Hydro

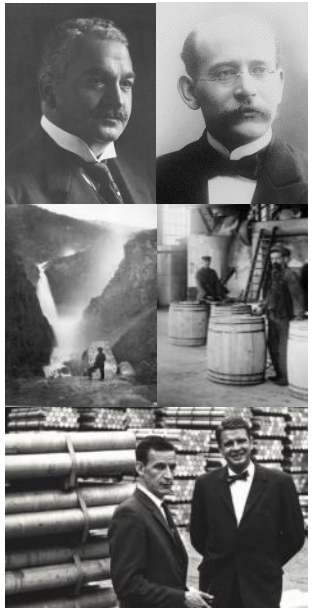
# Morgan Stanley Sustainability Event – Fireside Chat

September 22 2020

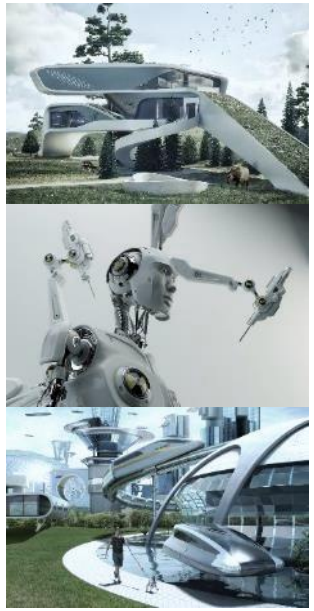
# Hydro: the global and complete aluminium company

*"…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**

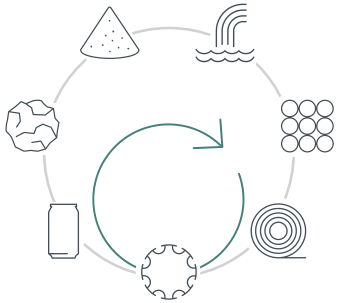


**Aluminium – metal of the future**



**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**

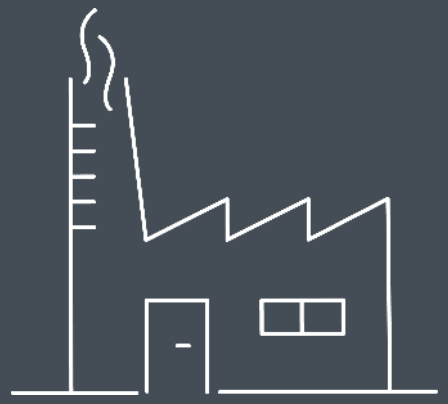
**Cut electrolysis emissions by**
**70%**
**since 1990**

**Karmøy technology pilot**
**15% more**
**energy efficient**

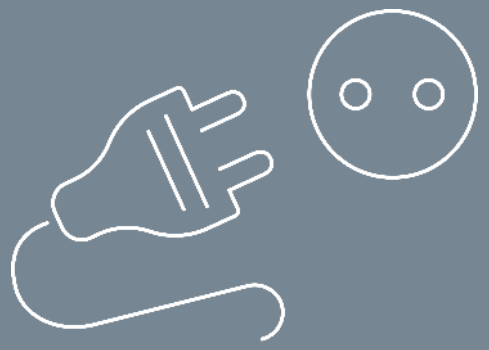
**Primary production:**
**70%** **based on**
**renewable power**

**Climate neutral by 2020**

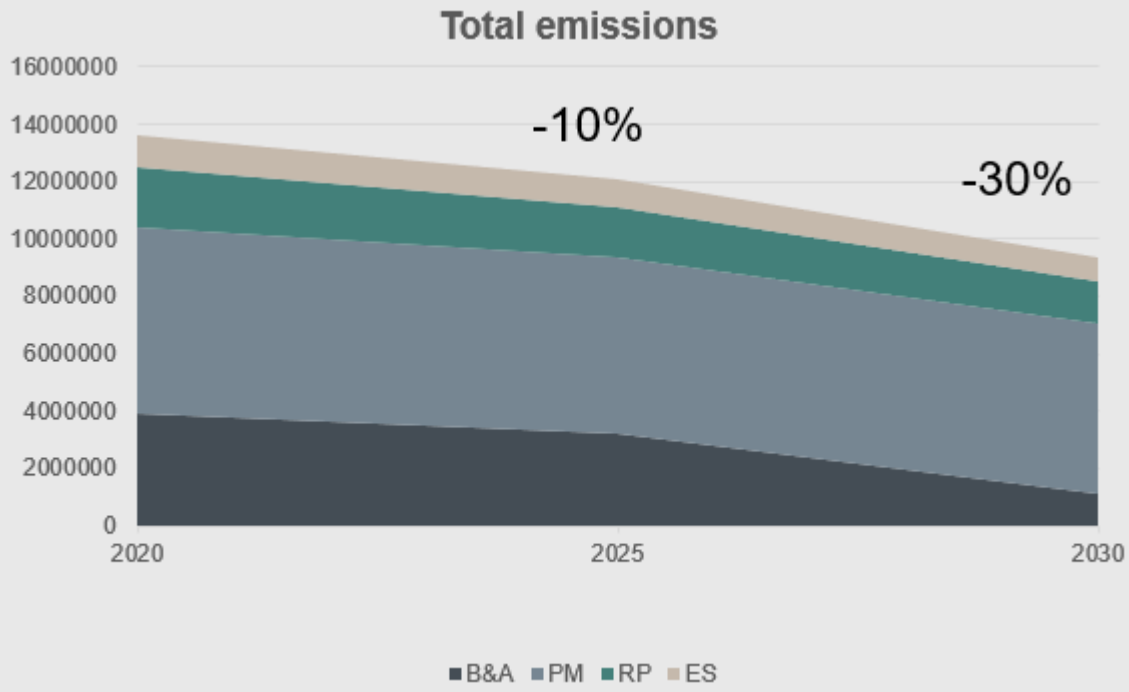
# 2030 Ambition: Cut $CO_2$ emissions by 30%



