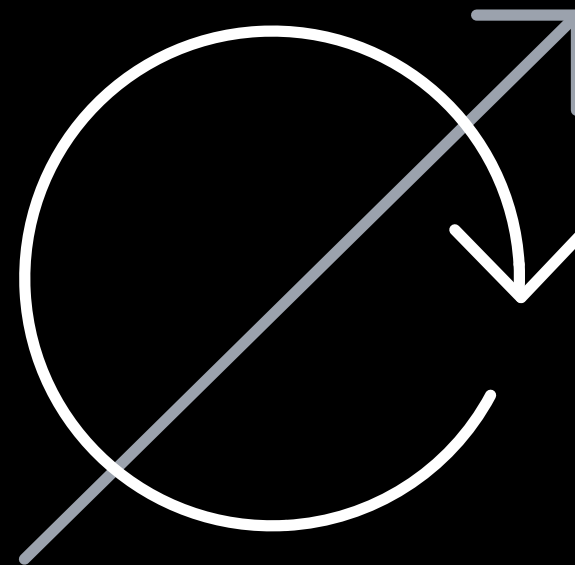




# Capital Markets Day

Lifting profitability, driving sustainability  
Seizing opportunities where capabilities  
match megatrends



Oslo, December 10, 2020

# Cautionary note



Certain statements included in this announcement contain forward-looking information, including, without limitation, information relating to (a) forecasts, projections and estimates, (b) statements of Hydro management concerning plans, objectives and strategies, such as planned expansions, investments, divestments, curtailments or other projects, (c) targeted production volumes and costs, capacities or rates, start-up costs, cost reductions and profit objectives, (d) various expectations about future developments in Hydro's markets, particularly prices, supply and demand and competition, (e) results of operations, (f) margins, (g) growth rates, (h) risk management, and (i) qualified statements such as "expected", "scheduled", "targeted", "planned", "proposed", "intended" or similar.

Although we believe that the expectations reflected in such forward-looking statements are reasonable, these forward-looking statements are based on a number of assumptions and forecasts that, by their nature, involve risk and uncertainty. Various factors could cause our actual results to differ materially from those projected in a forward-looking statement or affect the extent to which a particular projection is realized. Factors that could cause these differences include, but are not limited to: our continued ability to reposition and restructure our upstream and downstream businesses; changes in availability and cost of energy and raw materials; global supply and demand for aluminium and aluminium products; world economic growth, including rates of inflation and industrial production; changes in the relative value of currencies and the value of commodity contracts; trends in Hydro's key markets and competition; and legislative, regulatory and political factors.

No assurance can be given that such expectations will prove to have been correct. Hydro disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

# Agenda

09.00 – 09.05	Welcome
09.05 – 10.25	Hydro
10.25 – 10.40	Break
10.40 – 11.30	Financial priorities
11.30 – 12.00	Q&A





# Profitability and sustainability

- Seizing opportunities where capabilities  
match megatrends

Capital Markets Day, 2020

Hilde Merete Aasheim  
President & CEO

# Lifting profitability, driving sustainability

Recap 2019 ambitions



## Status

- BNOK 7.3 improvement ambition
- Restructuring and strategic review of Rolled Products
- New capital allocation framework
- 10% RoaCE target over the cycle
- Cut CO2 emissions by 30% by 2030

- Delayed / behind schedule
- Slight delay / Slightly behind schedule
- On track / ahead of schedule

10% target is Underlying Return on Average Capital Employed

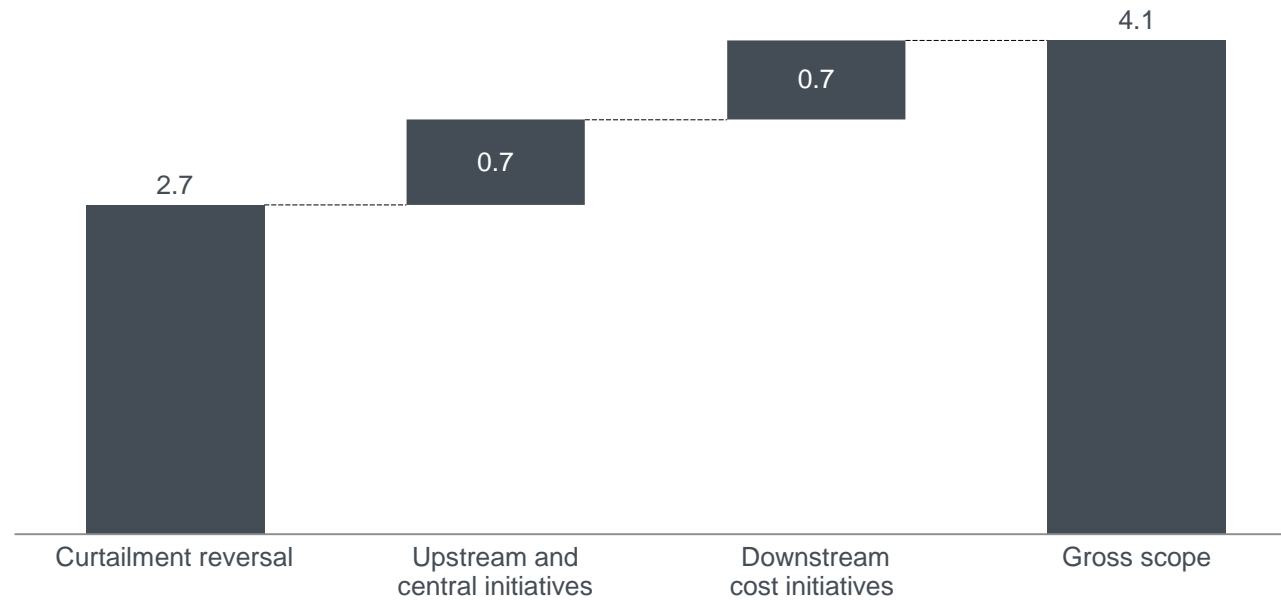
# Achieving 2020 improvement target based on current run rate



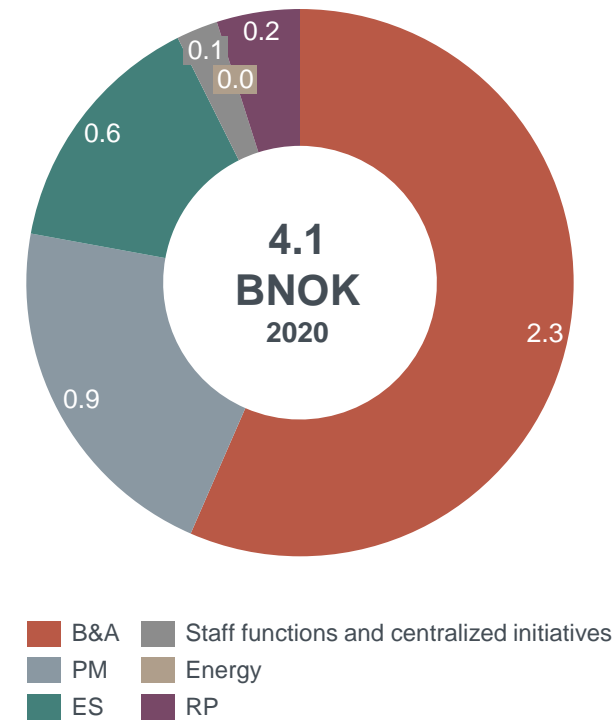
Contributing to 10% over the cycle RoaCE target

## Planned improvements – 2020<sup>1)</sup>

In NOK billion



## Planned improvements 2020 – by business area



1) Aggregate of 2019 and 2020, compared to 2018 baseline





# Increased robustness of operations in Brazil

## Increased robustness of B&A operations

- Embargo lifted in September 2019
- Investments to strengthen water treatment system increasing robustness during heavy rainfall
- Increased maintenance and strengthened asset integrity - focus on critical equipment and pipeline
- New press filter technology working well, the most effective available technology for managing and storing bauxite residue
- Q4 production expected to be around 90% of nameplate capacity

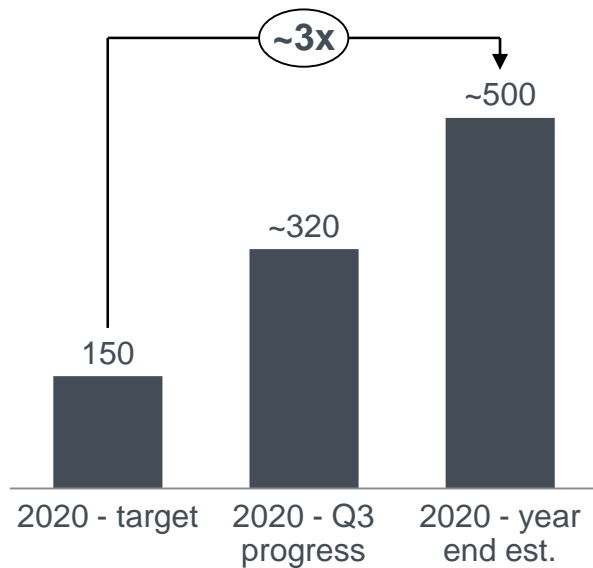
## Strengthened community relationship

- Donated nearly 15 million BRL to support communities through Covid-19
- Social programs and initiatives have strengthened capabilities of more than 16,000 people across 7 municipalities as of 2019, contributing to our 500,000 educate and empower target

# Rolled Products delivering cost improvements ahead of original target and schedule

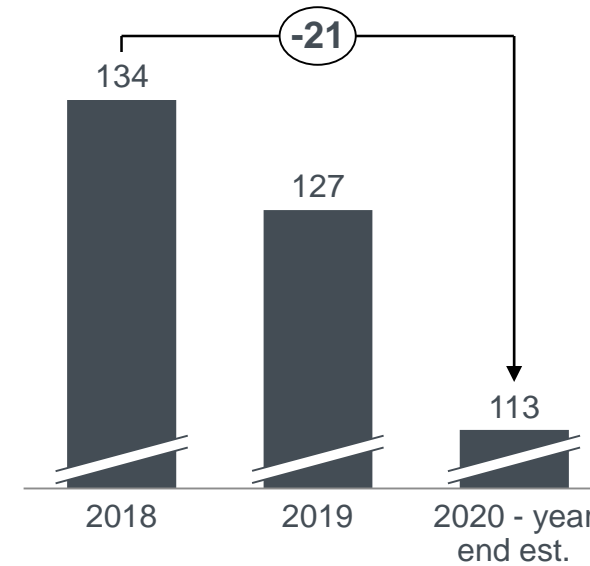


2020 improvement program – Rolled Products<sup>1)</sup>  
MNOK



- Organizational rightsizing
- Procurement
- Metal cost optimization

2020 improvement program – Rolled Products  
Inventory Days



- Inventory reduction on track
- Reduction of 20 inventory days from 2018 to YE 2020
- From metal neutral perspective, equivalent to over BNOK 1.1 in inventory

Strategic review ongoing

1) Compared to 2018 baseline

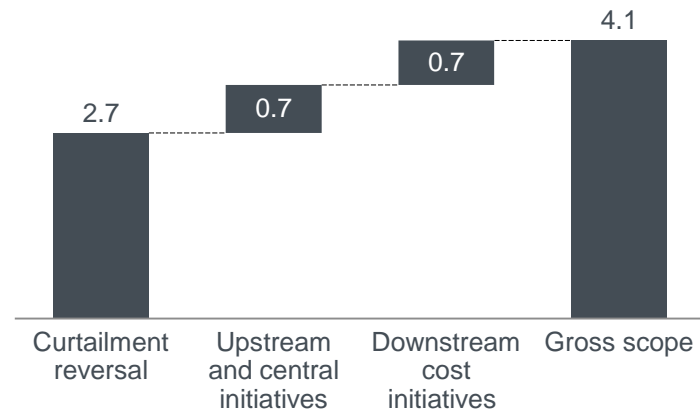


# Significant cash preservation in 2020



Fast response to Covid-19

## Cost improvement program (2020)<sup>1)</sup> Incl reversal of curtailments



- Additional short-term measures reduced costs in response to Covid-19 e.g. furloughs, curtailments, SG&A cuts

**~4.1 BNOK**

2020 vs 2018

## Net operating capital release

- Working capital release at Q3 of BNOK 6.4 since YE2018
- Strong inventory management throughout 2020
- Release supported by tailwinds on price and volumes

**~6.4 BNOK**

Release since YE2018

## Reduced CAPEX spend

- 25% CAPEX freeze in 2020 in response to Covid-19
- Continued evaluation of measures to reduce sustaining capex to larger extent

NOK billion



**~2.5 – 3.0 BNOK**

2020 actual versus 2020 planned <sup>2)</sup>

1) Aggregate of 2019 and 2020, compared to 2018 baseline 2) CAPEX estimate from CMD 2019 updated after Covid and subsequently will be realized at a lower rate for 2020E

# Sustainability: Progress across key areas



The basis for our future positioning



Social responsibility



Environment



Climate



Sustainability in the marketplace: our greener products portfolio



# Delivering on environmental ambition

Special focus on Brazil

## Tailings dry backfill

- Industry pioneering project eliminating the need for new large dams for storage of bauxite tailings

