



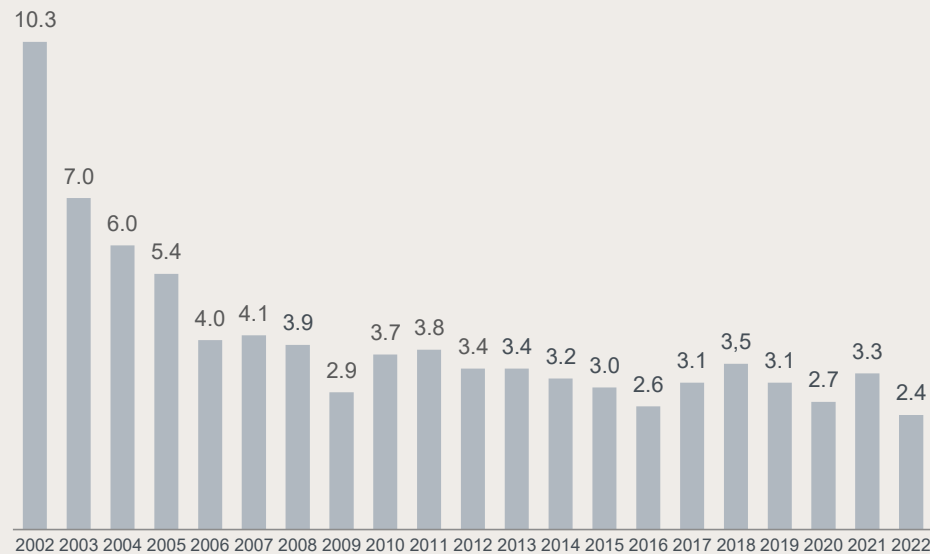
# Citi roadshow

2023-09-20

# Safe and responsible operations is a top priority

Leadership in health and safety, social responsibility and compliance as a license to operate

TRI Rate<sup>1)</sup>



1) Total recordable incidents (TRI) rate defined as cases per 1 million hours worked, for own employees and contractors

## Continuing efforts to further increase transparency

- Transparent and consistent reporting approach for more than three decades
- Sustainability is fully integrated in Hydro's strategy
- Work in progress to prepare for implementation of the EU Corporate Sustainability Reporting Directive (CSRD)
- Hydro again rated Low risk on ESG by Sustainalytics



**SUSTAINALYTICS**  
**17.3 (Low risk)**  
 #3 in sector (3/226)



**MSCI**  
**AA rating**  
 "Leading initiatives to achieve carbon-free aluminum"

Member of  
**Dow Jones Sustainability Indices**  
 Powered by the S&P Global CSA  
**67%**  
 Europe Index inclusion  
 DJSI inclusion since 1999



**ecovadis**  
**73/100**  
 96<sup>th</sup> percentile



**MOODY'S**  
**ESG Solutions**  
**71/100**



**ISS ESG**  
**B rating**  
 Corporate Rating: Prime Status

# Driving sustainability: Future-proofing our company



- On track to meet 30 percent reduction in scope 1 and 2 CO<sub>2</sub>e by 2030
- Net-zero by 2050 or earlier
- Reduce specific scope 3 emissions by 30% by 2030



- 1:1 reforestation on track
- No net-loss biodiversity ambition for new projects
- Tailings dry backfill technology reducing the need for permanent landfilling
- Continued focus on waste elimination, including new project on recycling bauxite residue

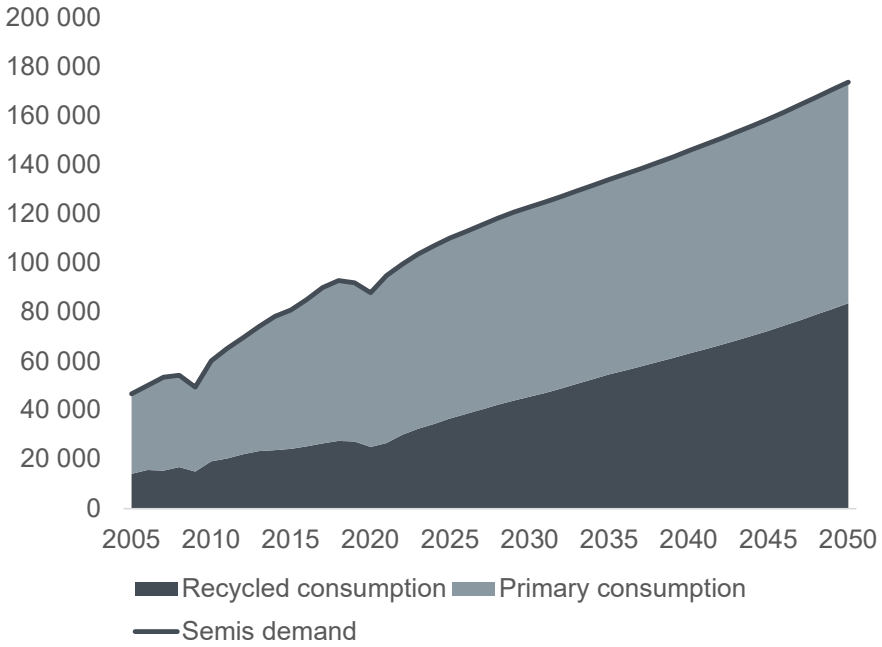


- On track to deliver on target of empowering 500,000 people with skills and education by 2030
- Significant social projects completed in Brazil
- Transparency and traceability of key product sustainability data by 2025 or earlier