-36%



-22%

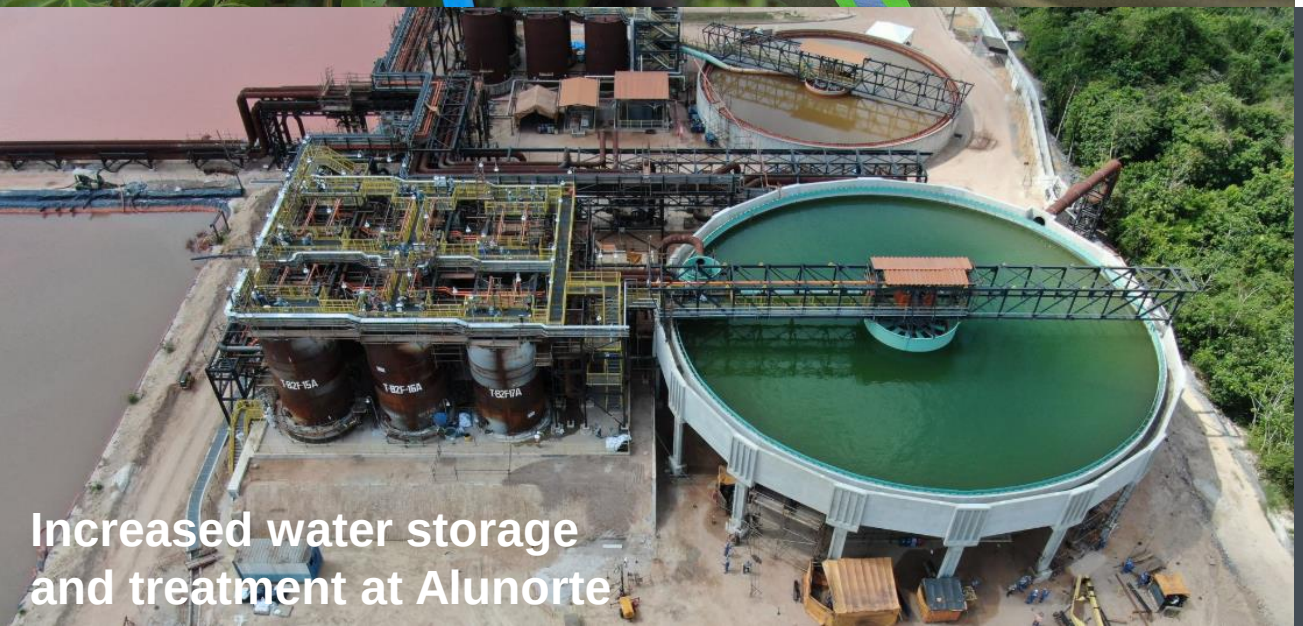


# But continued progress requires a technology shift

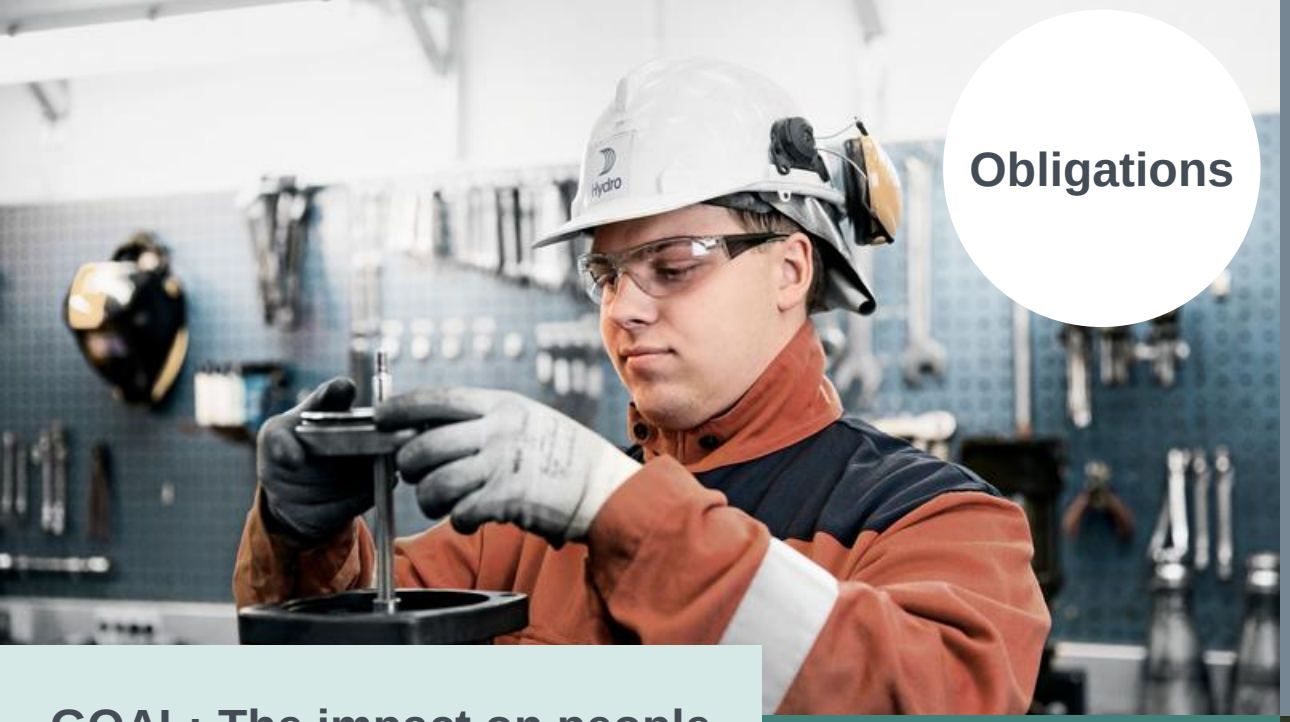
Investing in R&D for low- or zero-carbon technology toward 2050