## 1:1 rehabilitation of available mined out areas

- On track with respect to target of rehabilitating available areas within two years of initial mining

Bauxite residue management – target of 10% utilization from 2030

- Ongoing studies on bauxite residue alternative uses



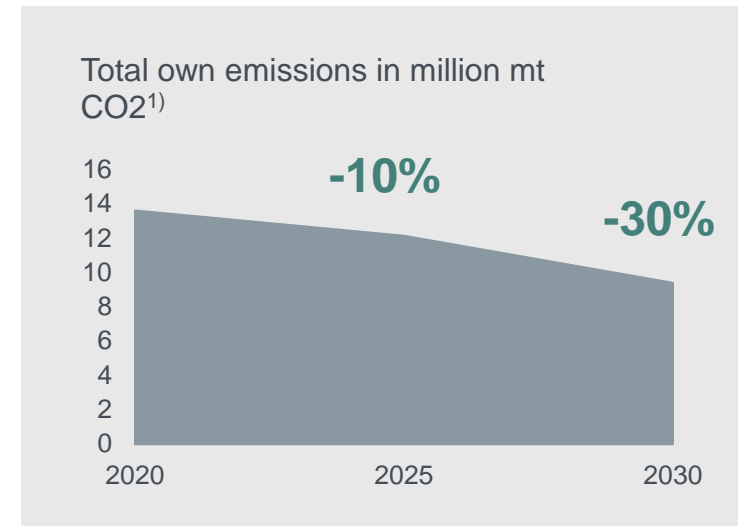
# On track to deliver our 2030 climate ambition



Goal to also reduce CO2 emissions by 10% by 2025

Greener energy mix at Alunorte key enabler for the 30% reduction by 2030

- Fuel switch project replacing heavy fuel oil with liquid natural gas
  - Project on track to reduce 600 thousand tonnes CO2 by 2025
- Installation of three electrical boilers
  - Potential to reduce additional 400 thousand tonnes CO2 by 2025
  - Pilot installation planned in 2021
- Electrification of remaining coal boilers
  - Additional 2 million tonnes CO2 reduction by 2030
  - Key enabler of 30% reduction target
- MoUs signed to develop solar/wind projects to deliver renewable energy at attractive cost



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

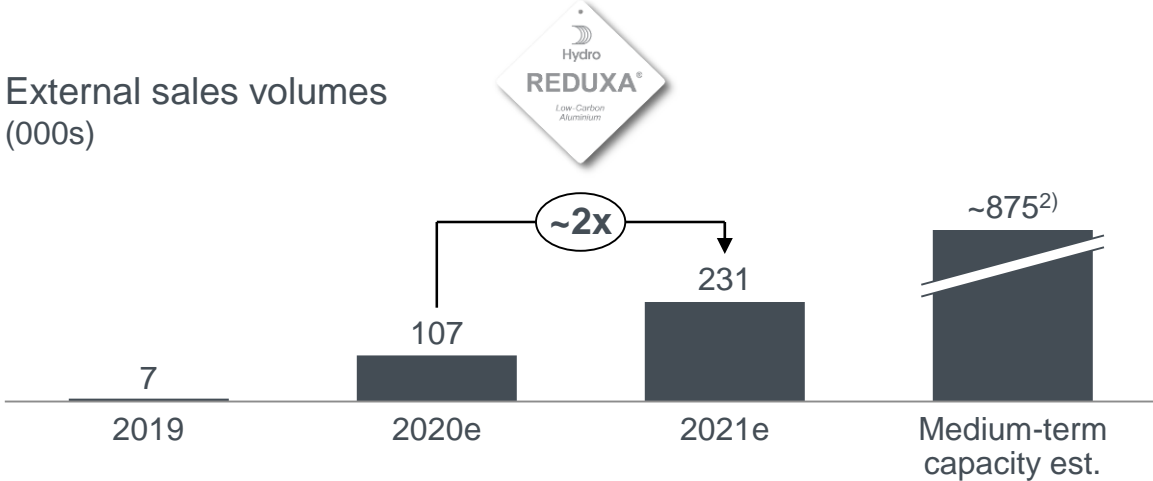
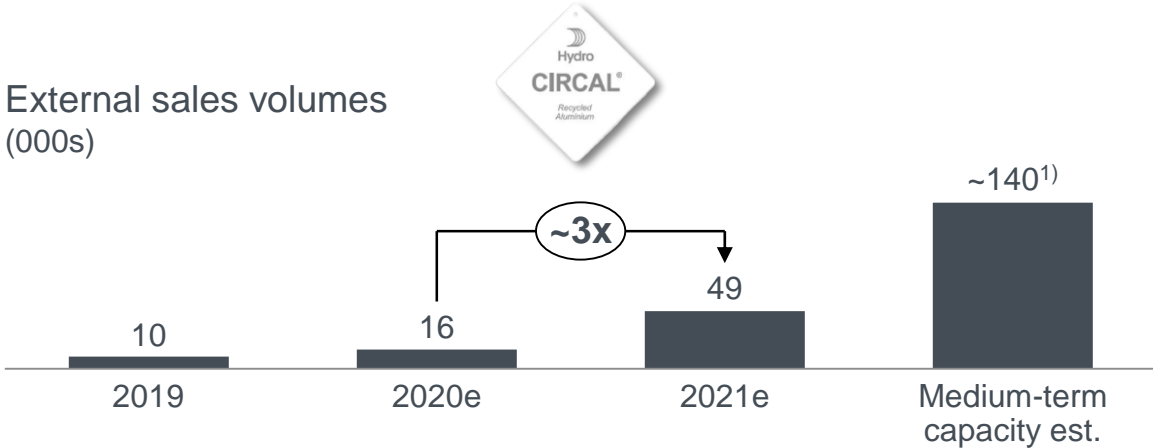
Exploring different paths

- Carbon Capture and Storage
- Carbon Capture and Utilization
- Biocarbon anodes
- Carbon-free process

1) Based on 2018 portfolio



# Strong demand for greener products



1) Capacity level require upgrades and investments in primary remelters; Some upgrades will be dependent on market conditions  
 2) Norwegian smelter portfolio currently Hydro REDUXA certified

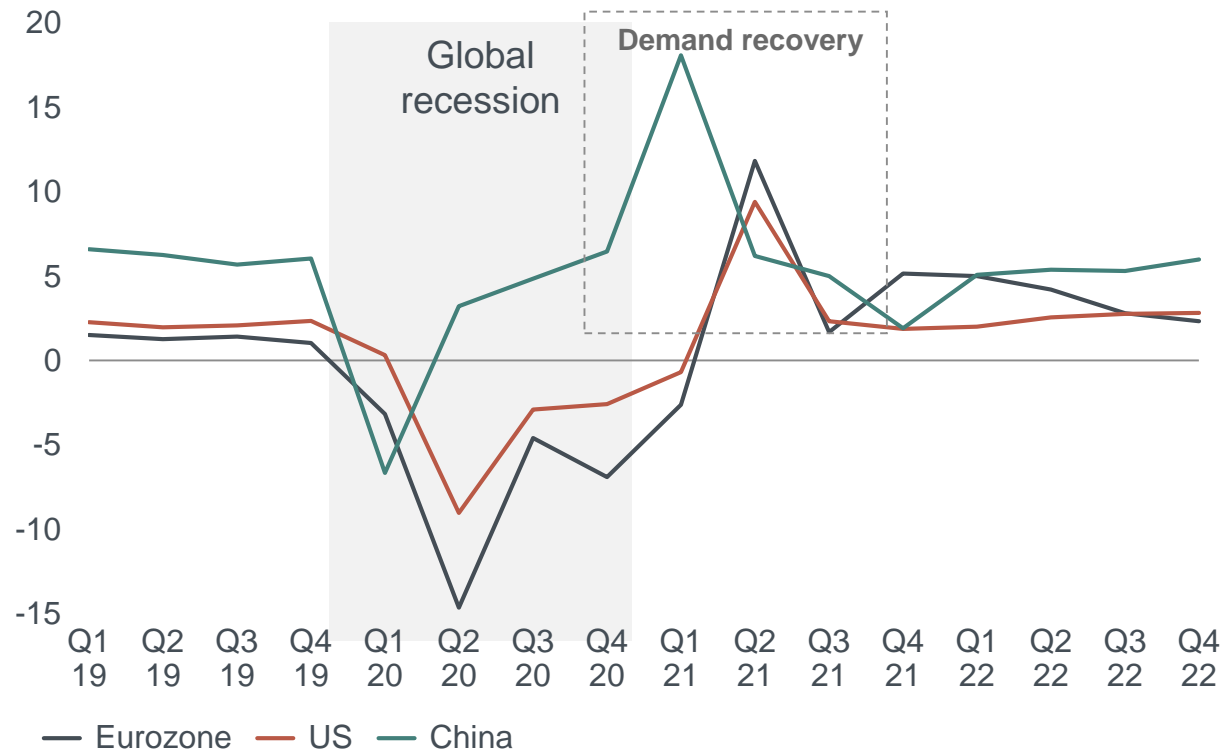


# Hydro 2025

# Recovery in China positively impacts outlook for aluminium

Pre-covid GDP growth levels expected to return in 2021

% Quarterly GDP growth y-o-y

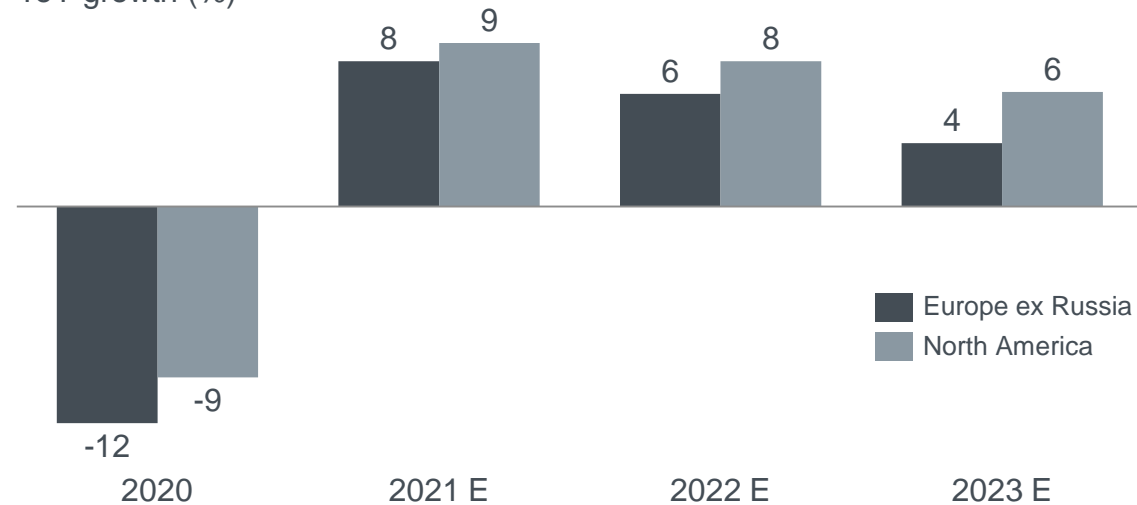


- Improved outlook for aluminium on Chinese recovery and Covid-19 vaccine prospects
- Auto sales are nearing or exceeding pre-Covid levels in US, Europe and China though trending somewhat downward in recent months, while Building & Construction segment less directly impacted by Covid
- Robust demand has been the main driver behind the higher SHFE and LME, and demand is expected to remain across most end use categories in China

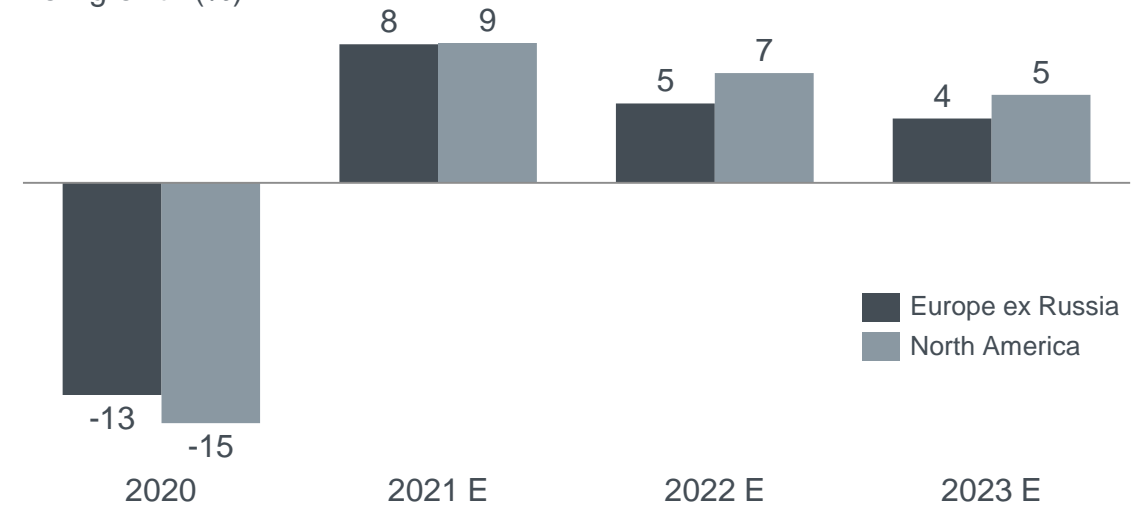
# Downstream demand rebounding in 2021



General Rolled Products demand  
YoY growth (%)