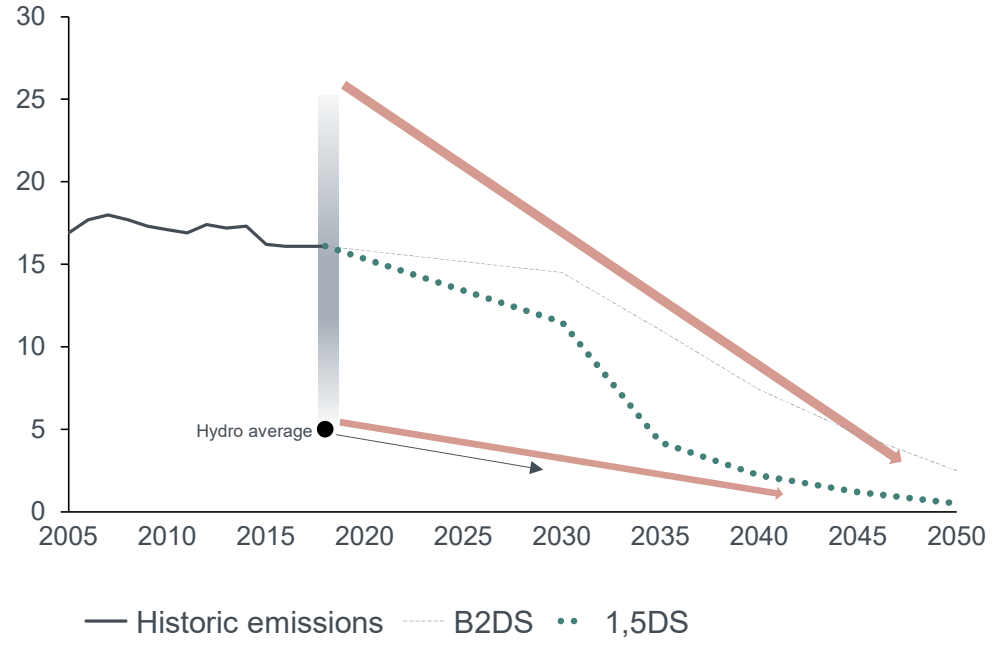
# Aluminium demand expected to grow significantly



Semis demand (Mt Al)