**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)




- 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

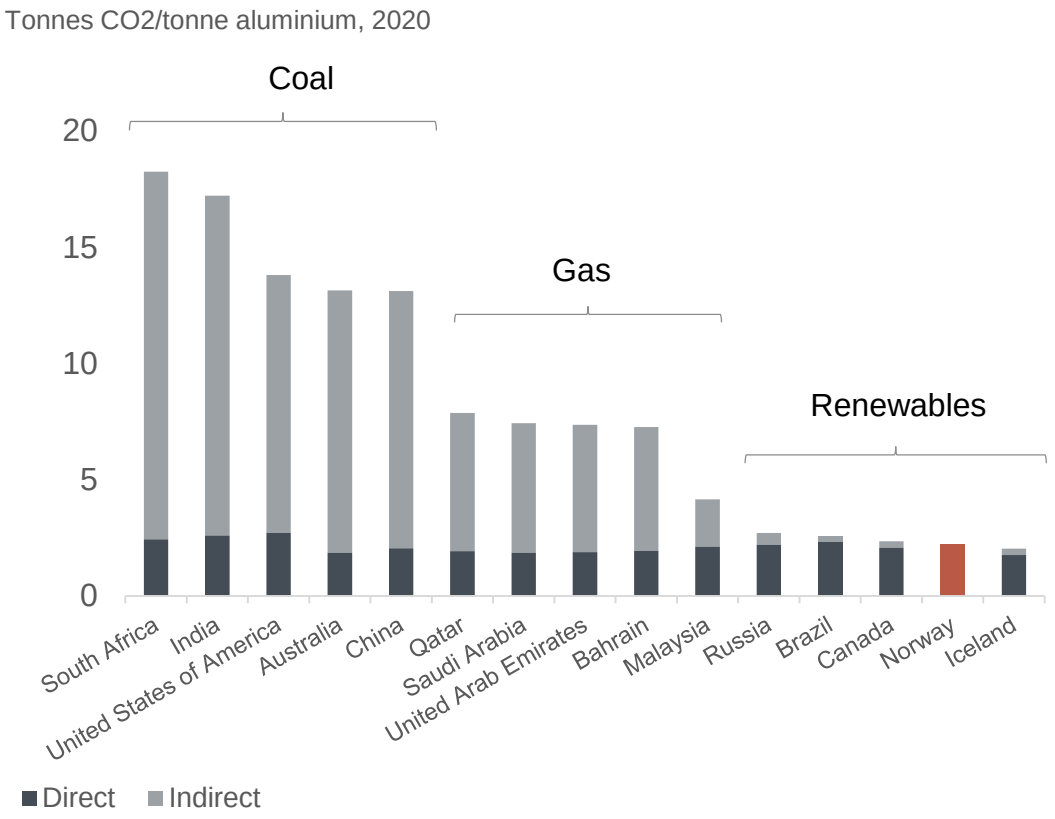
### Coalition for responsible business

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

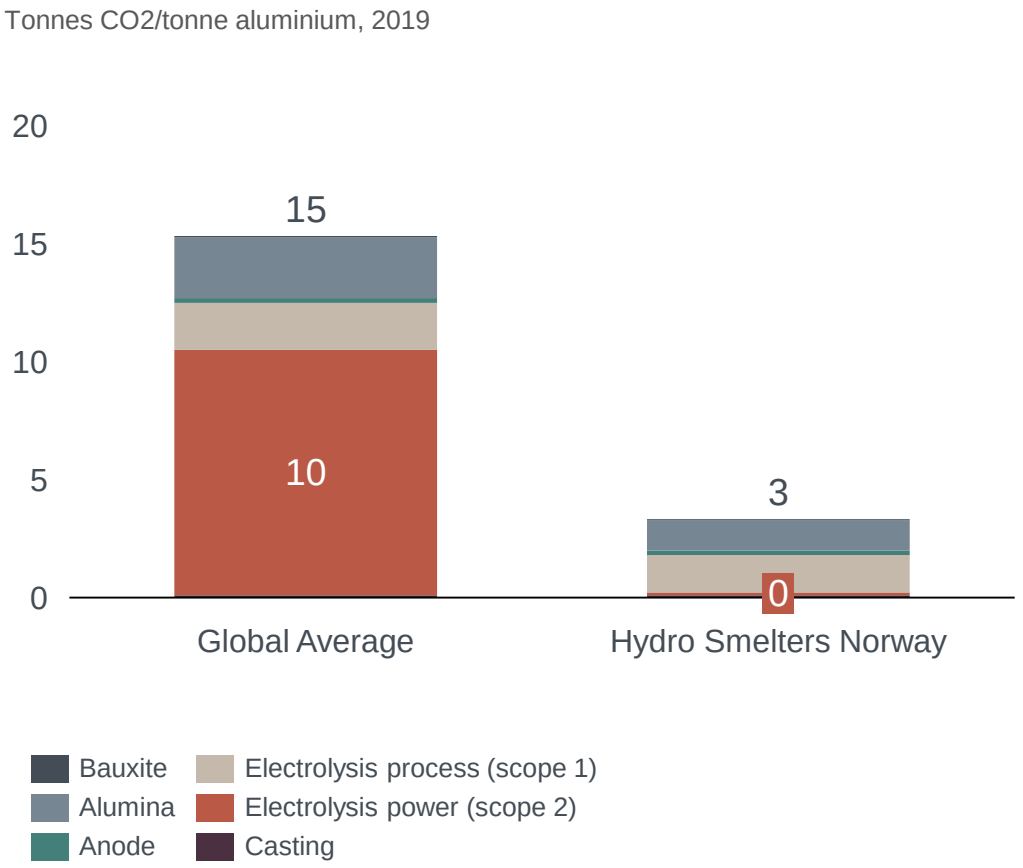
Some social investments efforts during Covid19 are redirected towards humanitarian response