General Extrusion demand  
YoY growth (%)



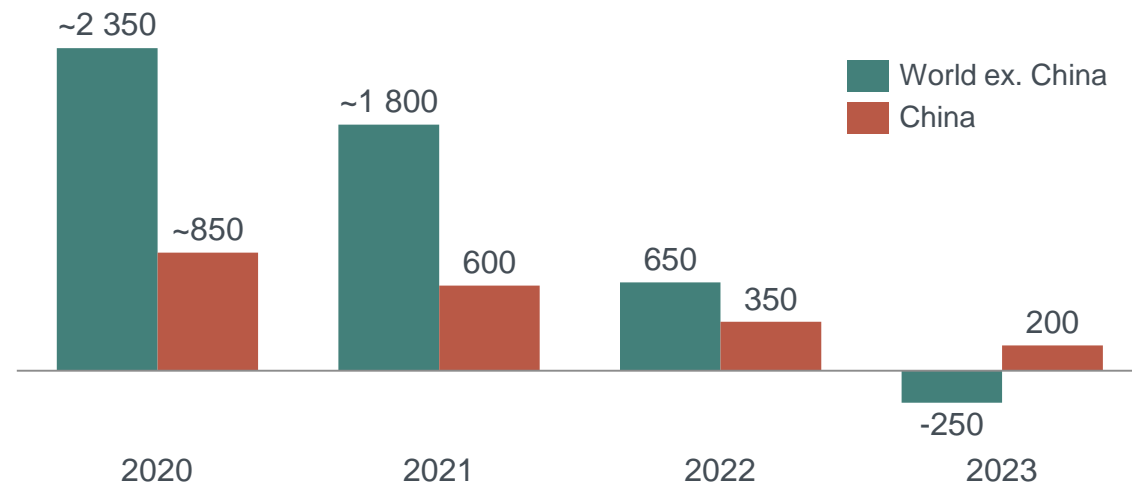
- Strong rebound of industrial demand across segments
- Solid recovery in auto demand supported by E-mobility
- Lifted travel restrictions to drive beverage can consumption

- Improving macro development; rising industrial production positively impacting overall demand for extrusions
- Recovery in auto build rates combined with increased aluminium content increasing demand in automotive
- B&C relatively less volatile than other segments



# Upstream demand expectations improving, however oversupply expected to remain in 2021

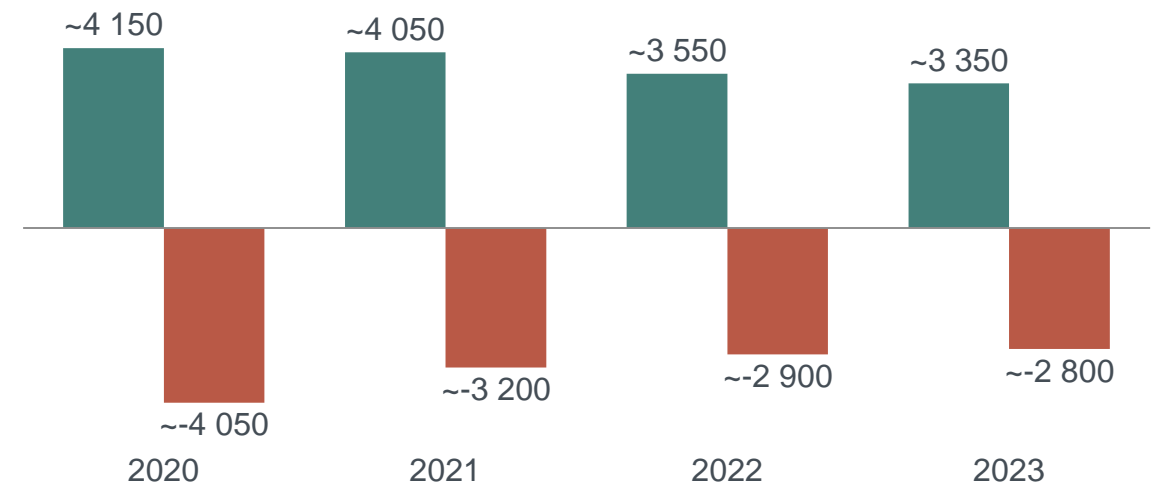
Primary aluminium global balance development  
000 tons<sup>1)</sup>



- Downward revision of surplus forecast supportive of aluminium prices
- High prices reducing pressure to curtail smelters
- Chinese surplus fueled by production expansions

<sup>1)</sup> Figures rounded to nearest 50  
Source: CRU

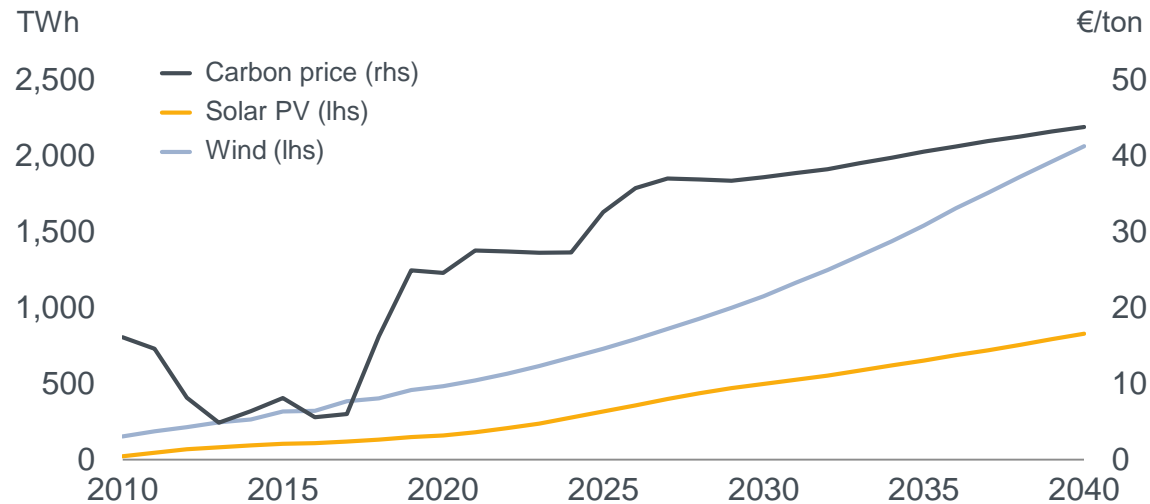
Alumina balance development  
000 tons<sup>1)</sup>



- Relatively stable alumina market balance going forward
- Alumina supply growth in India and Indonesia expected to match smelter production increase in World ex-China
- Alumina capacity growth in Southern China, away from traditional production hubs in Shanxi, Henan & Shandong
- Bauxite market remains oversupplied

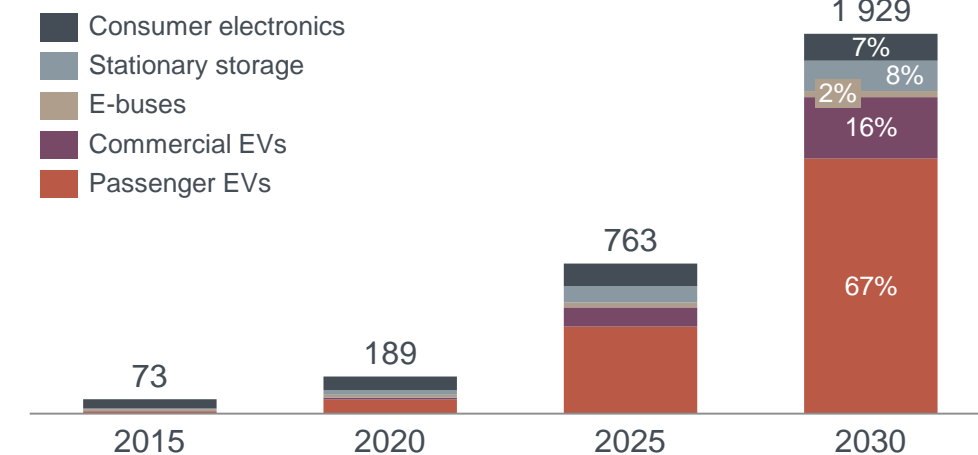
# Energy market development driven by electrification and decarbonization

European solar, wind and CO2 price projections



- European emission reduction targets set to increase as part of EU Green Deal (from 40% to 55% reduction by 2030)
- Solar PV and onshore wind generation capacity continues to increase across EU member states after somewhat slower 2020 due to covid-19 effects

European battery development per segment GWh



- Electrification of transport drives battery demand, automotive as fastest growing sector
- Sustainability and security of supply concerns result in political will to facilitate build-up of value chains for battery supply to own markets



# Political and regulatory trends support greener aluminium

## EU competitiveness

- Green Deal: Ambitious climate targets
- Aluminium defined as key strategic raw material
- Carbon leakage measures
- Sustainable product policy and finance to guide investors

## Trade tensions

- Protectionism and trade barriers
- Anti-dumping measures in Europe
- US trade tariffs hitting aluminium sheets

V

- Duties enforced against Chinese imports in October
- Improved CO2 compensation expected for Norwegian portfolio
- Strict sustainable finance taxonomy criteria but several Hydro activities compliant
- Low-carbon and circular products promoted in policies

# Global megatrends in our favor

Shaping consumer behavior and demand



## Sustainability

- Decarbonization
- Circular economy



## Electrification

- Energy transition
- E-mobility



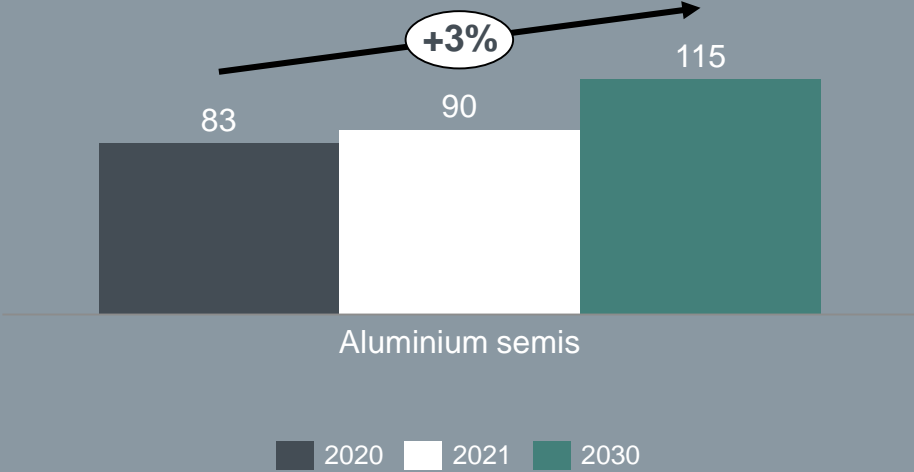
## Urbanization

- Smart housing
- Infrastructure

Source: CRU



Aluminium demand tonnes millions





# Hydro's capabilities matching megatrends



Competence,  
technology and  
innovation



Leading market  
positions and  
customer  
partnerships



Sustainability  
position





# Hydro's strategic direction toward 2025



Seizing opportunities where our capabilities match megatrends

## I Strengthen position in low-carbon aluminium



## II Diversify and grow in recycling and new energy



Profitability & Sustainability

# Strengthening position in low-carbon aluminium



## Main priorities

### 1 Cost-competitive asset base



- Safety, compliance and operational excellence
- 1<sup>st</sup> and 2<sup>nd</sup> quartile cost in B&A and PM
- Secure competitive power and raw materials
- Fixed cost

### 2 Strong market positions



- Deliver innovative solutions, build on strong customer collaboration
- Grow in automotive and e-mobility solutions
- Further explore substitution potential