Tonnes CO2e/t primary aluminium



Source: CRU

# Hydro provides products with low emissions

Primary aluminium produced on renewable energy



**4-6 times**

lower than the world global primary average

Recycled aluminium from Hydro



More than

**7 times** for 75R, and

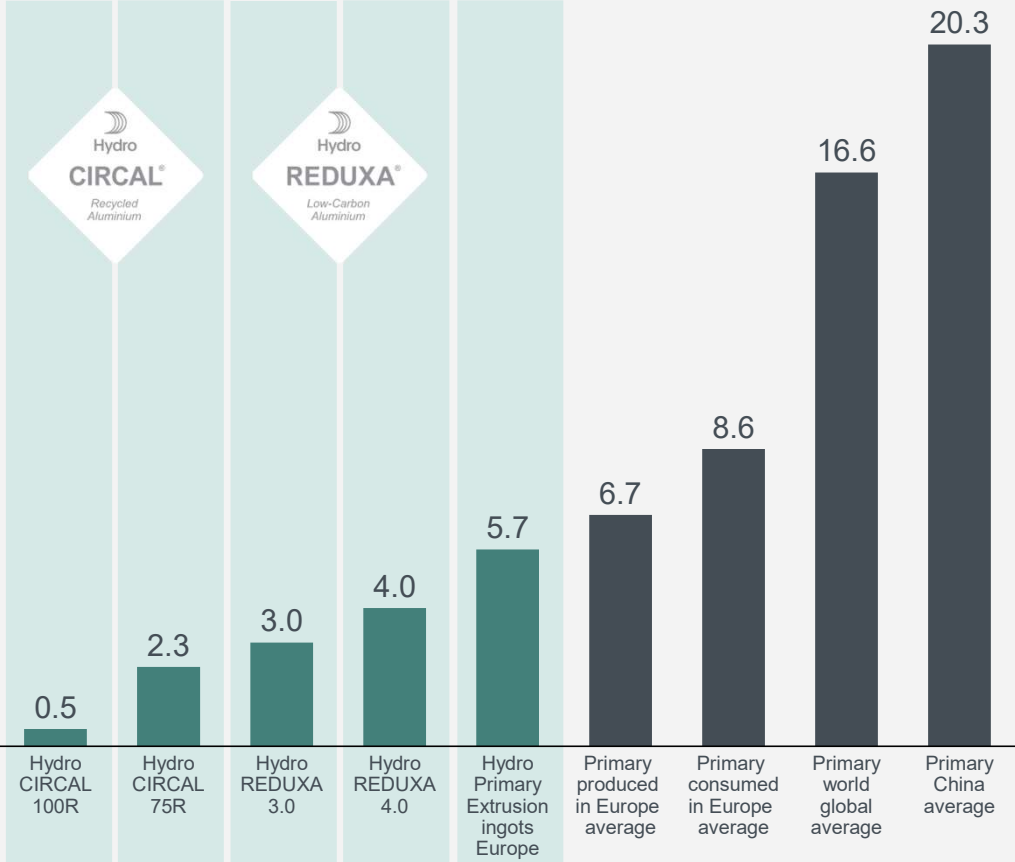
**33 times** for 100R

lower than the world global primary average

Sources: EAA, IAI, Hydro internal analysis



Kilos of CO<sub>2</sub>e emissions per kilo aluminium

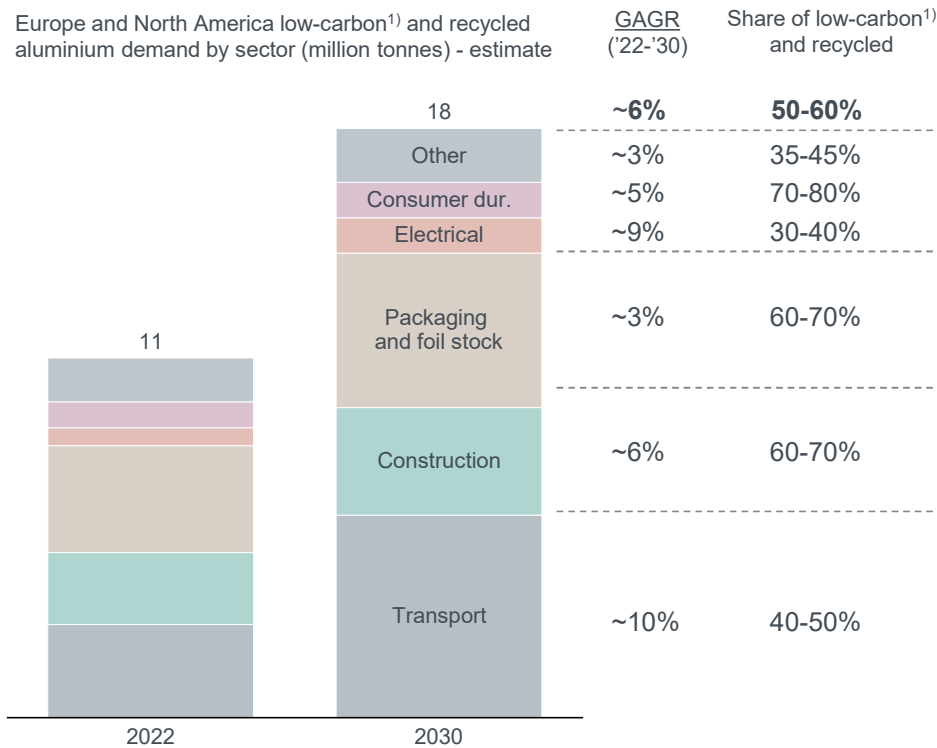


# Climate

# Carbon reduction targets growing across market segments



## Estimated demand based on currently stated ambitions



## Examples of front runners with ambitious 2030 targets

	Scope 3 reduction targets	Specific aluminium commitments
	CO2e neutral value chain	10% of primary at <3 t/t
	45% per MWh generated	
	52% per MW constructed	
		10% of primary at <3 t/t
		10% of primary at <3 t/t
	50% for absolute emissions	Max. 2.0 kg carbon emitted / kg
	30% for absolute emissions	
	20% for absolute emissions	
	CO2e neutral balance sheet	
	CO2e neutral (2039)	
	25% per vehicle (2025)	10% of primary at <3 t/t
	22% per vehicle	
	30% per vehicle	

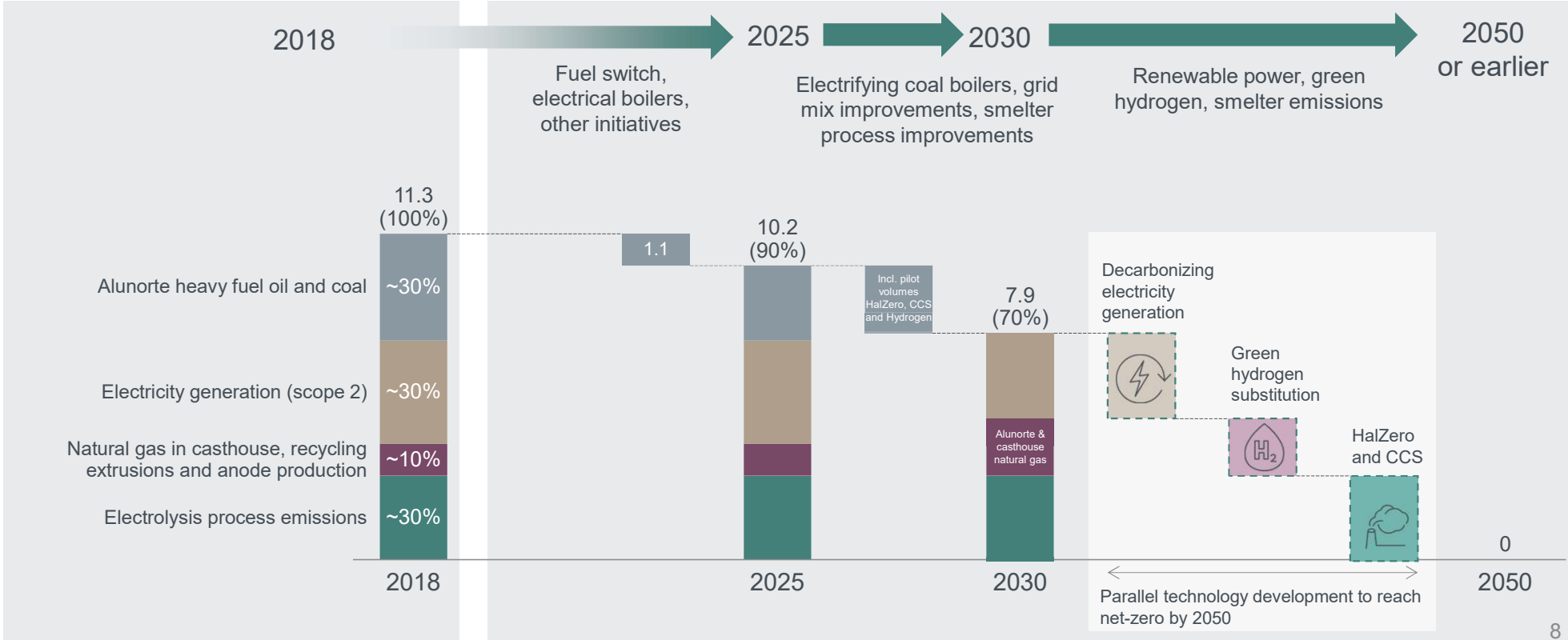
1) <4 tons of CO<sub>2</sub>e emissions per ton of primary aluminium produced, including full value chain emissions

# Net-zero Hydro: The roadmap



On track to achieve 30% carbon emissions reduction by 2030 and net-zero by 2050 or earlier

**GHG emissions – ownership equity**  
 Million tonnes CO<sub>2</sub>e (% of 2018 baseline emissions)





# New target to reduce specific scope 3 emissions by 30% by 2030

## Reducing footprint of purchased raw materials

Reducing footprint of external purchased metal is the main source to reduce scope 3 emissions, in addition to external alumina, alloying elements, anodes, caustic soda, fuel and other goods and services

## Increasing the use of post-consumer scrap

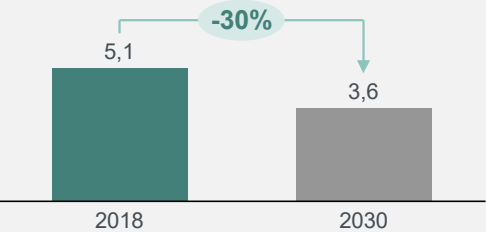
Replacing ingots and pre-consumer scrap input with post-consumer scrap drives down the inherent footprint of the product.