# Fuel source most important differentiator

## CO2e emissions from primary aluminium production

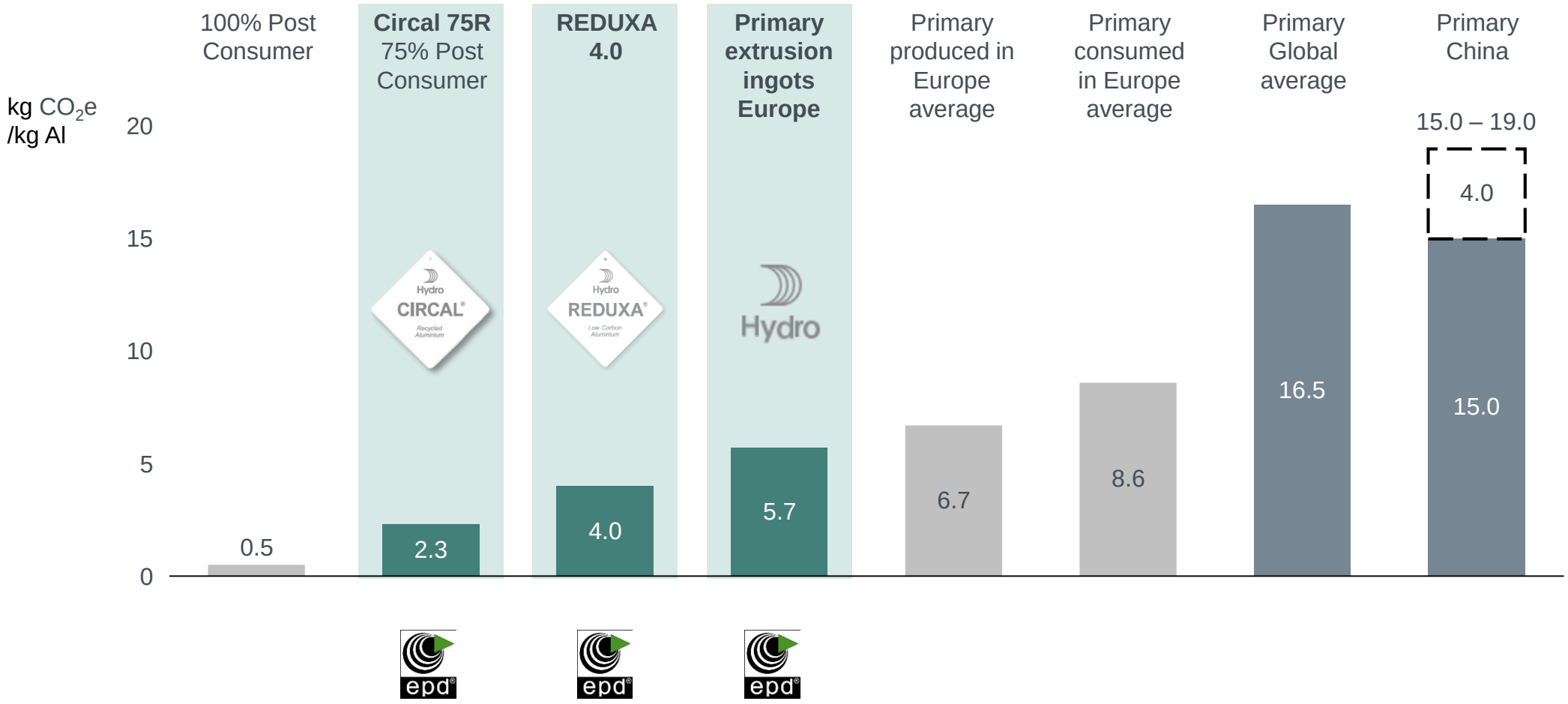



## CO2e emissions from primary aluminium full value chain




Source: CRU, IAI, Hydro Analysis