### 3 Sustainable footprint



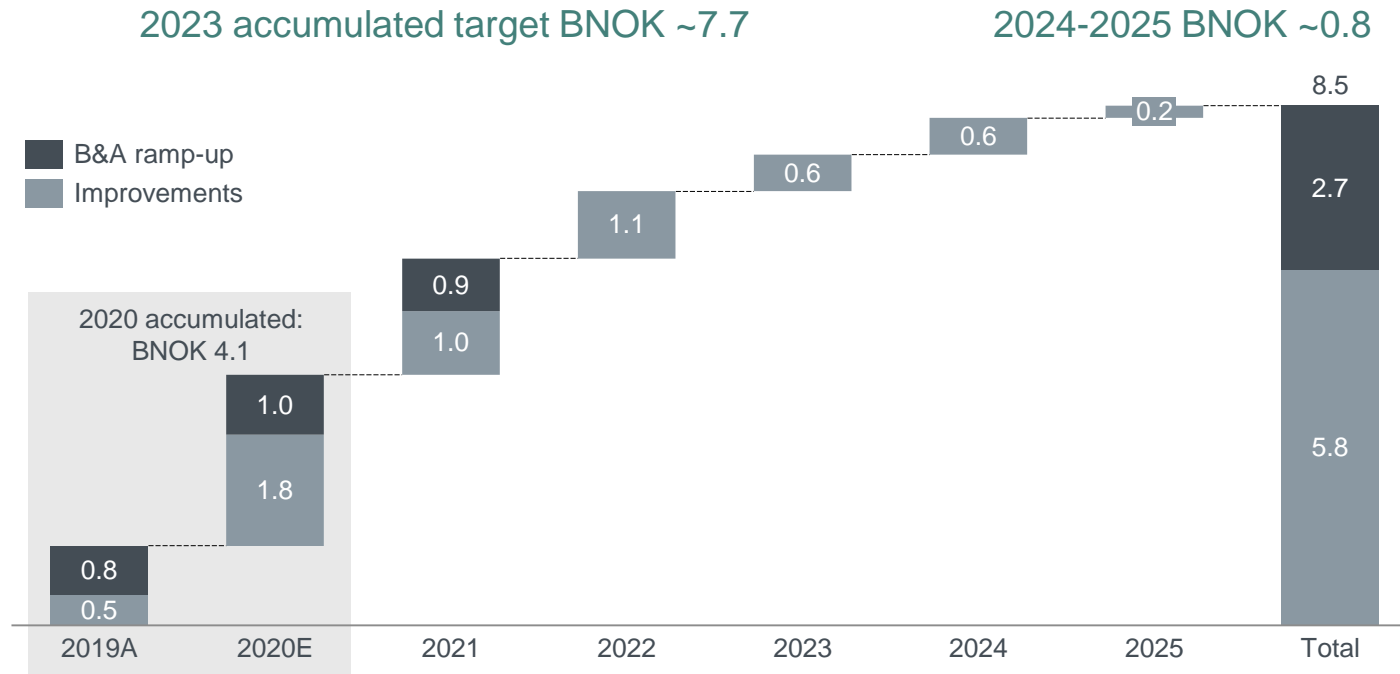
- Source renewable based power
- Innovation driving expanded product offering of CIRCAL and REDUXA
- Increase recycling



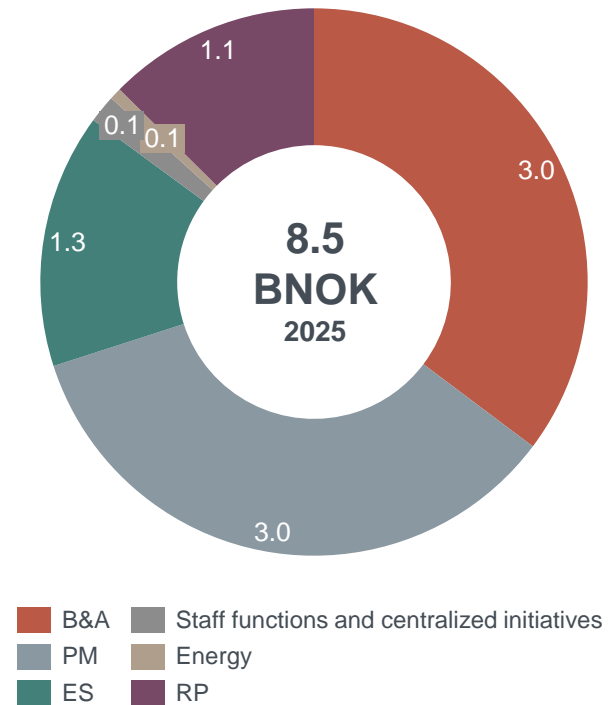
# Extended improvement program: target BNOK 8.5 in EBITDA improvements by 2025

Front loaded program with ~70% to be realized by end 2021

2025 accumulated improvement potential by year<sup>1,2)</sup>  
NOK billion



Planned improvements 2025  
– by business area<sup>3)</sup>



1) Alunorte and Paragominas ramp-up to full nameplate capacity 2) 2025 EBITDA target excludes ca 0.2 BNOK in depreciation, mainly in PM 3) F4F and procurement improvements reflected in business area improvement targets – no longer in staff as in previous program

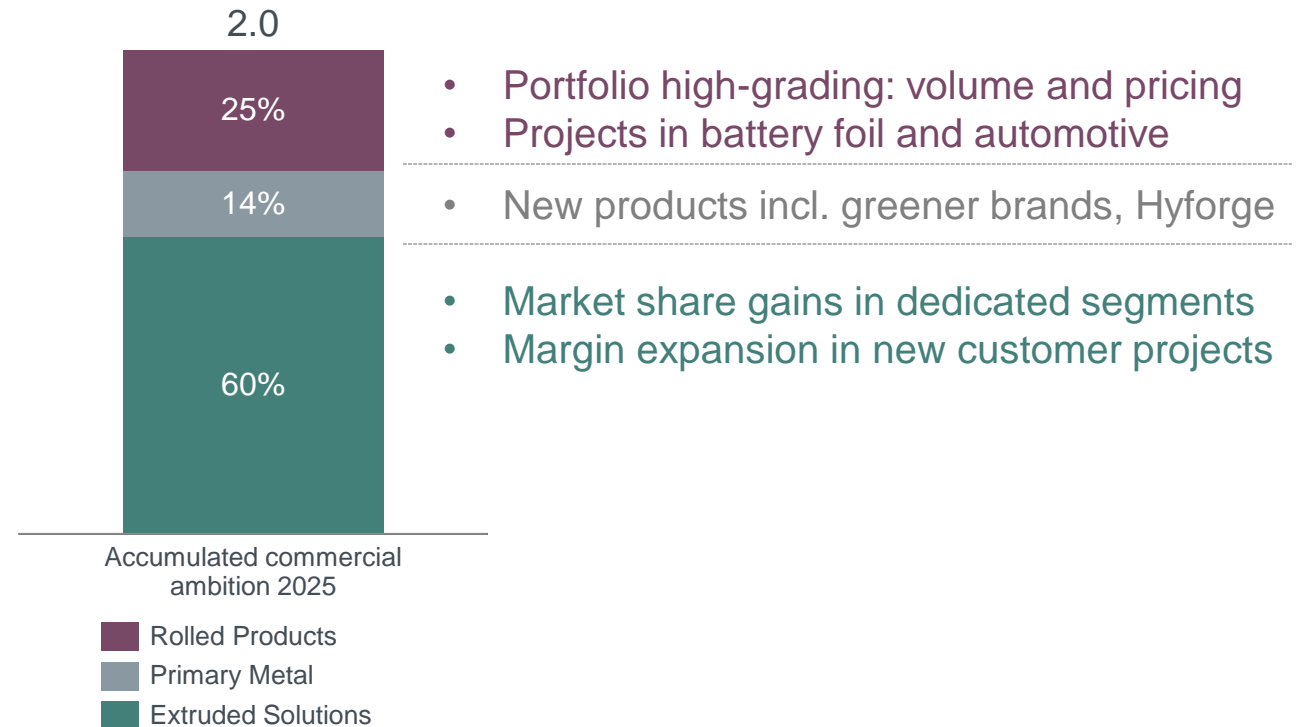


# Additional commercial ambition: EBITDA potential BNOK 2.0 by 2025

- Pursuing market and customer-driven growth opportunities within current portfolio
  - Pricing and share of the wallet
  - Upgrading and developing product portfolio
  - Customer-driven incremental growth
- The Commercial program is dependent on market conditions

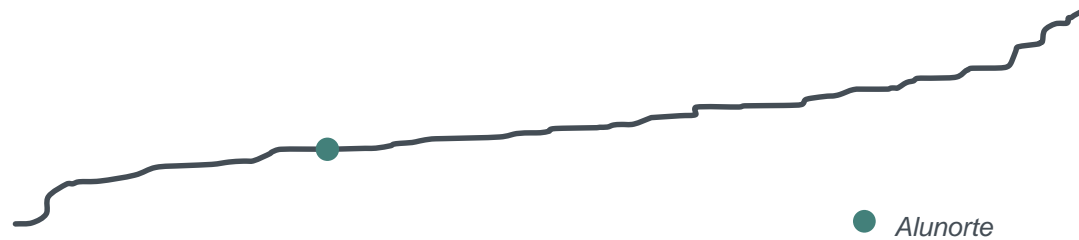


Commercial EBITDA ambition by 2025  
NOK billion



# Bauxite & Alumina maintaining first quartile cost curve position and reaching sustainability goals

Alumina Business Operating Cost curve (2020)



- Competitively positioned on the global cost curve despite lower output because of unexpected maintenance on pipeline between Paragominas and Alunorte
- Implied alumina costs coming down in 2020 vs 2019
  - Reduction in raw material input costs
  - Increased Alunorte production
  - Lower alumina sourcing costs

Bauxite & Alumina - 2025 ambition

## Maintain first quartile cost position

BNOK ~3.0 in EBITDA effect from cost and operational improvements by 2025<sup>1)</sup>

Robust operations enabling curtailment reversal and ramp up<sup>2)</sup>  
Improved energy efficiency (energy mix, reduced consumption, fuel switch)

## Safer and more sustainable refining and mining

1 million tonne CO<sub>2</sub> reduction from fuel switch (600kt) and electrical boilers (400kt) by 2025

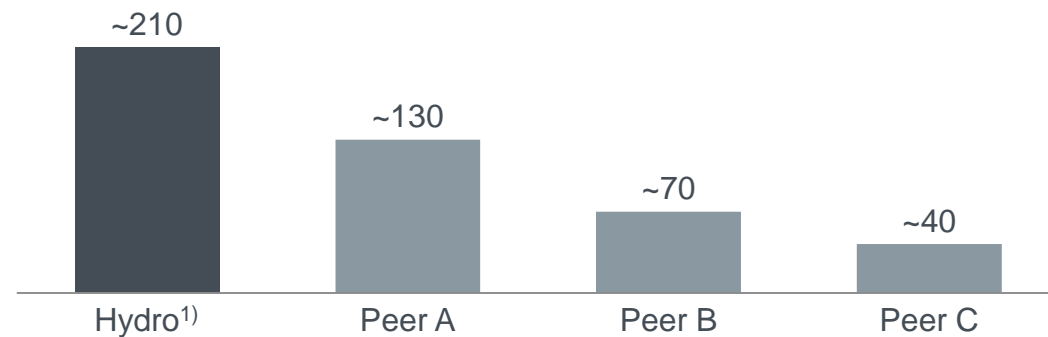
1:1 rehabilitation of available areas

1) Based on 2018 baseline 2) EBITDA impact part of BNOK 3.0 improvement program  
Source: CRU cost model

# Primary Metal lowering costs and strengthening position as a low carbon producer



PM EBITDA per ton (1 year avg. from Q2 2020 last 12 mo.)<sup>2)</sup>  
NOK (000s)



- Position improved over the last quarters due to improvement program and supported by a weaker NOK
- Hydro has over the last years consistently remained among the top performers in the industry

## Primary Metal - 2025 ambition

### Strengthening cost position and maximizing value from value-added product sales

BNOK ~3.0 EBITDA impact from cost, operational improvements, and Husnes line B by 2025

Additional BNOK ~0.3 commercial improvement-driven by green and differentiated product sales and optimizing flow