## Alunorte fuel switch and decarbonization

The planned fuel switch and decarbonization will lead to less emissions from production and transportation of fossil fuels

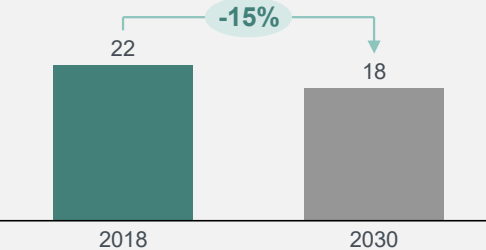


Upstream scope 3 GHG target  
pr tonne aluminium\*



\*Per tonne delivered from Aluminium Metal and Hydro Extrusions combined

Upstream scope 3 GHG target  
Million tonnes CO<sub>2</sub>e



# Environment

# Environment: Minimizing Hydro's environmental footprint



## Protect Biodiversity



- 1:1 rehabilitation of available mined areas within two years (ongoing)
- **No net loss of biodiversity in new projects (ongoing)**

## Eliminating waste



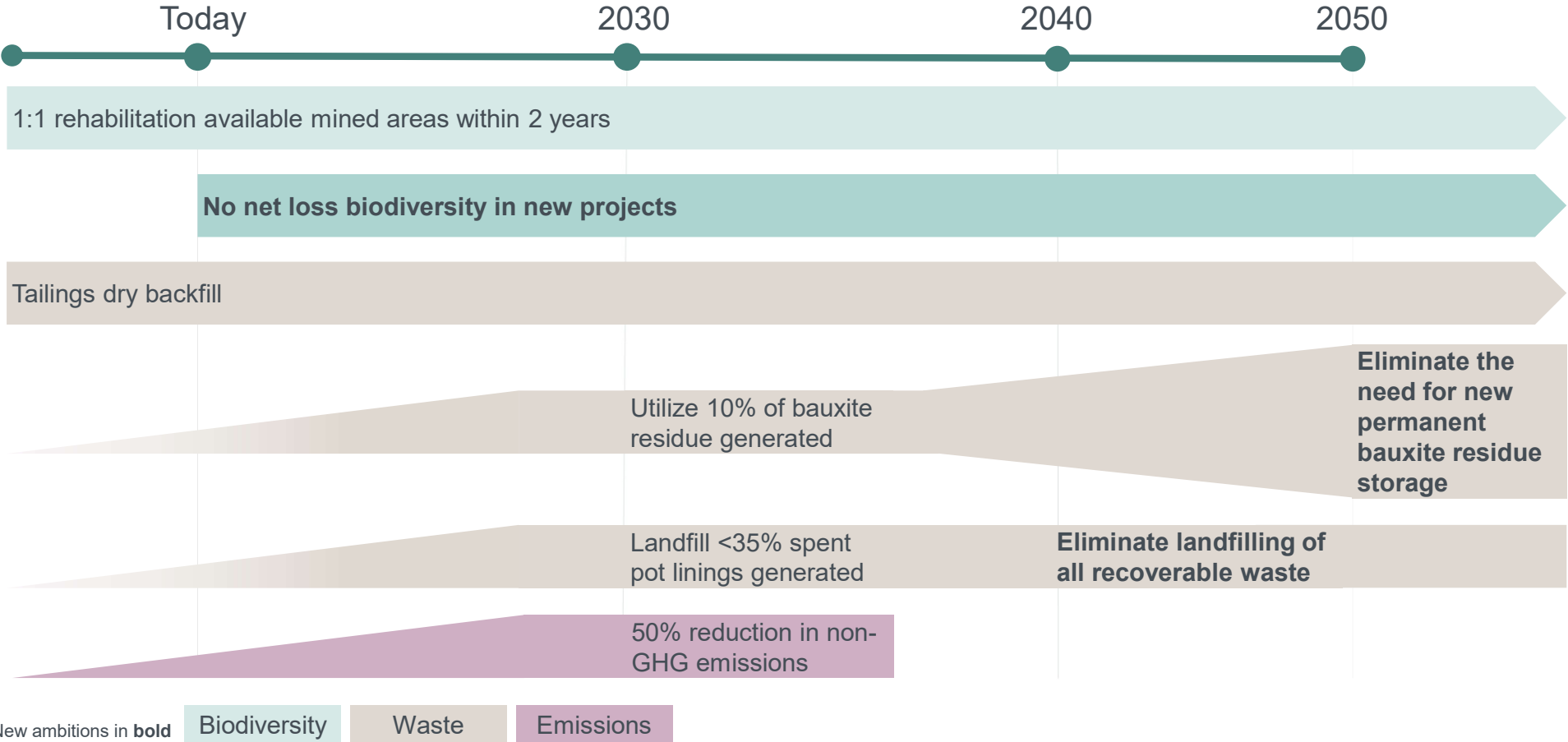
- Bauxite Tailings Dry Backfill (ongoing)
- Landfill <35% of spent pot lining generated, by 2030
- Utilize 10% of bauxite residue generated, by 2030
- **Eliminate landfilling of all recoverable waste, by 2040**
- **Eliminate the need for new permanent bauxite residue storage, from 2050**

## Reducing emissions



- Reduce material non-GHG emissions by 50%, by 2030 (2017 baseline)