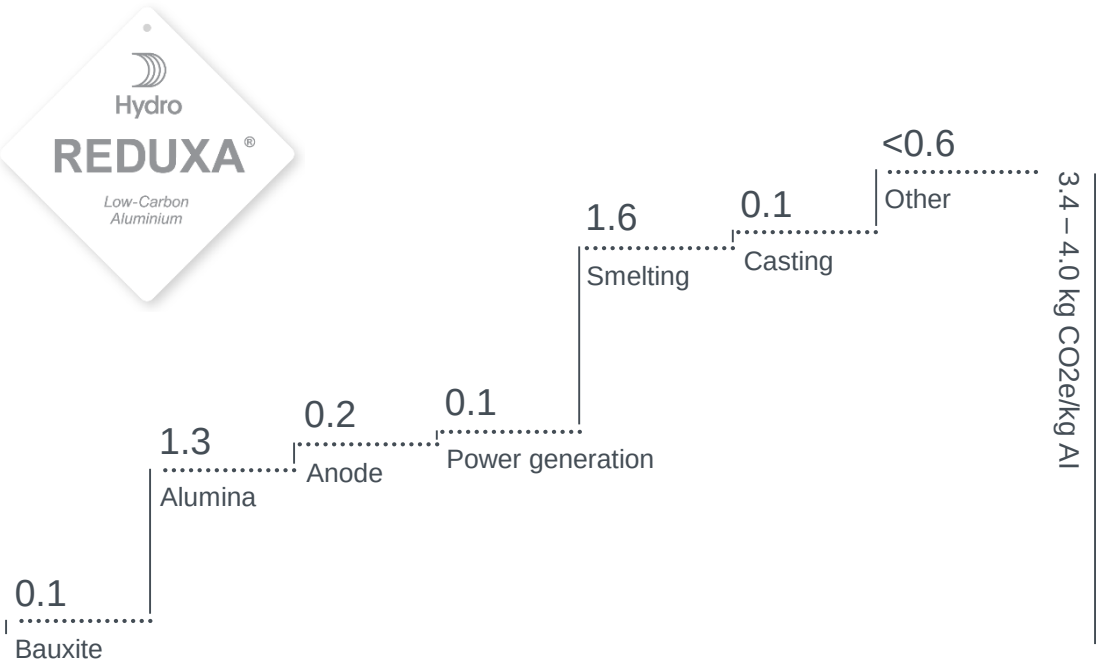
# Aluminium CO2 footprint by origin



# Greener products: From REDUXA 4.0 to 2.0

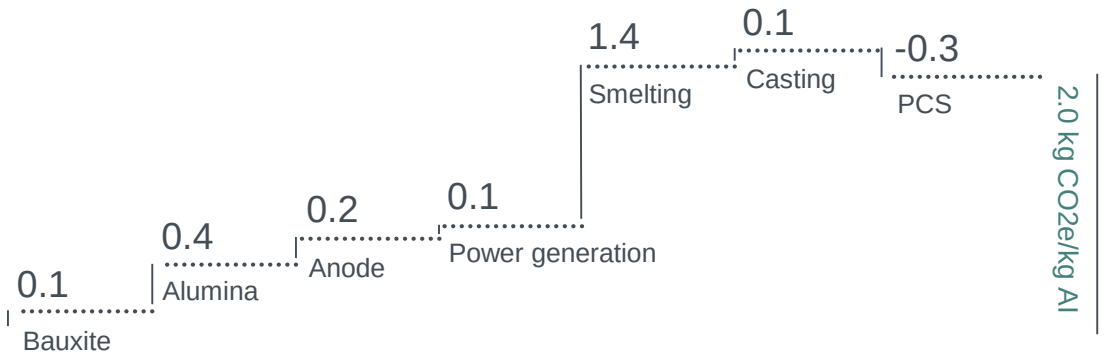
New energy mix in Alunorte important enabler to reach 2.0