### Commercializing greener

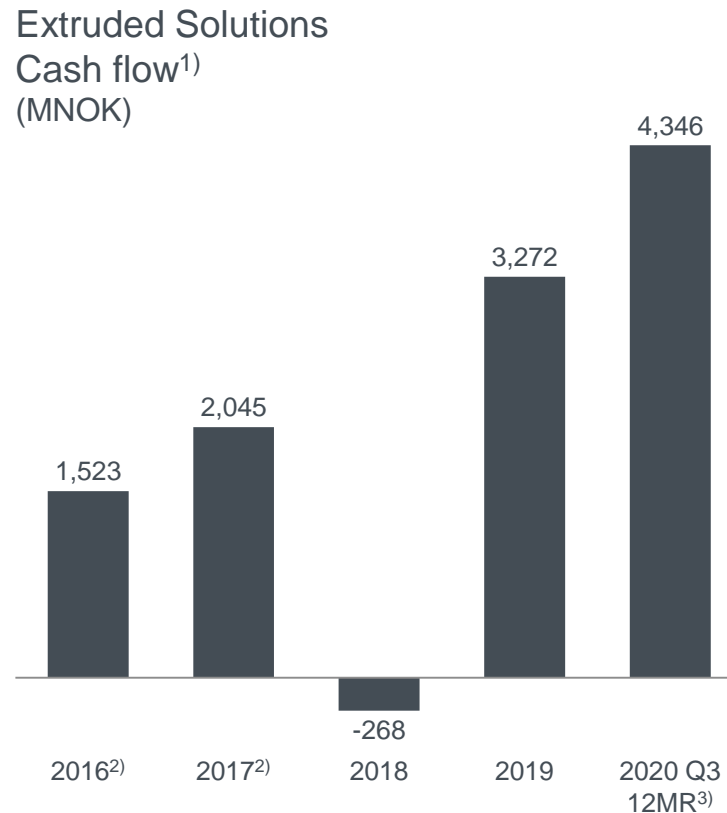
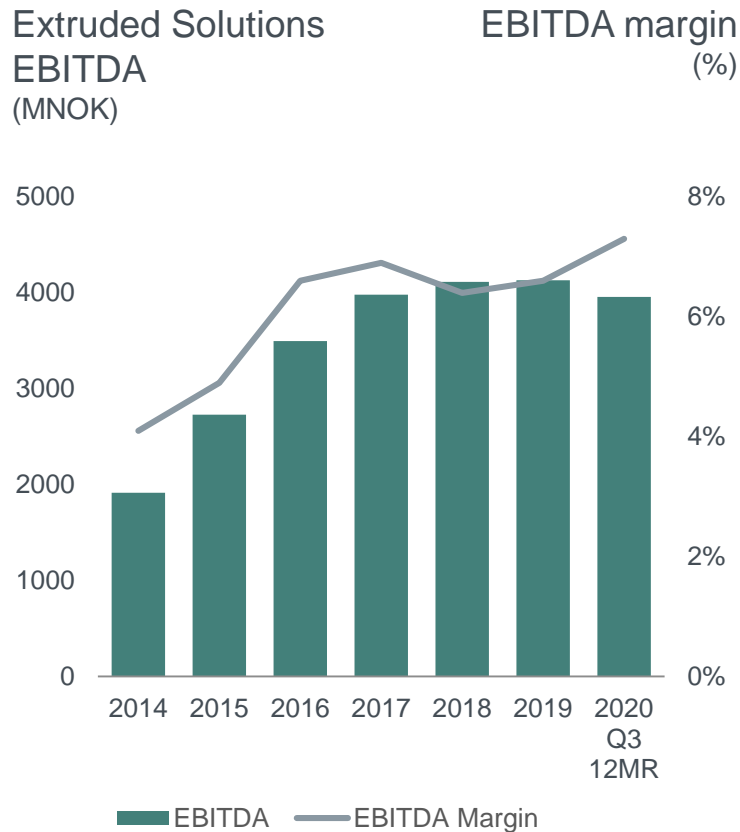
Global leadership in low carbon products – 400kt REDUXA sales, ~85 kt CIRCAL sales

Increase post consumer scrap consumption by ~50%

1) Includes Hydro PM and MM

2) 2) Include from Q2 since not all peers providing quarterly financial reports  
Source: Hydro analysis; Peers include Alcoa, Rusal and Century

# Extruded Solutions has delivered growth in margin and cash flow, however negatively impacted in 2020 by Covid-19



## 2013 - 2017

- Realizing synergies in Joint Venture
- Restructuring activities
- Gradually improving extrusion markets

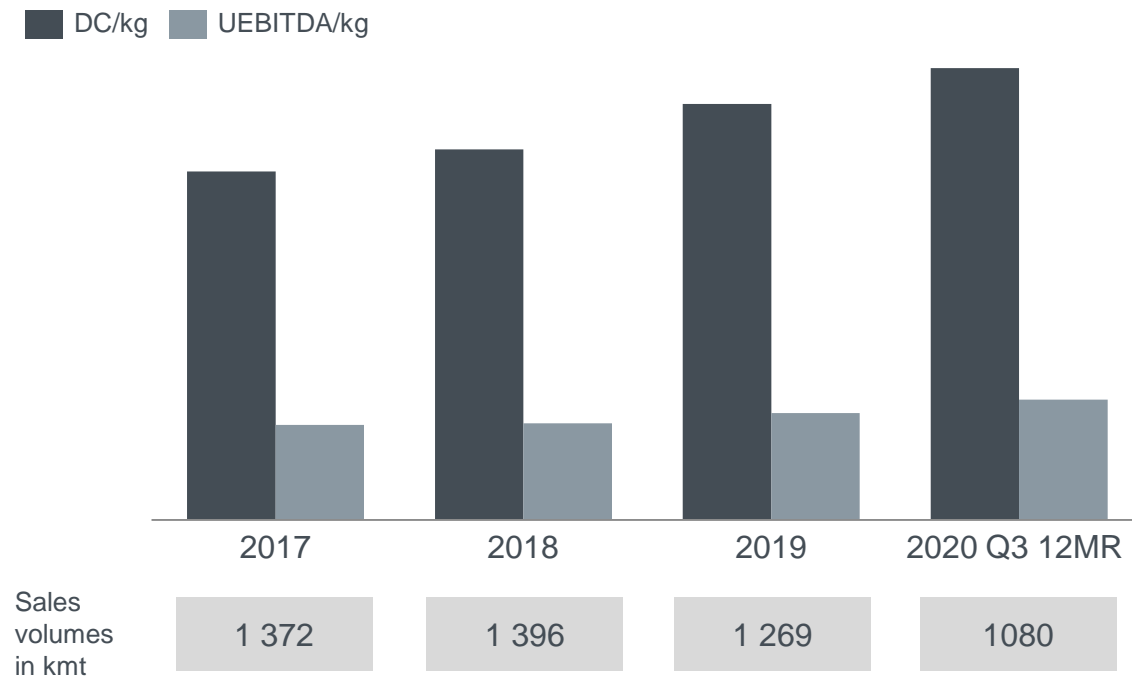
## 2018 - 2020

- Cash-flow in 2018 impacted by net working capital and investments
- EBITDA impacted by external events
  - 2019: Cyber-attack
  - 2020: Covid-19

1) EBITDA plus or minus the changes of NOC less the investments (CAPEX or others)  
 2) Sapa figures: operating free cash flow  
 3) Based on solid cash flow in Q4 2019 linked to NOC release; will be relatively less in Q4 2020 due to less NOC effect

# Restructuring efforts in the past year has strengthened cost position

Rising Direct Contribution<sup>1)</sup> and UEBITDA per kg  
NOK per kg



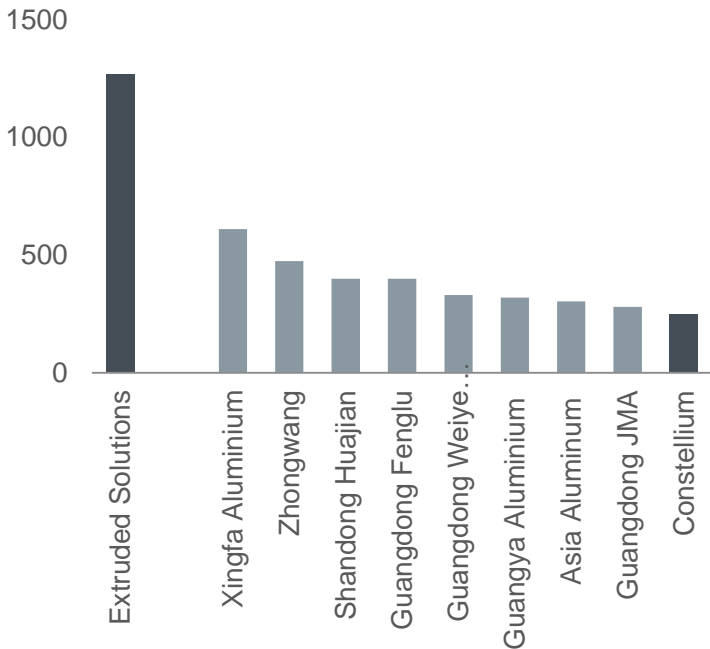
- Significant restructuring measures taken to support performance and cash generation
  - Closure of 10 plants during 2019 and 2020
  - Divestment of four plants
  - De-manning of 1300 (~6%) employees in addition to divestments
- ES 5.0 project targeting SG&A cost reductions
- Dedicated improvement program in procurement

1) Direct Contribution (DC) calculated as operating revenues less cost of material, freight out, process variable costs and direct labour costs

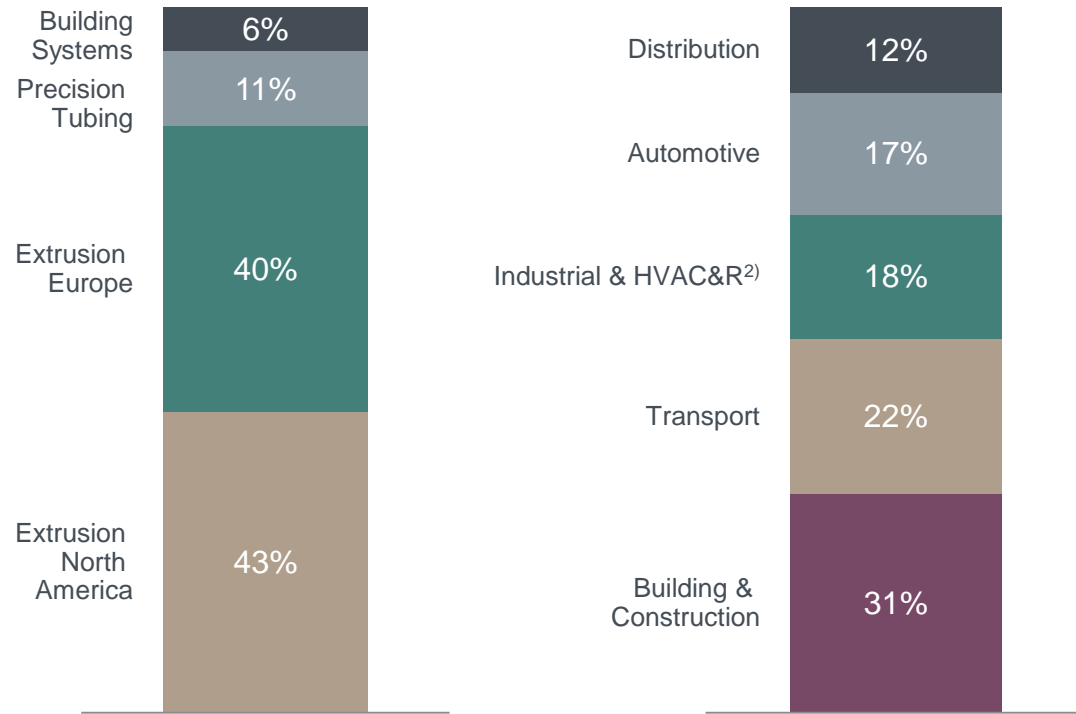


# Unrivalled position as the largest extrusion provider globally with a strong and diversified segment footprint

Unrivalled position as #1 extrusions provider globally  
 Extrusion sales volume (2019), tonnes (000s)



Four distinct Business Units, all with strong segment presence  
 Total volume 2019: 1.27 mill tonnes<sup>1)</sup>



Source: Company filings, CRU  
 1) 12M rolling volume development YTD 2020: ~1.1 million tonnes  
 2) HVAC&R: Heat, ventilation, air condition & refrigeration

# Extruded Solutions leading the industry, well positioned in attractive markets including automotive

## Background

### Automotive an attractive segment

- Trend towards lighter cars and more environmentally friendly solutions
- Attractive margins from development of unique solutions in partnership with customers

### Extruded Solutions competitively positioned

- Innovative solutions based on R&D capabilities
- Strong and well-developed supply chain and global footprint
- Unique product offerings and close customer relationships
- Annual volumes of ~200 k tonnes (17% of total)

## Examples of strategic positioning

### Extrusion North America

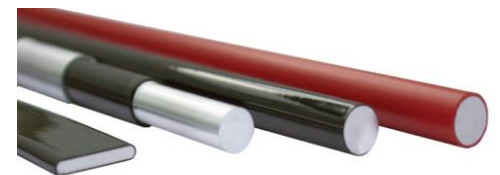
- Improvements in capability and capacity with Cressona & Phoenix, both high performance press investments
- Targeted approach to grow by focusing on e-mobility, body-in-white (BIW), structural and ABS segments

### Extrusion Europe

- Investments made in fabrication recent years enabling strong position within e-mobility
- Cross-plant collaboration through Automotive platform to streamline deliveries

### Precision Tubing

- New low- and high-voltage line cables for e-mobility; contracts closed with several OEM's
- New products using precision tubing material science competence for automotive and e-mobility



Aluminium battery cable  
Significant advantages in material, weight and cost

# A market leader in Commercial Transport, driving sustainability in Building Systems



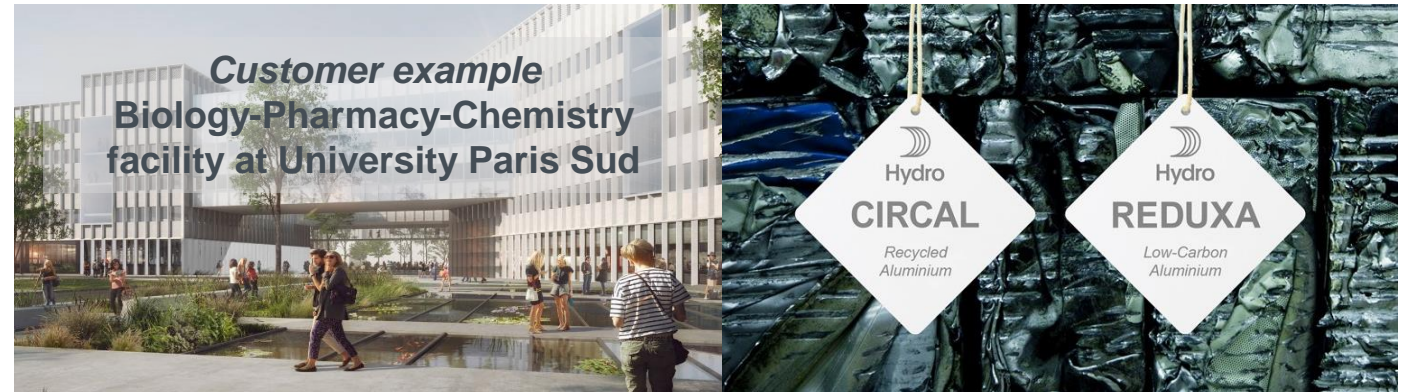
## Commercial Transport

- Market leader in delivering extruded solutions to the Commercial Transport segment in North America
  - Strong collaboration in network of plants
- Total sales for Extruded Solutions at ~265 ktpy<sup>1)</sup>
  - Weaker sales during Covid-19, but improving orders into 2021
- Strategic focus to further improve market share and grow trailer content through innovative applications and downstream service content