# Environment: Protect biodiversity and eliminate waste



Social

# Social:

## Improve lives and livelihoods wherever we operate

### Invest in education



Equip people with essential skills for future economy



Empower 500,000 people with education and skills development by 2030

### Support just transition

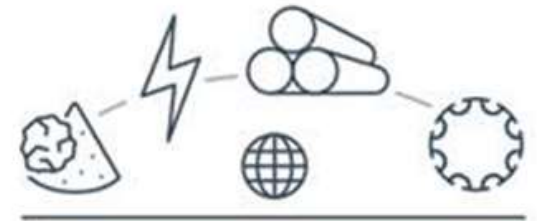


Contribute to economic and social development in communities where we operate



Just Transition framework for Hydro with specific targets developed in 2022

### Responsible supply chain

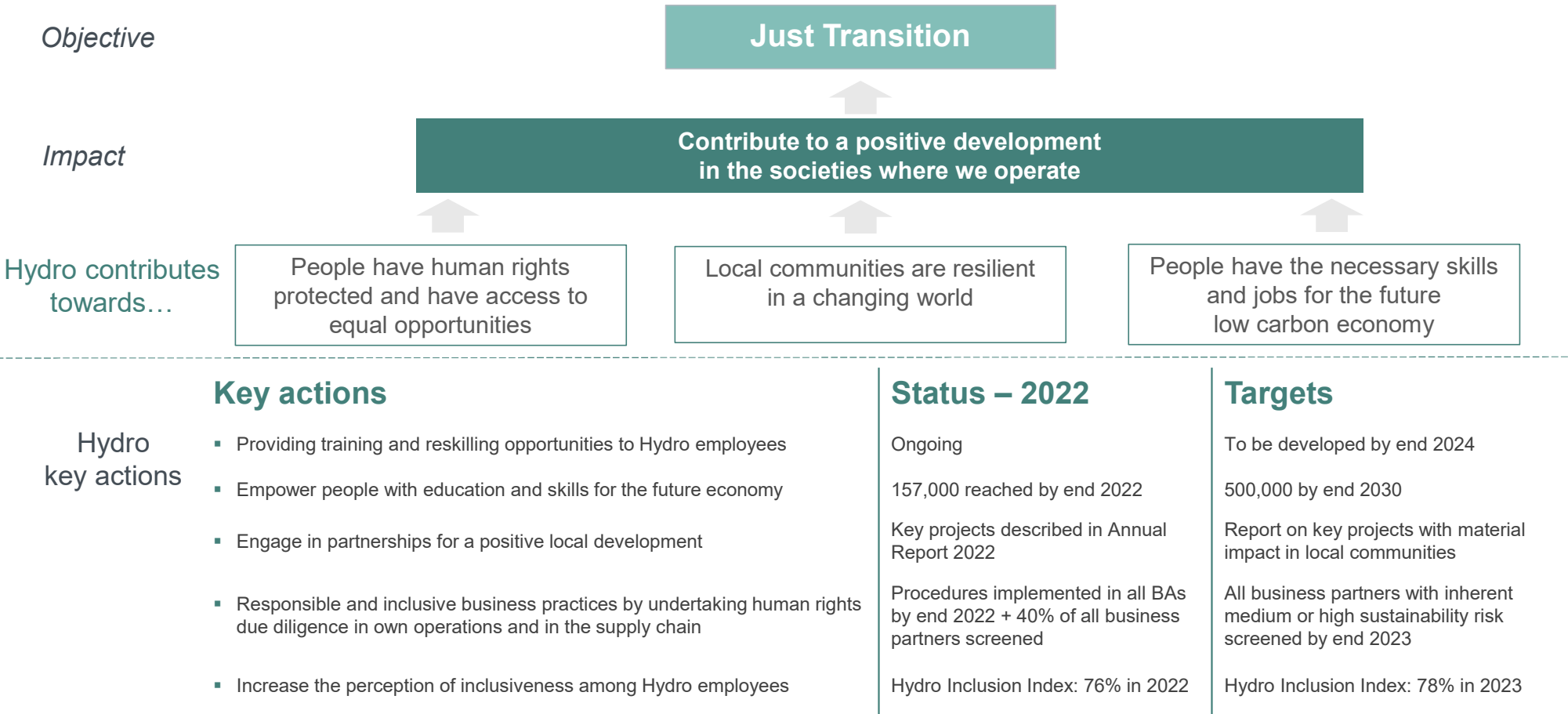


Ensure transparency and responsible business practices in our supply chains



Transparency and traceability of key sustainability data for our products by 2025 or earlier

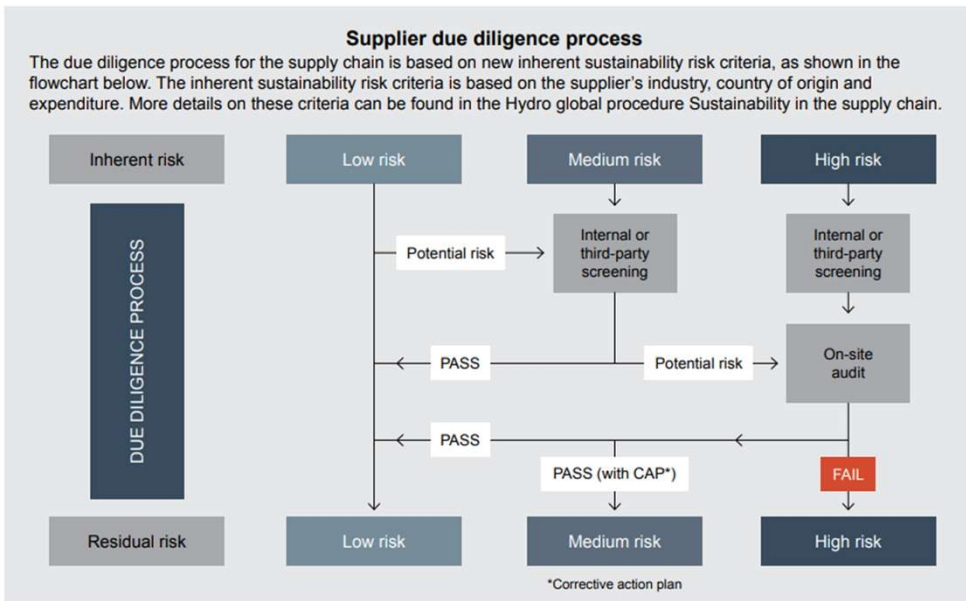
# Hydro Group - Just Transition framework and targets



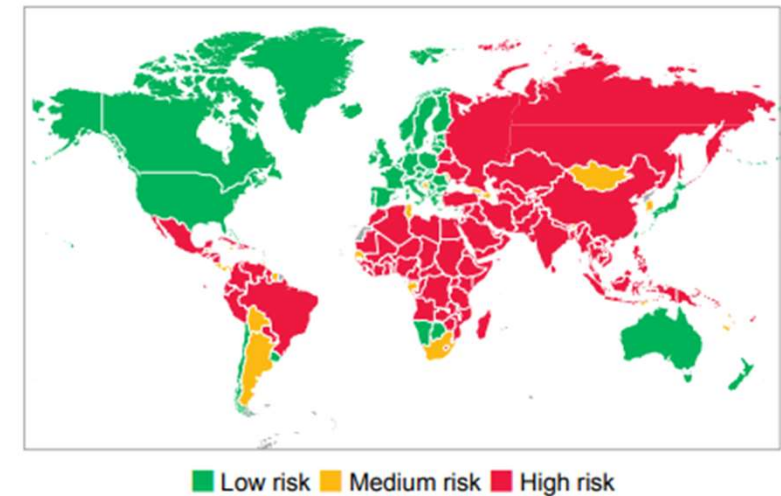
# Current supply chain management in Hydro

Supplier due diligence process set out in *Sustainability in the Supply Chain Procedure (GP-09-01)*