## From REDUXA 4.0




Typical production values

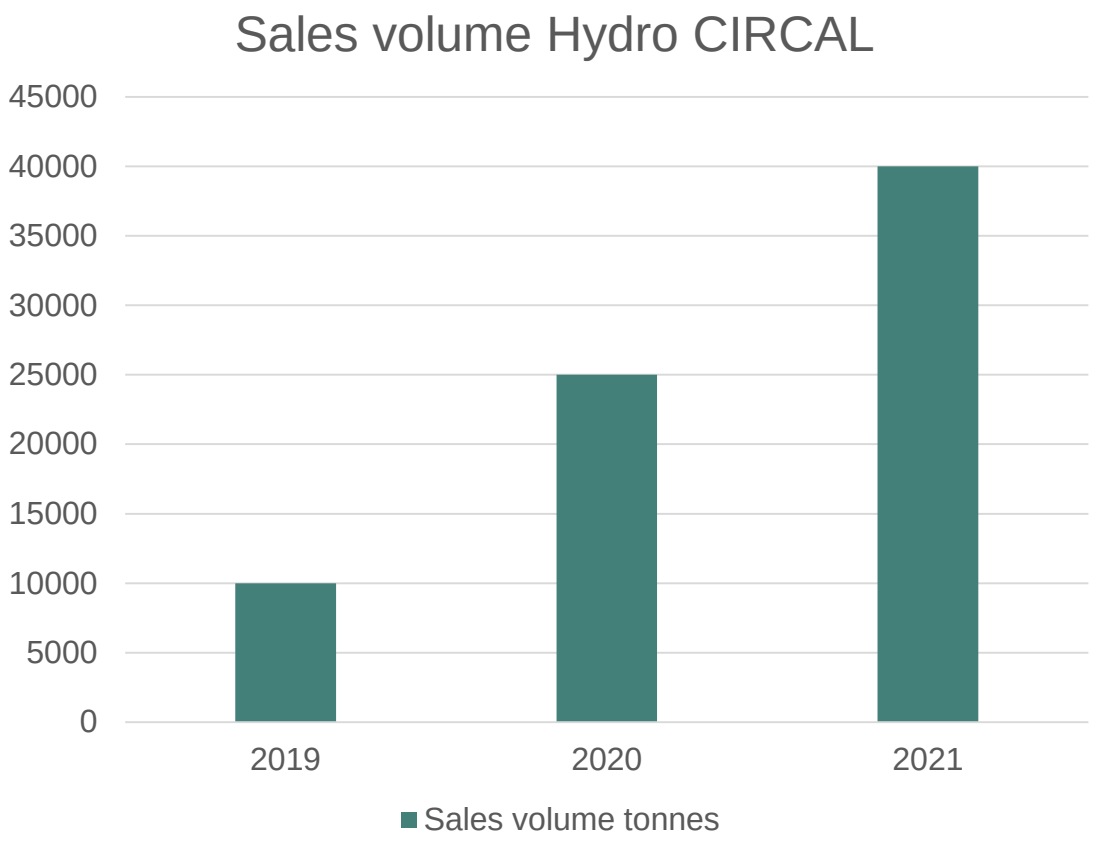
## Towards REDUXA 2.0 by 2030



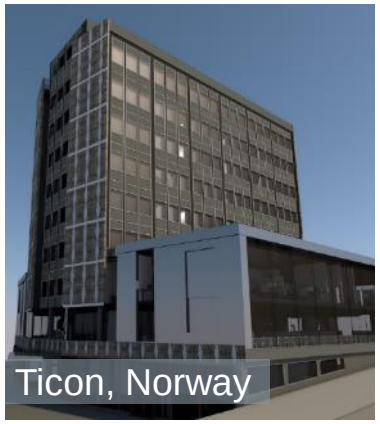

Potential production values

# Growing demand for Hydro's greener facade solutions

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



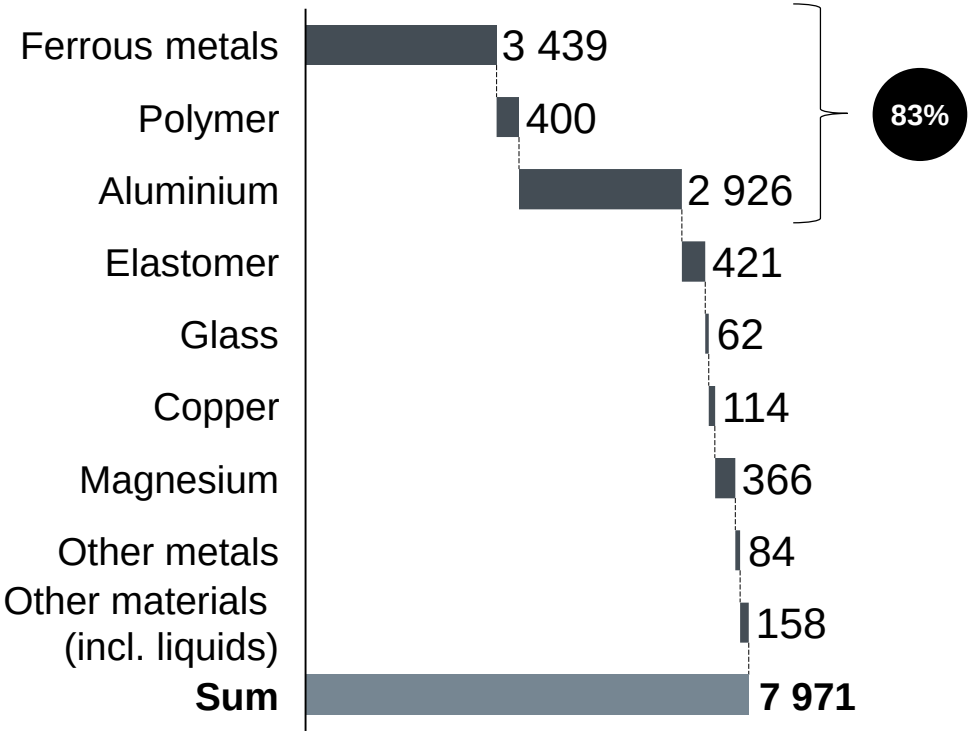