## Hydro Building Systems

- Dedicated Building Systems unit serving customers globally, collaborating closely with building developers and architects
- Since January 2020, all Building Systems premium product ranges manufactured in Europe are made of Hydro CIRCAL or Hydro REDUXA
- 110 000 tons CO<sub>2</sub> reduced with Hydro CIRCAL volumes compared to using standard aluminium consumed in Europe<sup>2)</sup>



1) 2019 volumes

2) Based on estimated CIRCAL volumes of 17.500 tonnes in 2020 (CIRCAL CO<sub>2</sub>/kg Alu at 2.3 versus European average: 8.6 kg CO<sub>2</sub>/kg Alu)

# Further improvements expected from productivity, plant specialization and a greener product offering

## Core targets and ambitions for 2025

### Improvement target

**NOK 1.3 billion in EBITDA improvement from dedicated improvement programs<sup>1)</sup>**

ES 5.0 – SG&A reductions

Portfolio restructuring

Procurement

### Commercial ambition

**NOK 1.2 billion improvement from margin expansions in new projects**

Stronger segment focus to drive growth

Market share gains in dedicated segments

Specialized product offerings

## Extruded Solutions strategic focus



Restructuring

- Closure and divestiture of plants with unsatisfactory returns or without strategic fit to target segments and specialization
- Driver of current cost structure and future cost savings



Plant specialization

- Enhance production platforms in attractive segments e.g. Automotive in Europe and North America, specializations in building systems
- Commercial and strategic benefits from strong market segment focus



EBS

- Increase focus on productivity and continuous improvements
- Ambition to “beat inflation” through clear savings and productivity targets within plants



Recycling

- Build on unique network of recyclers to leverage availability of post consumer scrap



Green products

- Capture rising demand for low carbon aluminium
- Strong combination with ASI certifications



# Diversifying and growing into new areas



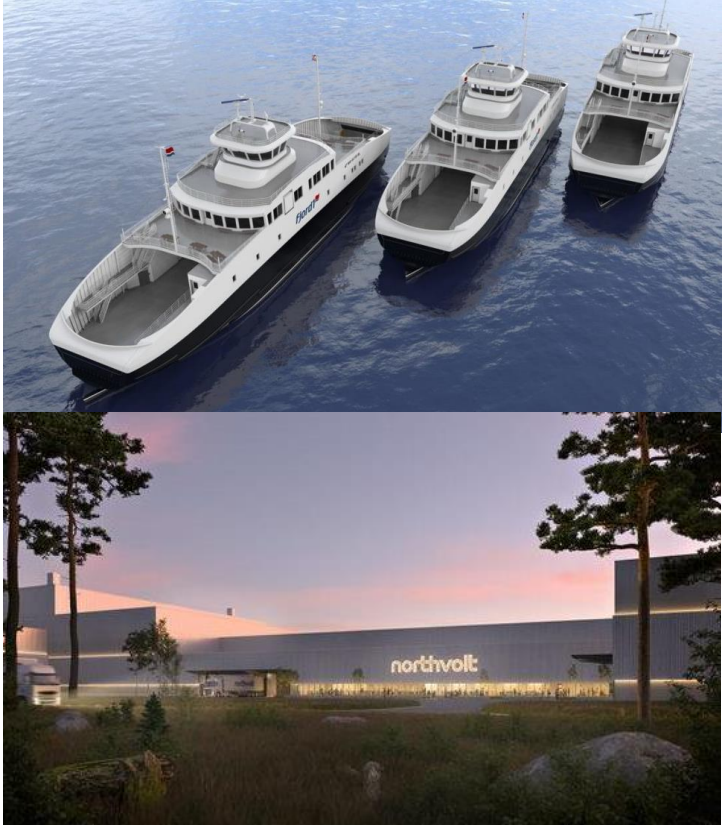
## 1 Recycling



## 2 Renewables



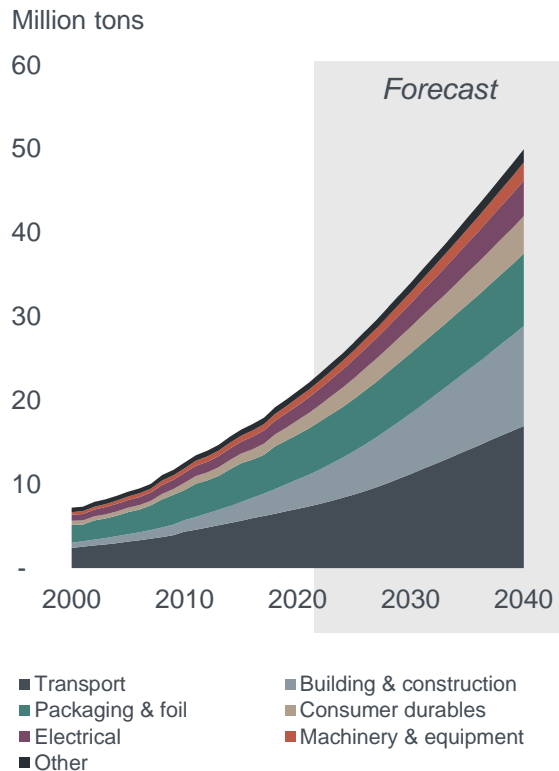
## 3 Batteries



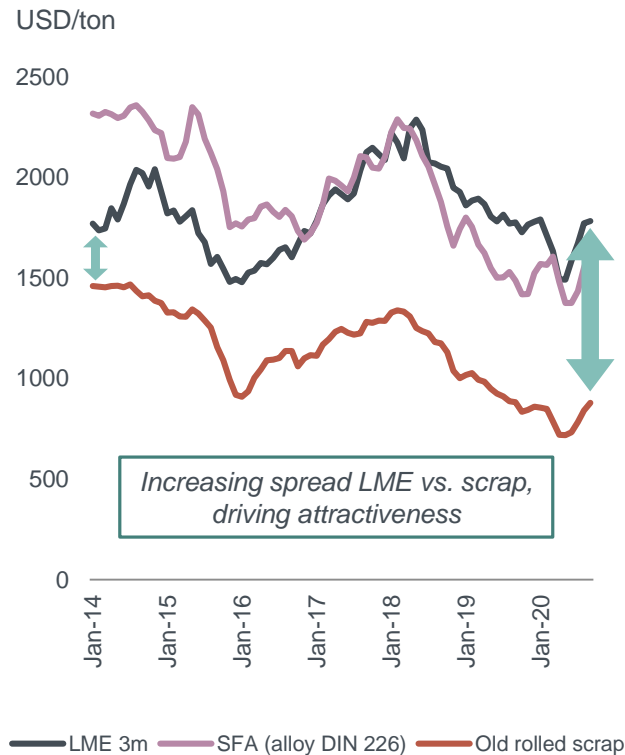


# Recycling an attractive value creation opportunity for driving profitability and sustainability

Global estimated recovery from post-consumer scrap collected



Price development LME, SFA 226 and Old rolled scrap, USD/t



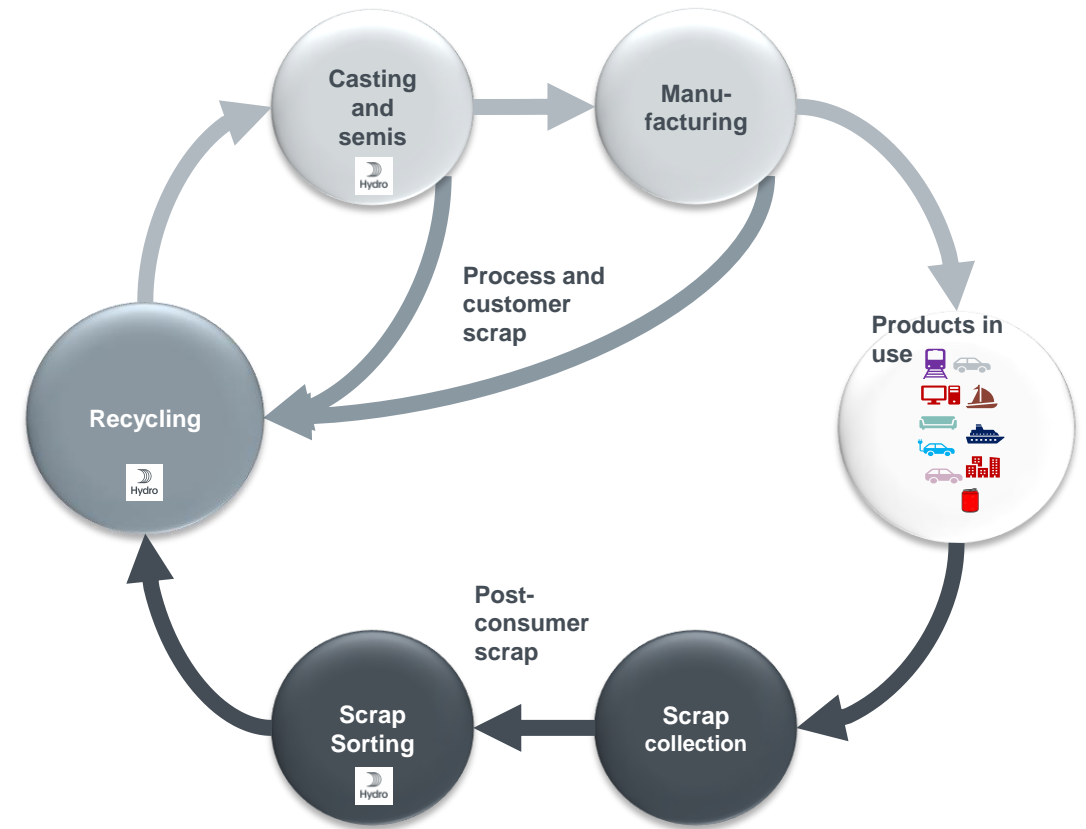
- Post-consumer scrap (PCS) generation increasing
- Business opportunity supporting sustainability and profitability agenda
  - Attractive prices, especially complex scrap
  - PCS with lower CO<sub>2</sub> footprint versus primary aluminium
  - More scrap use keeping materials “in the loop”



Profitability & Sustainability

# Recycling is already an important part of Hydro's value proposition – creating a solid foundation for further growth

- Scrap recycling is a key driver for profitable and sustainable development of Hydro and the aluminium industry as a whole
- Conversion of process scrap for our external or internal customers is the basis for Hydro's recycling business
- Both process and post-consumer scrap recycling important
  - Keeping aluminium in the loop and reduce CO<sub>2</sub> footprint
  - Lower hot metal cost



## Recycling at Hydro at a glance

Recycling at  
29 plants

Combined capacity of  
~2.6 million tons per year

# Recycling strategy established - ambitions defined in Primary Metal, Extruded Solutions and Rolled Products



Develop the recycling value-chain from scrap sourcing to products and customers – reinforced by collaboration and partnership



- Source larger volumes and broader range of scrap across BAs (“dig deeper in scrap pile”)
- Secure volumes by e.g. partnering with scrap suppliers



- Expand capacity (organic/M&A)
- Develop and implement advanced sorting technology e.g. in collaboration with suppliers



- Upgrade existing assets’ capabilities
- Pursue attractive growth (organic/M&A/greenfield)



- Develop alloys and market; RFAs<sup>1)</sup> and Hydro CIRCAL
- Work with regulators
- Communication & Branding

