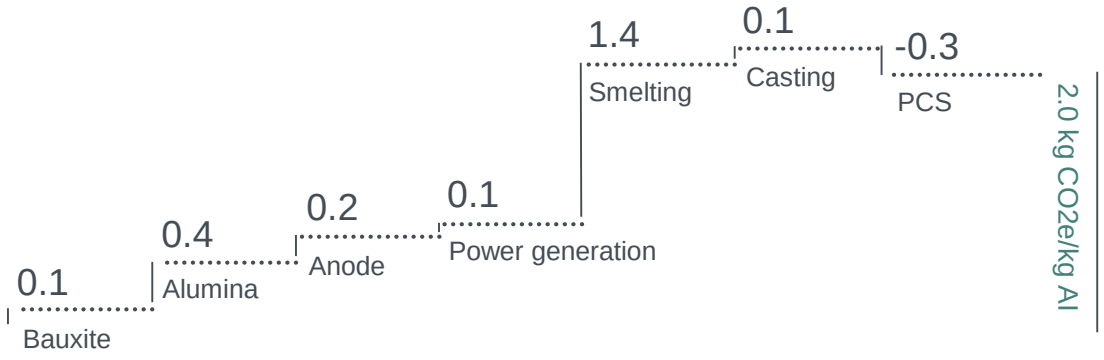
New energy mix in Alunorte important enabler to reach 2.0