Økern Portal, Norway


Ticon, Norway

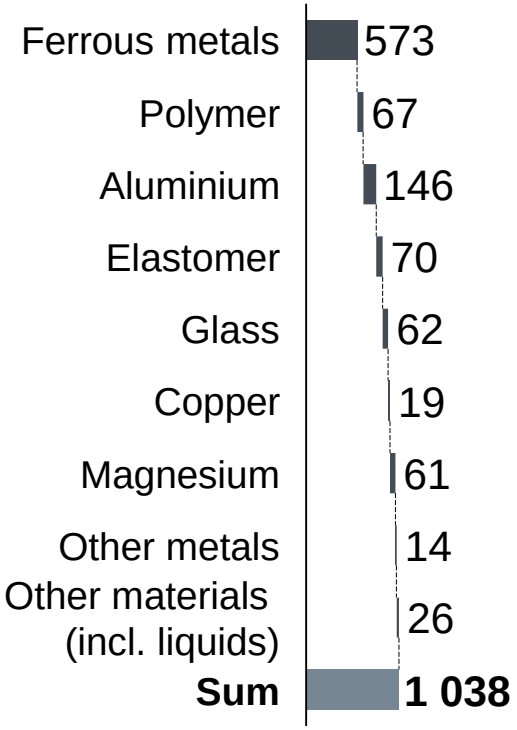

HELL energy drinks

# 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

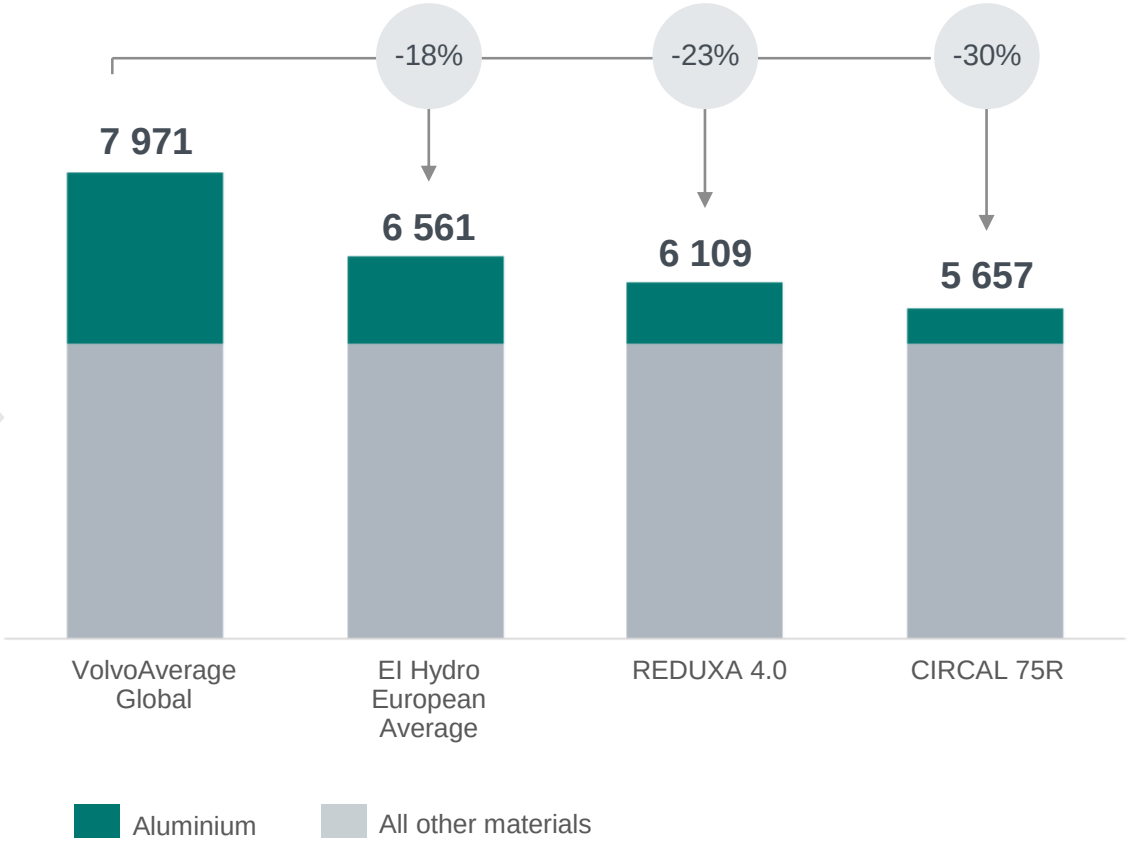



**Pre-requisites**
Sufficient market for high-quality recycled material, primarily when it comes to **metals** and **plastics**