1) RFA: Recycle Friendly Alloy, allowing for higher recycled content in products

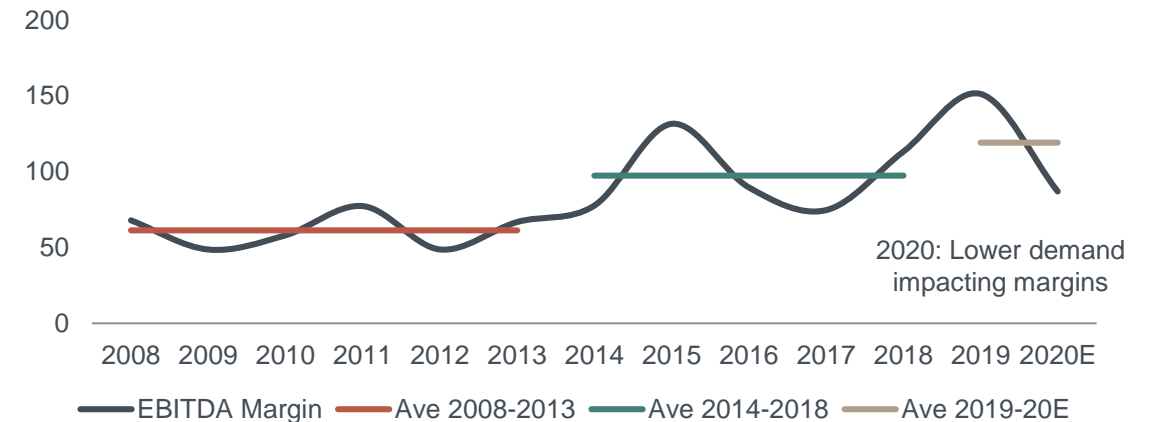
# Well positioned to deliver on Recycling strategy



Capitalizing on strong competence, asset portfolio and customer base

- Developed strong scrap recycling capability over several years
  - Increased 5-year average EBITDA margin by 40 USD/t in PM recyclers - optimizing hot-metal cost
- Strong metallurgical and commercial competence - developing products in partnership with customers – e.g. Recycle Friendly Alloys
- Large recycling asset base in North America and Europe, covering several customers and product segments
  - Expansions/upgrades completed or underway - further opportunities
- Taken position in developing advanced scrap sorting technology - LIBS<sup>1)</sup> pilot in operation in St Peter, Germany
- Unique flexibility in scrap sourcing - multiple product outlets allowing to sort and utilize complex, lower priced scrap
- Strong value chain positioning to lead adaptation of innovative greener products - e.g. CIRCAL

Primary Metal Recycling EBITDA Margin \$/mt



LIBS pilot in operation in St Peter sorting plant



Azuqueca – CIRCAL expansion completed

1) LIBS: Laser Induced Breakdown Spectroscopy. Advanced sorting technology enabling sorting into aluminium alloy groups

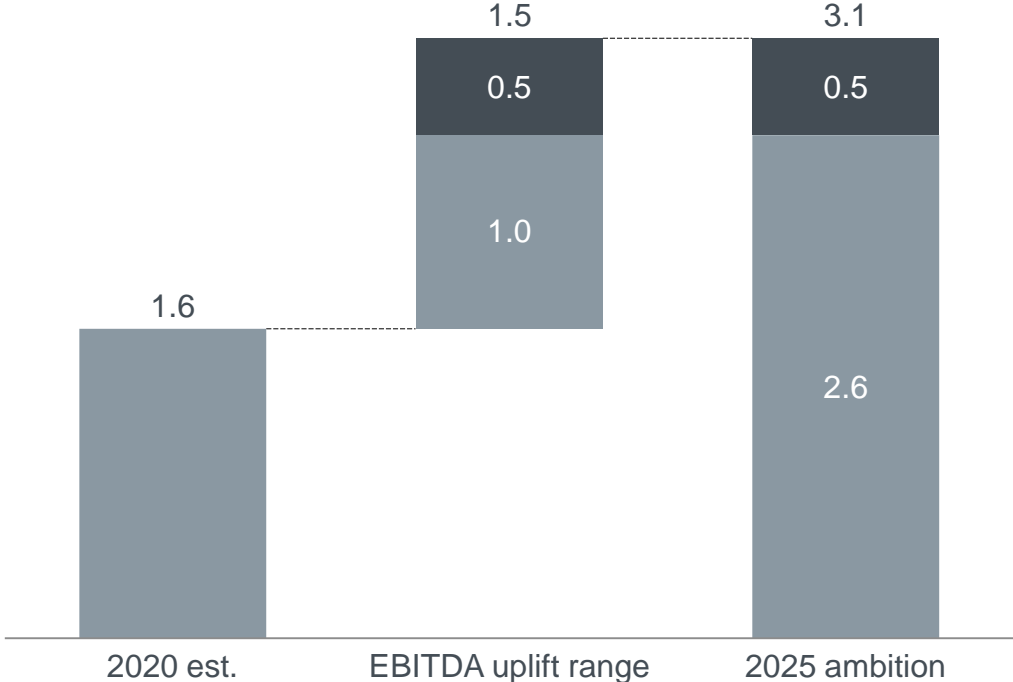


# Ambition to double recycling of post-consumer scrap by 2025



Organic and inorganic growth

Estimated Recycling EBITDA (across BAs)  
BNOK



- EBITDA uplift of BNOK ~1.0-1.5<sup>1)</sup> by 2025 across business areas' recycling operations – Primary Metal, Rolled Products and Extruded Solutions
- Build capability to add ~250 to 400 ktonnes of PCS and enhance marketing & sales of more sustainable aluminium
  - Doubling current PCS volumes to ~600-750 ktonnes by 2025
- CAPEX of BNOK ~3.5-5.0

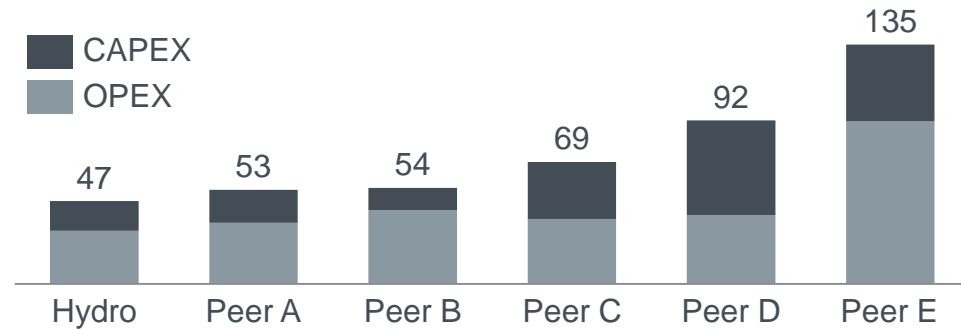
1) Recycling is an integrated part of the BAs' value creation and is reported as part of the BAs' total financial results. EBITDA uplift also driven by e.g. utilizing pre-consumed low-priced, complex scrap types as well as developing capability in Rolled Products to recycle more internal process scrap.

# Strong fundamental for growth in Hydro Energy

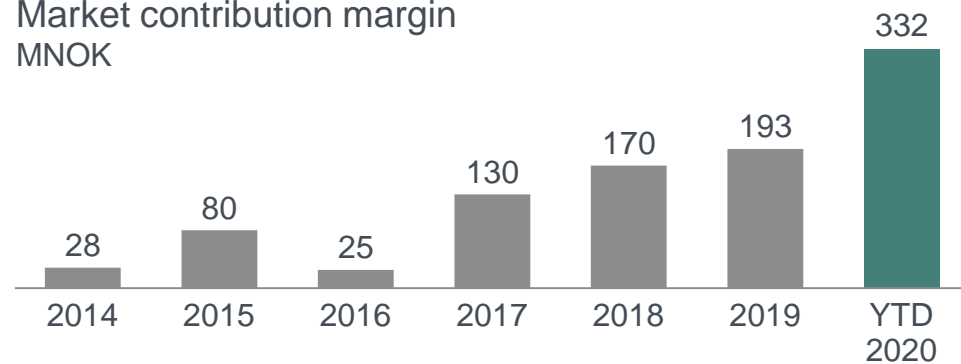


Strong cost position, commercial results and building scale in operations

Resource use per operational volumes<sup>1)</sup>  
Thousand NOK per GWh



Market contribution margin  
MNOK



1) Benchmark based on 2019 financial figures

## After the Lyse transaction

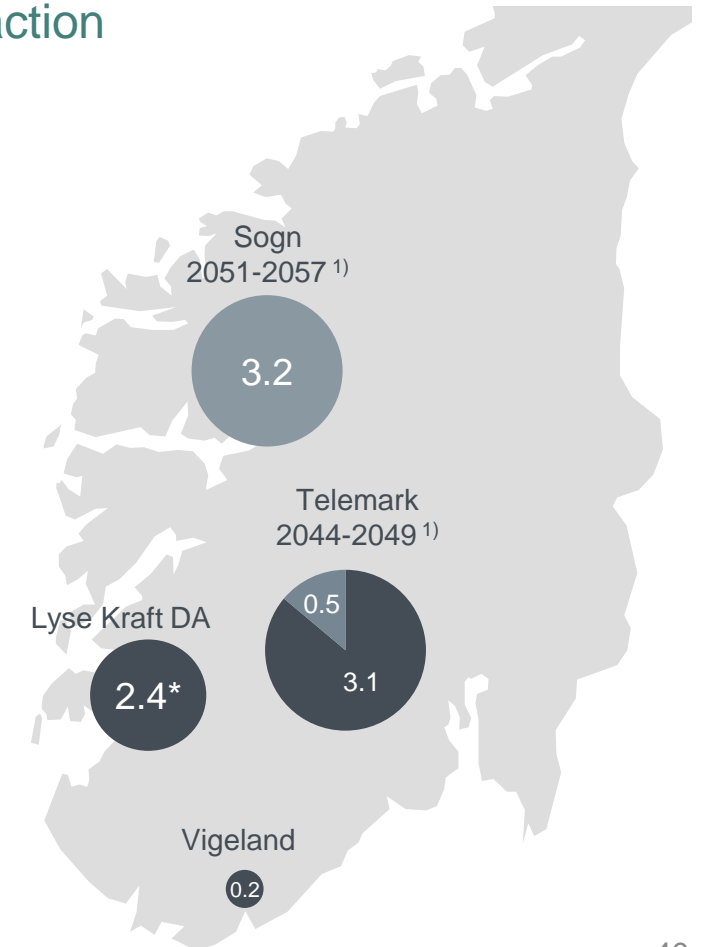
Normal annual production,  
Equity share

9.4 TWh

Operator hydropower

12.9 TWh

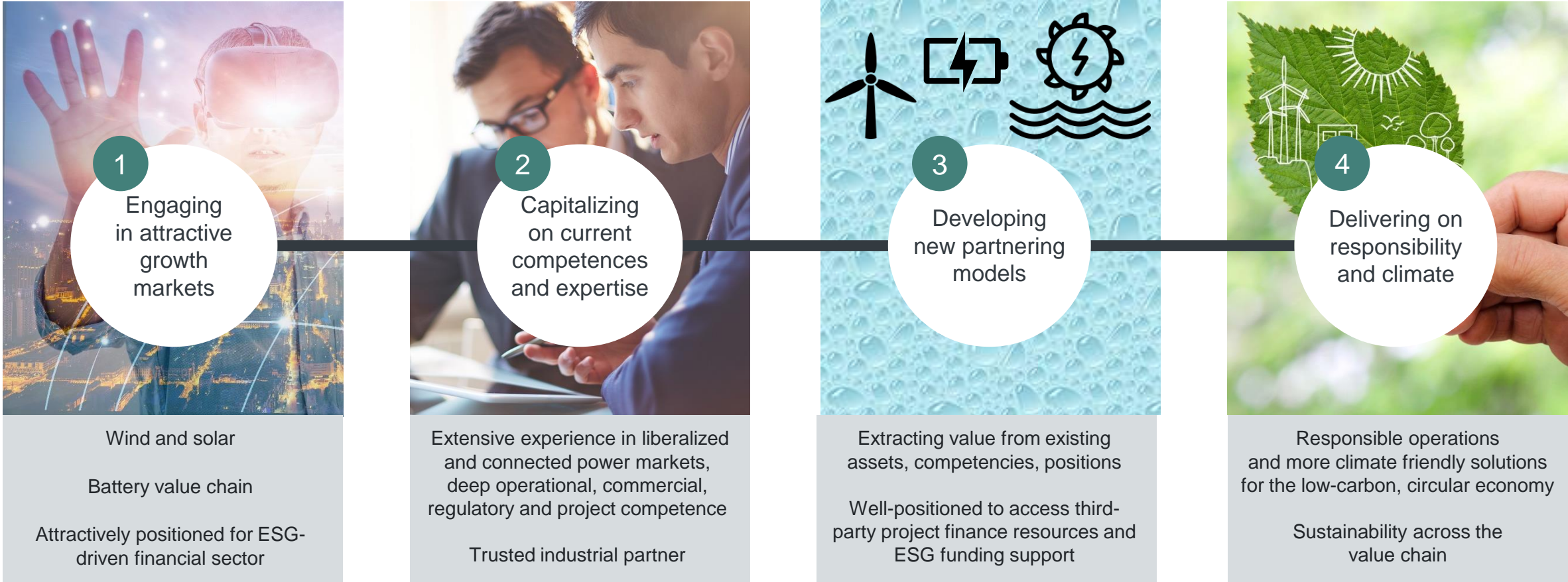
- No reversion
- Subject to reversion
- Bubble size = production in TWh