From REDUXA 4.0



Typical production values

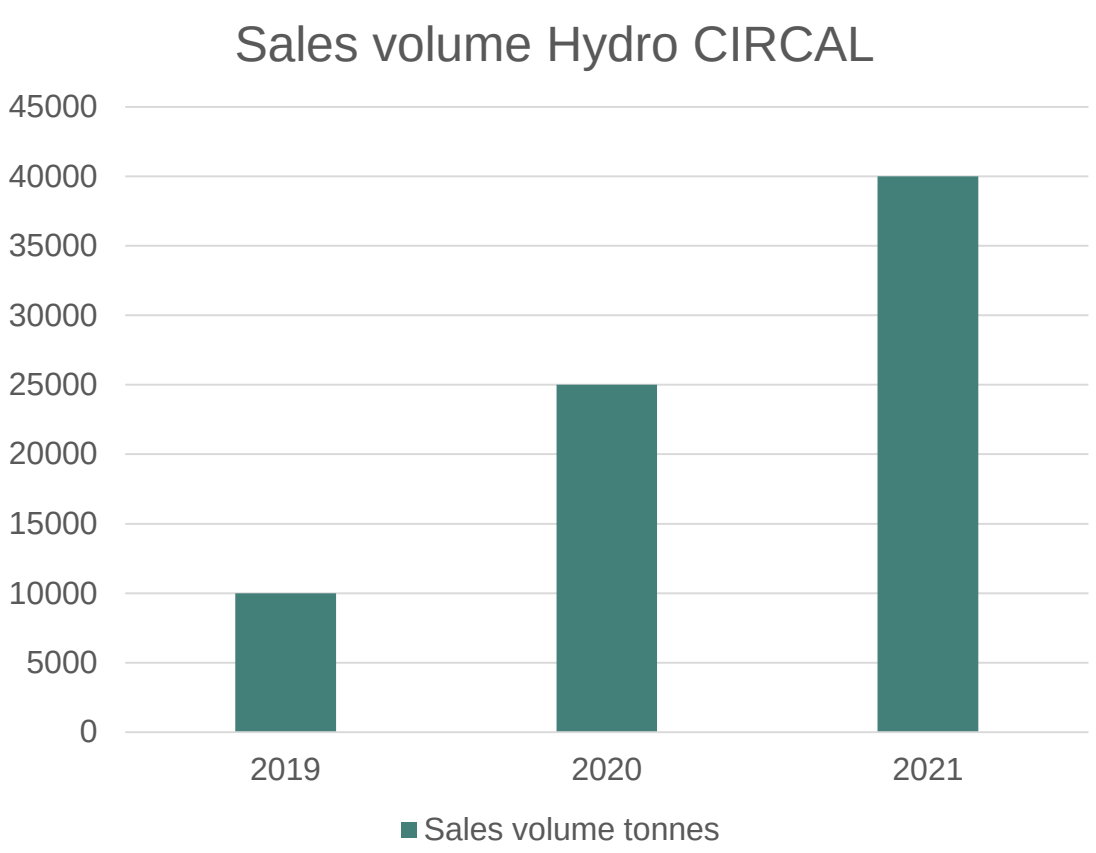
Towards REDUXA 2.0 by 2030



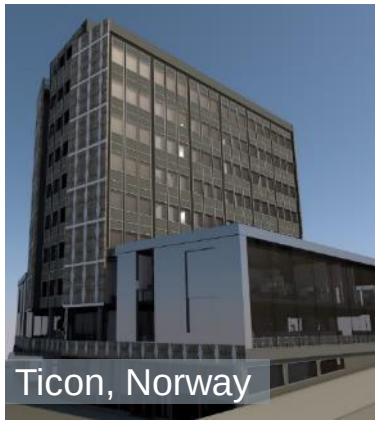
Potential production values

Growing demand for Hydro's greener facade solutions

60 Hydro CIRCAL-project for 250 MNOK in 16 countries during 1 year



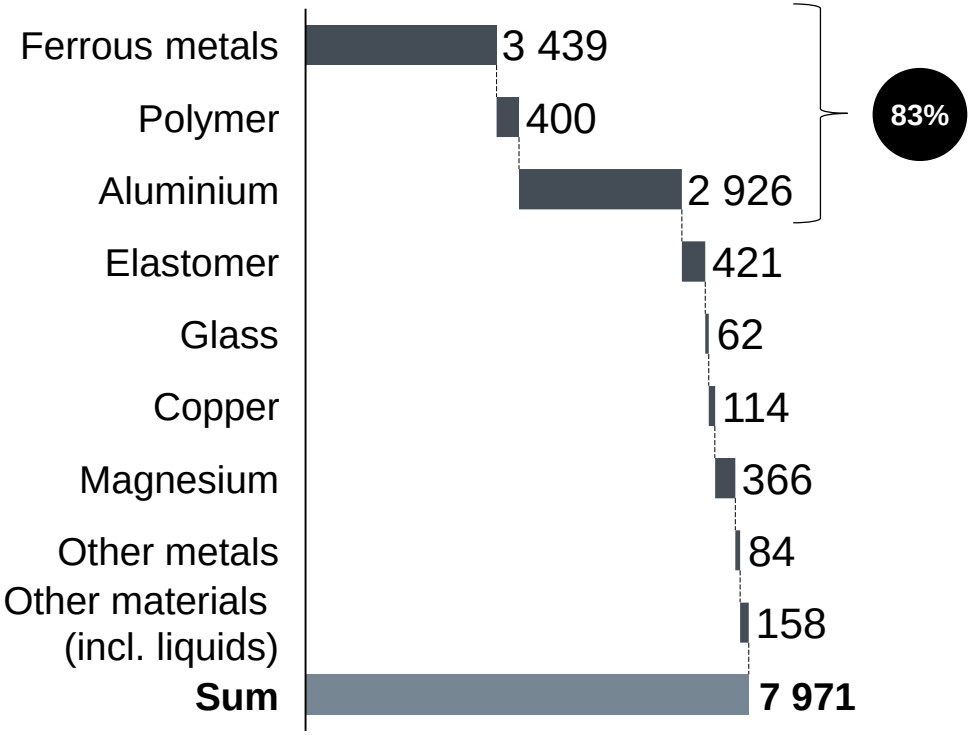
Økern Portal, Norway


Ticon, Norway

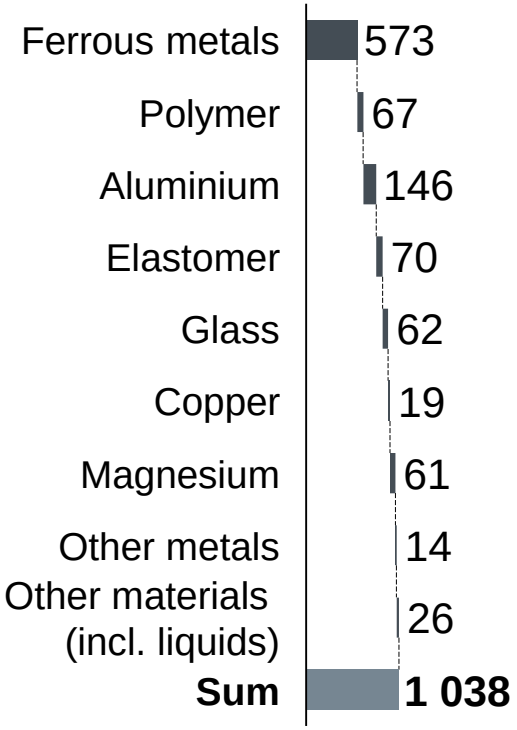

HELL energy drinks

A car made of 100% recycled material would have ~85% reduced CO2 footprint

CO2 breakdown (virgin material)
(XC60 ICE example) kg



CO2 breakdown (recycled material)
(XC60 ICE example) kg

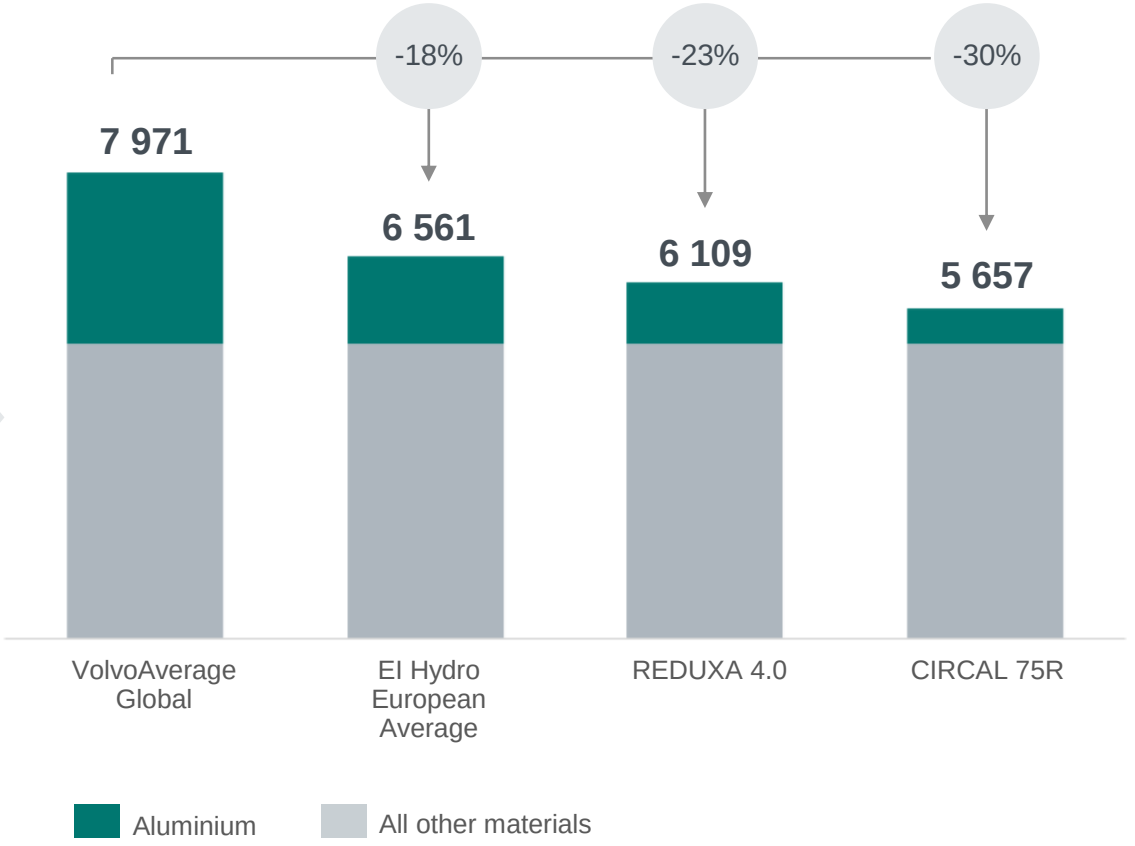


Pre-requisites
Sufficient market for high-quality recycled material, primarily when it comes to **metals** and **plastics**

Source: Volvo Cars, GABI GWP factors, Material Economics

An opportunity for the Automotive OEMs to drastically reduce the CO2 footprint of producing a car

The Volvo case – total CO2 emissions from producing a car would be 30% lower with 75R



Volvo Global Average: 12 kg CO2 / kg Al
EI Hydro European Average: 5.7 kg CO2 / kg Al
REDUXA 4.0: 4.0 kg CO2 / kg Al
CIRCAL 75R: 2.3 kg CO2 / kg Al

Operating within a changing regulatory environment

Hydro

Three key carbon leakage measures…

EU Emissions Trading System (ETS)

CO2 indirect compensation

Carbon border adjustment measure (CBAM)

…which have implications for Hydro and aluminium

- *Low-carbon competitiveness depends on free allowances to support investments in green transition*
- *Continuation of CO2 indirect cost compensation fundamental to securing cost competitiveness of aluminium in global markets*
- *CBAM alone – without additional carbon leakage measures such as CO2 compensation – unlikely to mitigate carbon leakage risk and affect aluminums' global competitiveness*

Sustainable Finance

Good and realistic definitions are key to make finance sustainable

- EU initiative to mobilize investments in sustainable businesses
- A classification (taxonomy) to define economic activities which are sustainable to invest in is being developed.
- Only primary aluminium production is considered, not the entire value chain