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

Two key carbon leakage measures…

*CO2 indirect compensation*

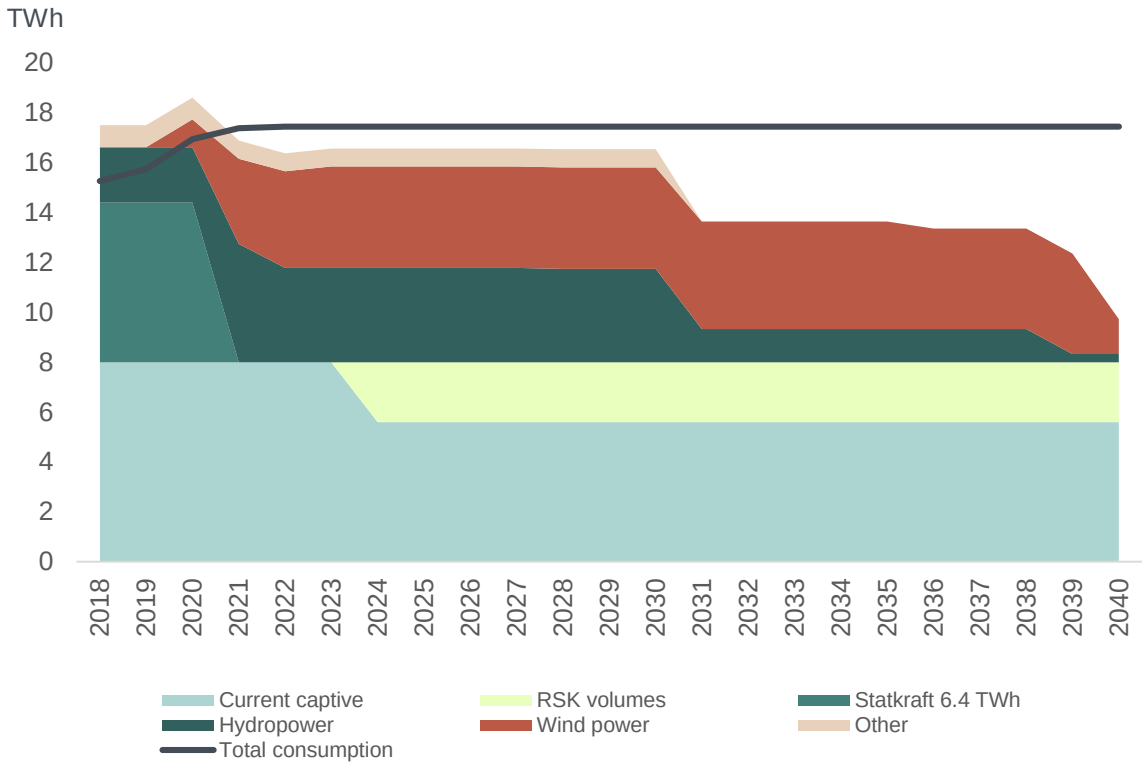
*Carbon border adjustment measure (CBAM)*

…which have implications for Hydro and aluminium

- *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*

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

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

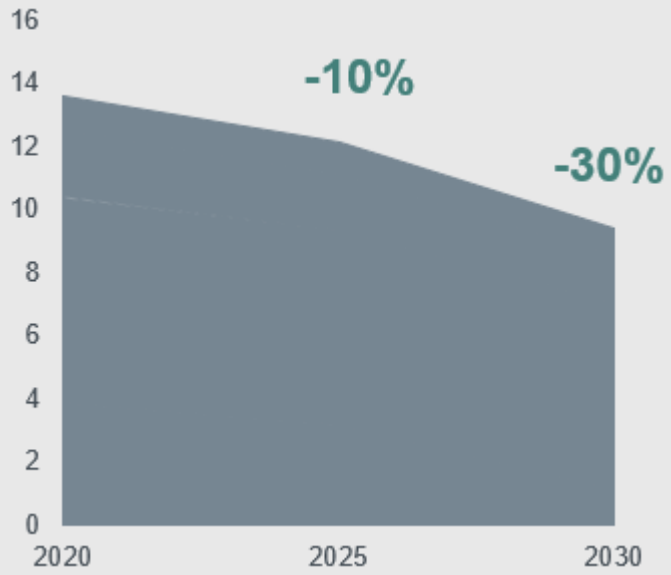



# 2030 ambition: roadmap to cut CO2e emissions by 30%

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