Overview of human rights risk score per country for Hydro's direct suppliers



## Human Rights Country Risk Score







**Hydro**

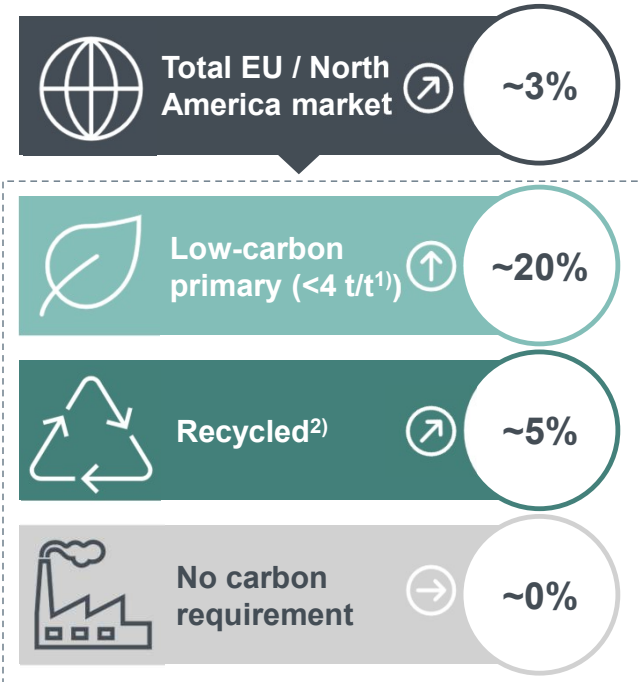
*Industries that matter*

# Demand for greener aluminium accelerates

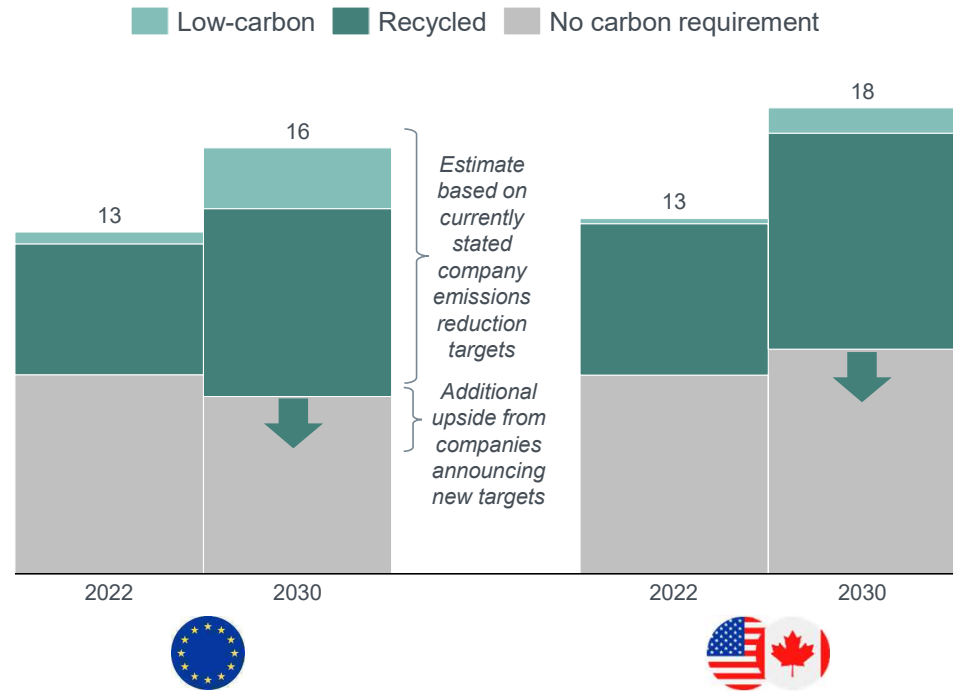
Low-carbon and recycled aluminium to make up majority of EU and North America market by 2030

Greener demand growth is outpacing the rest of the market

'22 -'30 CAGR



Estimated demand from currently stated company emissions reduction targets – demand upside as new targets are expected

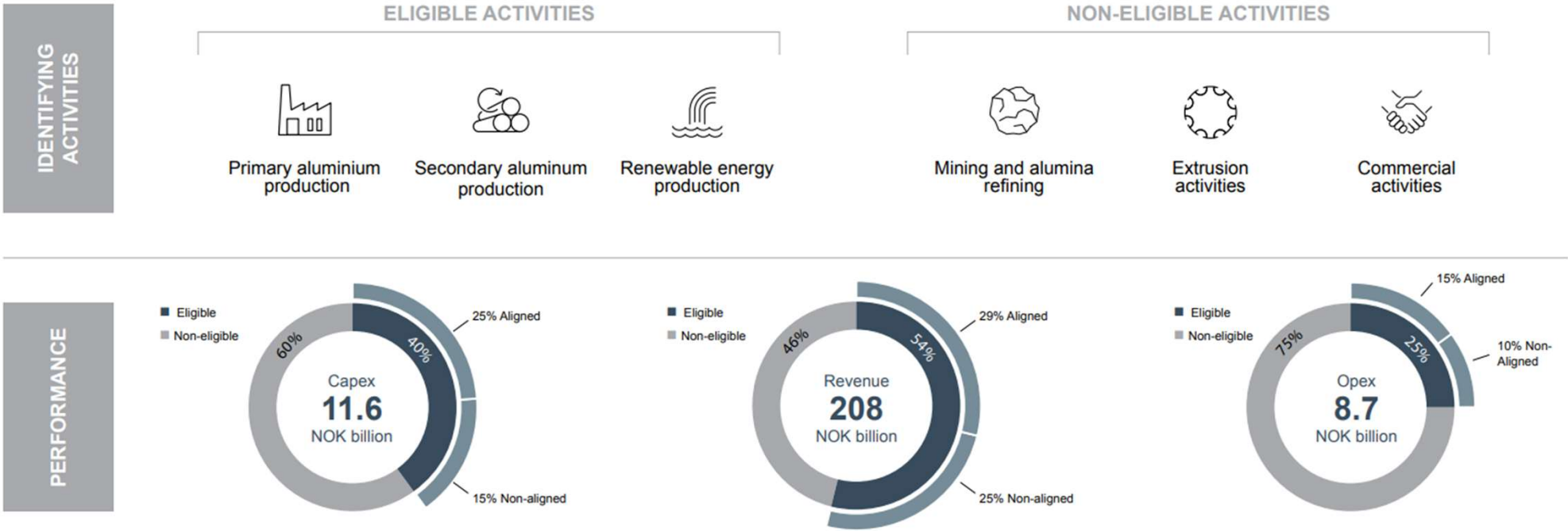


1) Tonnes of CO<sub>2</sub>e per ton of primary aluminium produced, including full value chain emissions. 2) Does not distinguish between post-consumer scrap and process scrap