Timeline

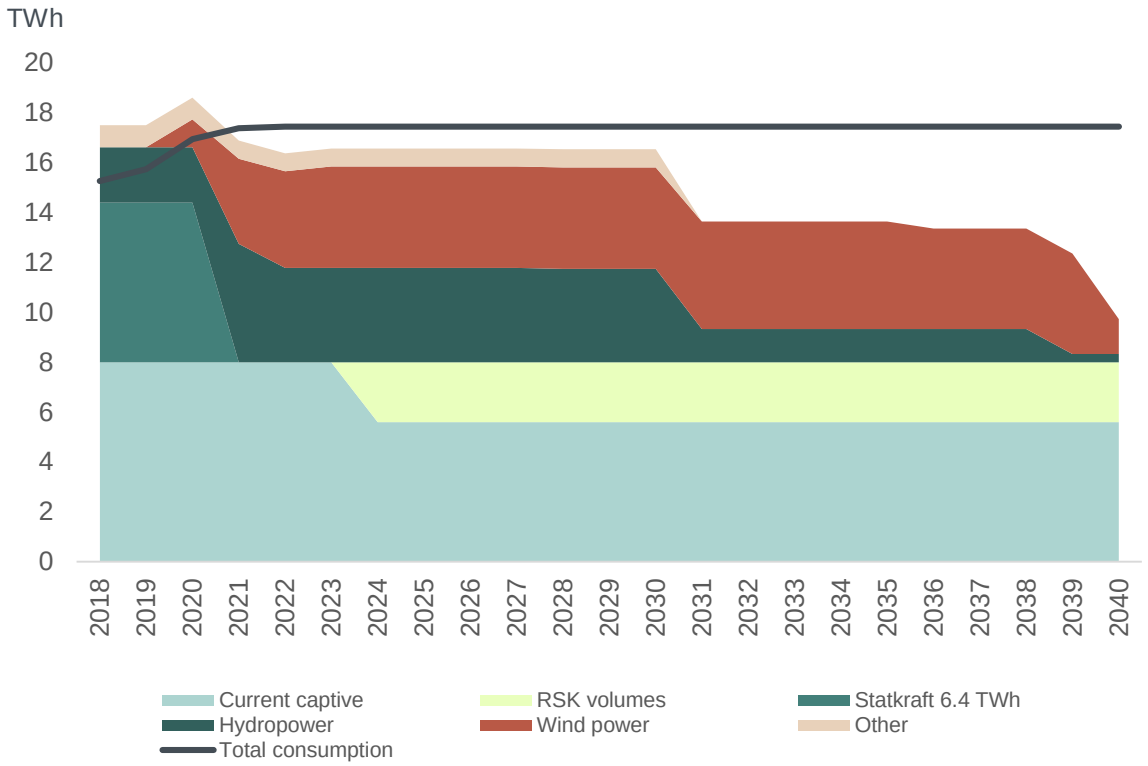
- Q4 2020 2021: Taxonomy rules and new Sustainable Finance Strategy

Our message:

- *More transparency and harmonization of sustainability evaluations in investments is welcome, as it contributes to drive the EU towards a low-carbon economy*
- *It will be important to integrate life cycle assessment in the EU sustainable finance framework*
- *Due to the need of aluminium in the low-carbon transition, all parts of the value chain should be considered as an enabling activity.*
- *Sustainability criteria for aluminium should be defined realistically to be considered an adequate tool for sustainability evaluation*

Growing Hydro’s renewable business: Becoming a wind park operator in Norway

Sourcing platform for fully-owned smelters, Norway[1)]

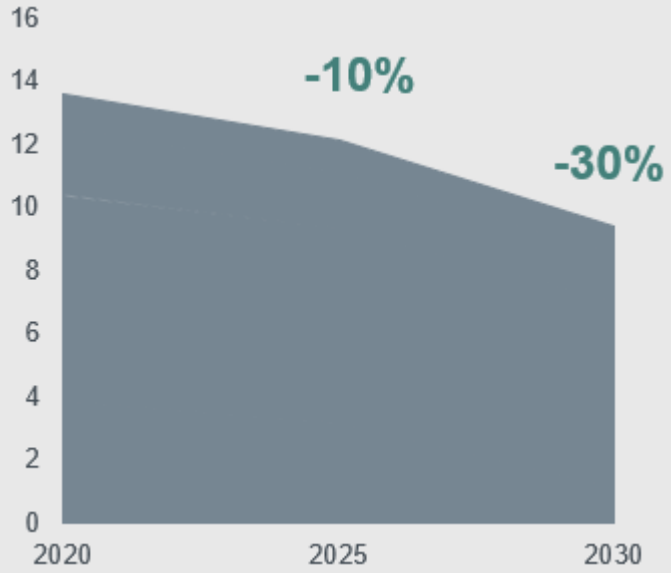


2030 ambition: roadmap to cut CO2e emissions by 30%

Hydro

Innovation and technology development key enablers toward CO2-free processes

Ambition to reduce own emissions by 10% in 2025, 30% by 2030



Greener energy mix at Alunorte: Key enabler for new climate and environment ambitions

R&D for low- or zero-carbon technology towards 2050

Exploring different paths

- Carbon capture
- Biomass anodes
- Carbon-free process

* Based on 2018 portfolio

Hydro

We are aluminium