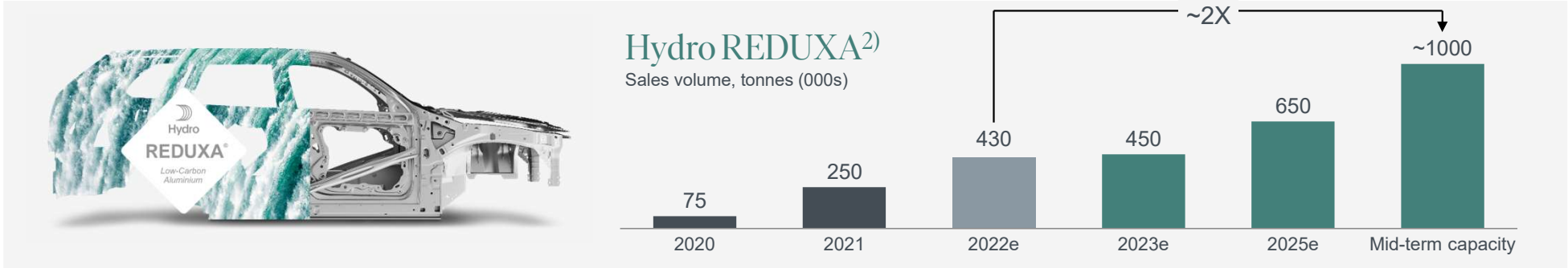
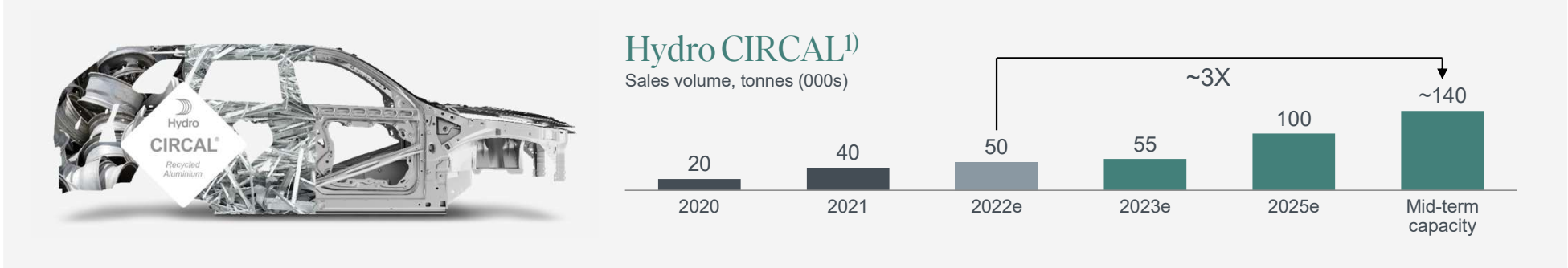
# The EU Taxonomy has the best intentions



But does not always hit the target – particularly outside the EU/EEA



# Ambition to more than double sales of greener products to meet market demand



1) Post-consumer scrap > 75%. 2) Footprint < 4.0

# Social Strategy in Brazil:

## Four key focus areas to support just transition



Education and Skills



Value chain



Biodiversity



Quality of life



### Barcarena

- Ativa Barcarena
- Embarca Amazônia
- Technical School
- FHS - Hydro Sustainability Fund
- Sustainable Connections (FHS)
- Tiptix (FHS)
- Barcarena Sustainable Initiative (IBS)
- Travessia Barcarena
- Todos pelo Trabalho
- Trilhando Caminhos
- Sustentar Barcarena



### Ipixuna do Pará

- Embarca Amazônia



### Belém

- Peace House - TerPaz Guamá
- Peace House - TerPaz Terra Firme
- Peace House - TerPaz Jurunas



### Paragominas

- Embarca Amazônia
- Território do Saber
- Viver Cidadania



### Acará

- Coletivo Florestar
- Embarca Amazônia



### Moju

- Coletivo Florestar
- Embarca Amazônia



### Tomé-Açu

- Coletivo Florestar
- Embarca Amazônia



### All locations

- Human Rights agenda
- Traditional Community agenda
- Social Dialogue
- Volunteering Program



Scan for more details about the projects



## Positive impact in the territory:

80,000 People direct assisted by social programs\*

59,269 People with access to education and training (CEO KPI)

14,000 People benefited by volunteers with more than 70 institutions

1,400 Family farmers from 38 rural communities have received long term technical assistance

650 Public teachers trained to improve municipal education

178 Community leaders part of structured dialogue in IBS

\*Since 2018

# Product qualities and roadmap to zero make aluminium key for green transition

Key **properties** of aluminium match requirements – lightweight, conductive, corrosion resistance



**Infinitely recyclable** with very low energy need and high resource efficiency



Aluminium based on renewables has **lower footprint** than global average



Aluminium has a **clear roadmap** to zero emissions



## Importance of aluminium within key green transition technologies<sup>1</sup>

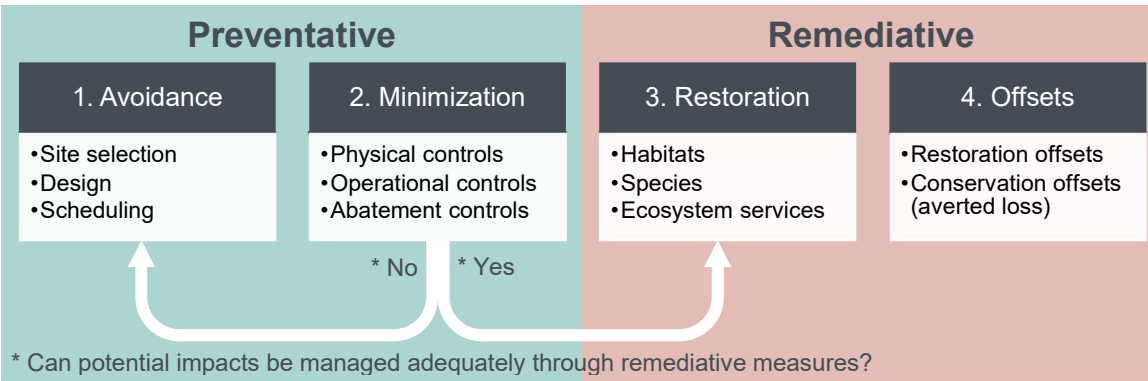
PV		
Electric vehicles		
Wind power		
Electricity networks		
Concentrated solar		
Hydropower		
Bio-energy		
Hydrogen		
Nuclear		
Geo-thermal		

1) [The raw-materials challenge: How the metals and mining sector will be at the core of enabling the energy transition](#) | McKinsey 2022

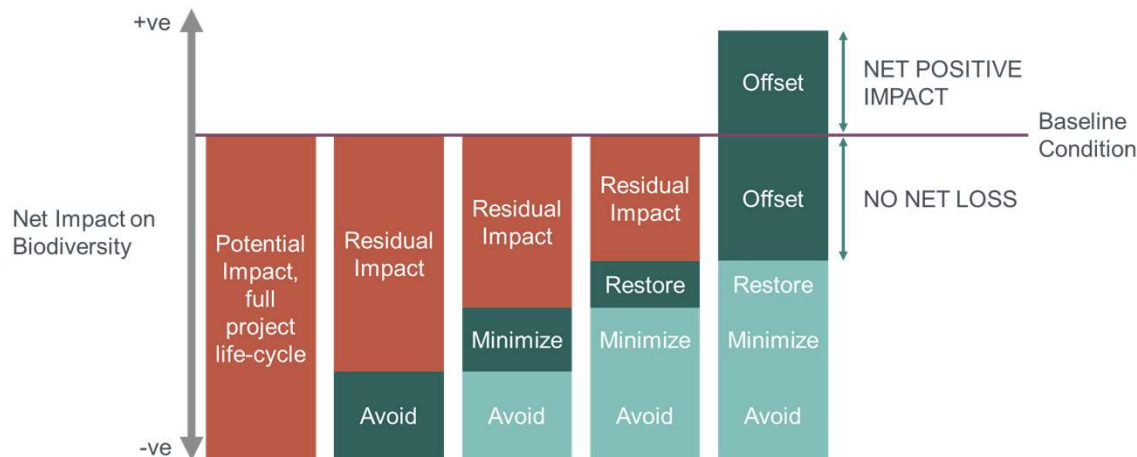
# Biodiversity Mitigation Hierarchy (BMH) Framework



Addressing impacts to biodiversity through a structured, hierarchical framework



- The BMH is a well established framework that defines a series of actions that should be taken to reduce a project’s overall impact to biodiversity, prioritising avoidance measures first.
- To fully mitigate a project’s overall impact may require additional “beyond the fence” actions, known as offsets, to either achieve a **No Net Loss (NNL)** or **Net Positive Impact (NPI)** outcome
- Offsets require extensive resources and careful planning. They need to meet both the legal frameworks and international standards to be accepted as appropriate compensatory measures
- The timeline to achieve a No Net Loss or Net Positive Impact is typically aligned with the project’s lifetime (i.e. closure) or sooner
- According to industry standards, NNL is the more common expectation for **material impacts** to biodiversity in new projects
- For existing projects, defining a historic biodiversity baseline can be challenging
- In these cases, industry practice is to only consider *future impacts* to biodiversity in the scope of their biodiversity commitment (e.g. project expansions) and *discount historical impacts*



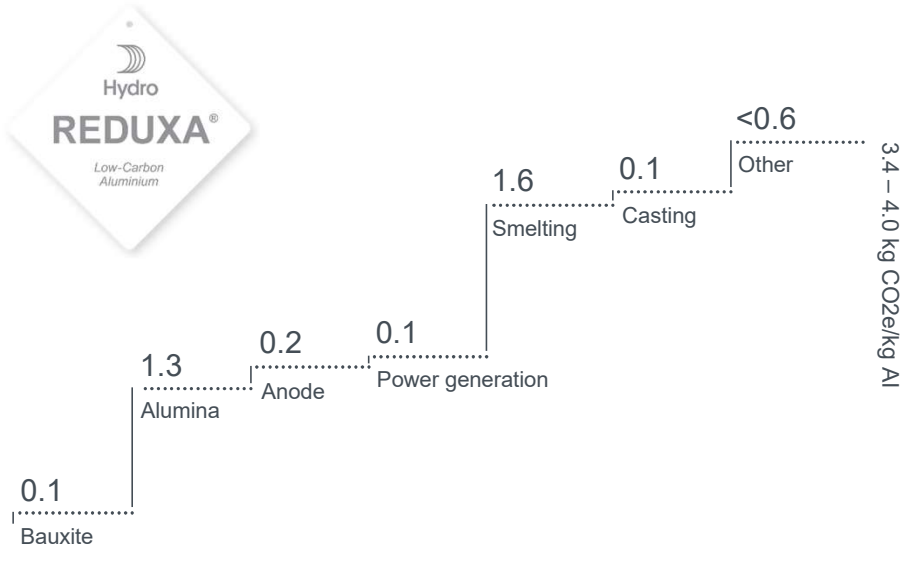
# Greener products: From REDUXA 4.0 to 2.0



New energy mix in Alunorte important enabler to reach 2.0

## From REDUXA 4.0

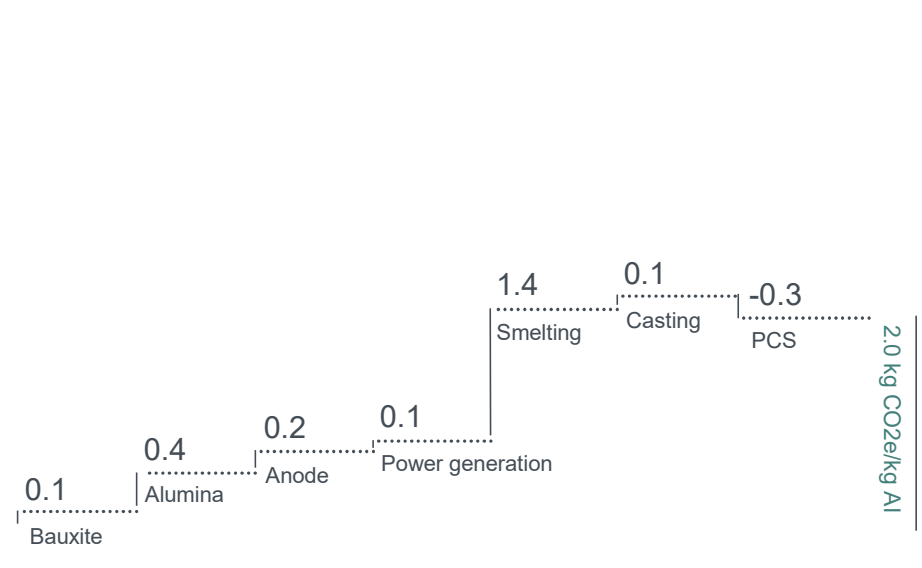
Primary aluminium



Typical production values primary aluminium

## Towards REDUXA 2.0 by 2030

Primary aluminium



Potential production values primary metal