# Building complementary businesses, creating value



A platform for growth, scaling and new ideas



# Growing and diversifying our portfolio where capabilities match trends: Renewable Growth



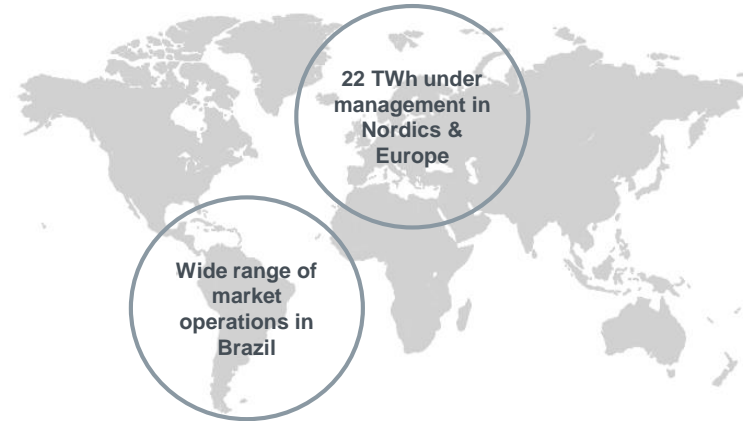
- Capturing existing value in Hydro's power demand and industrial footprint
  - Approx. 10 TWh repowering required by 2025
  - 100+ sites globally
- Leveraging Hydro's unique position in value chain
  - Power sourcing and trading, source optimization
  - Asset operations (hydro, wind)
  - Project management; commercial expertise
  - Industrial energy management
- Solidifying position in high growth renewables industry
- Supporting Hydro's low carbon and sustainability agenda



# Significant competitive edge from existing expertise, tools and market intelligence

## Renewables value chain<sup>1)</sup>

	OEM	D	EPC	O&M	PP	MO	IEC
Hydro Classic		■	■	■	■	■	■
Renewable Growth		■	■	■	■	■	■



### Unique position in value chain

- Building on Hydro's strong position across the energy value chain
- Focus on full spectrum (hydro, solar and wind)

### Experienced market operator

- 25 years' experience in Nordic and European energy markets
- Hydro Energia established in 2015 with wholesale, sourcing, prop trading and advisory services

### Established track-record

- Operator of Tonstad wind park, one of Norway's largest wind farms
- Commercial de-risking of 2.5 GW of greenfield wind projects since 2015

■ Active in segment   ■ Active via Hydro

<sup>1)</sup> Definitions: OEM – Original Equipment Manufacturer; D – Developer; EPC – Engineering, Procuring Construction; O&M – Operations and Management; PP – Power Producer (owner); MO – Market Operations; IEA – Industrial Energy Consumer (PPA Capacity)

# Focus on building scale rapidly through development of attractive investment pipeline

## 1 Partnership-based business model

## 2 Capitalize on captive industrial customer base

- Competitive PPAs
- Behind-the-meter energy solutions

## 3 Service provider based on outsourcing to Hydro centers of expertise

## 4 Low capital requirement from Hydro

- Optimize group capital structure
- Investment level debt financing

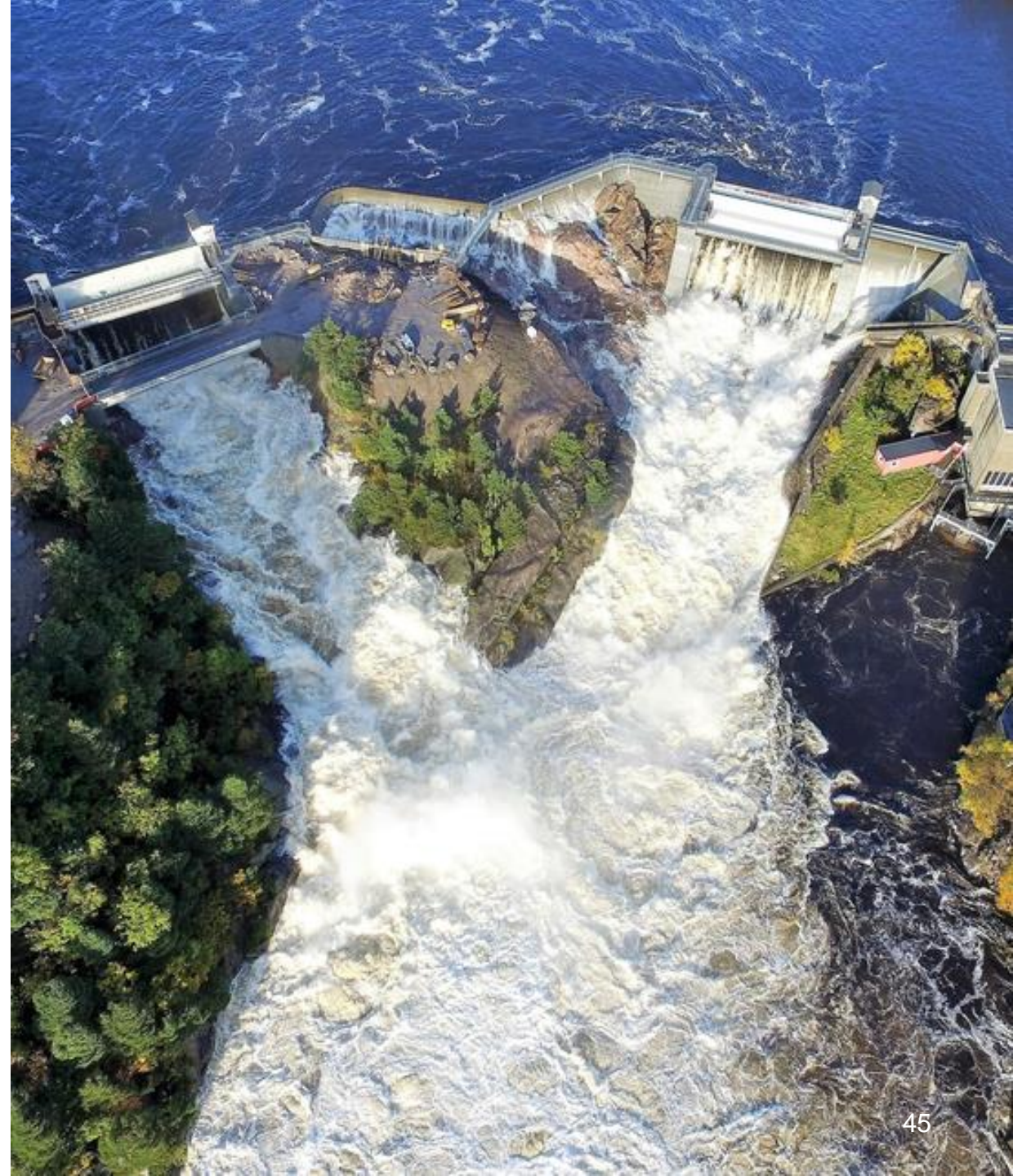
- Renewable project portfolio under development
  - 50% JV with Sowitec on floating solar project in Para with up to 2GW potential
  - More than 5GW of wind and solar projects in Nordics and Brazil under screening
- Several MoUs signed or under discussion, including:
  - 480MW solar project in Brazil with Scatec and Equinor
  - 620 MW combined wind and solar project in Brazil with Macquarie's Green Investment Group
- Focus on offering EPC, market and asset operation services to all projects
- Pilot projects for energy solutions (BESS, EaaS) under review in continental Europe and North America



# Equity raise to be evaluated for Renewable Growth company

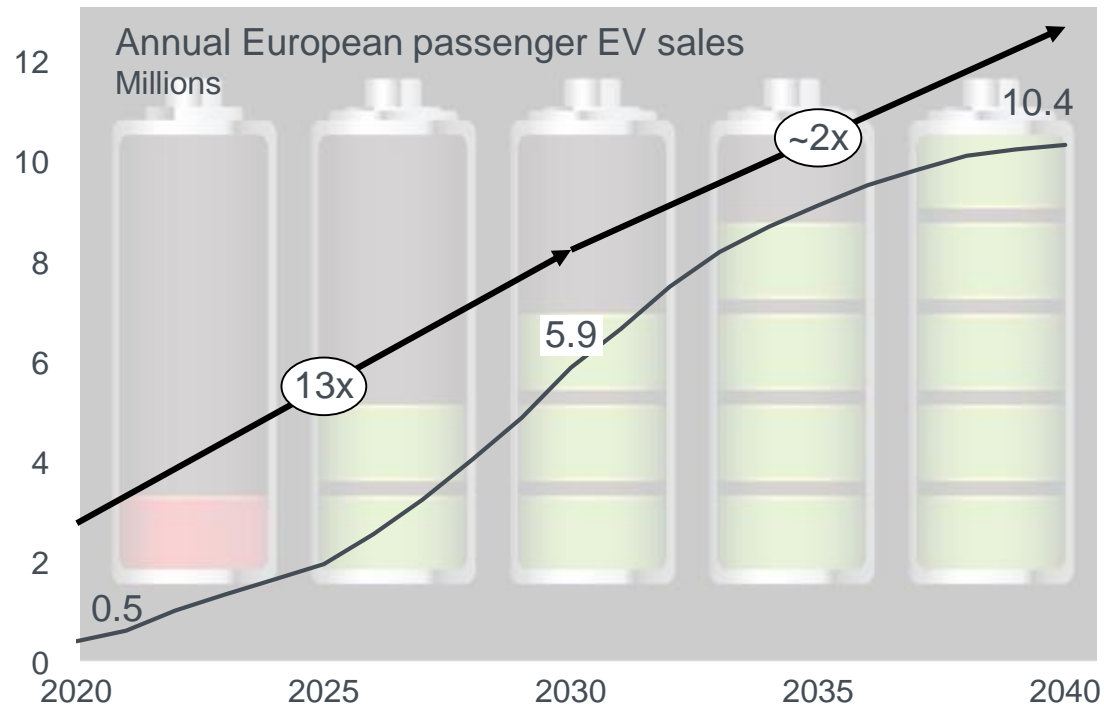
- Leverage Hydro energy expertise to capture value throughout the value chain
- Target investment decisions into more than 1GW<sup>1)</sup> of renewable power projects in 2021 to feed portfolio repowering requirements
- Platform for growth “beyond Hydro”, through aggregation of demand and services
- Equity raise by Renewable Growth company to be evaluated
  - Timing to be aligned with final investment decision on anchor projects
  - Hydro will maintain majority ownership of company
  - Listing alternative evaluated in short to medium term

1) 100% basis



# Decarbonization and electrification of transport drives battery demand

European passenger EV sales forecasted to grow ~13x over next 10 years<sup>1)</sup>



Source: BloombergNEF

1) Assuming 35% EV share of new passenger sales in 2030

2) [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_19\\_6705](https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6705)

Trends: Decarbonization, electrification, regionalization

- Sustainability and security of supply resulting in regional battery markets
- EU setting greenhouse gas reduction targets
  - Green Deal target of no net emissions of GHG by 2050
  - EU expected to lift emission reduction ambition to 55% by 2030 from current 40%
- EUR 3.2 billion dedicated on EU level to establish competitive and viable European battery value chain<sup>2)</sup>



# Hydro well placed for growth in battery industry



## Battery industry

Batteries are needed for electrification and decarbonization

Industrial and political push for a European sustainable battery value chain

Long value chain with optimization of high-value materials

Partnerships needed to succeed

Industry driven by automotive OEM customers



115 years of solving global challenges by industrial development based on green energy

Strong European operational footprint and focus on sustainability

Industrial experience from integrated value chain

Experienced and trusted partner in Europe and Norway

Experienced solutions provider for automotive OEMs with multiple touch-points relevant for battery sector

# Strategy of stepwise engagement in the battery value chain, leveraging Hydro's strengths



- Aim: to build a new sustainable and profitable business that will diversify and strengthen Hydro's overall portfolio
- New business unit "Hydro Batteries" to perform active industrial ownership of current assets and develop new opportunities
- Expanding battery footprint with selective positions and partnerships across value chain
- Successful strategic investments already made with strong pipeline of opportunities



**northvolt**



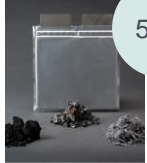
0.9%

**Corvus Energy**



21%

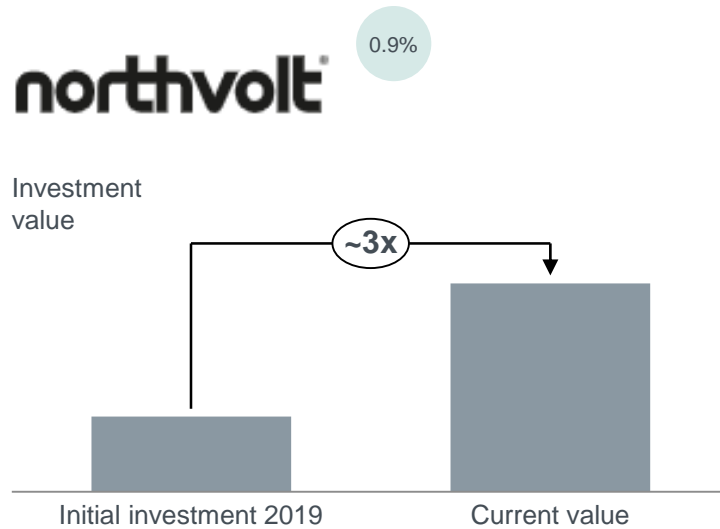
**hydrovolt**



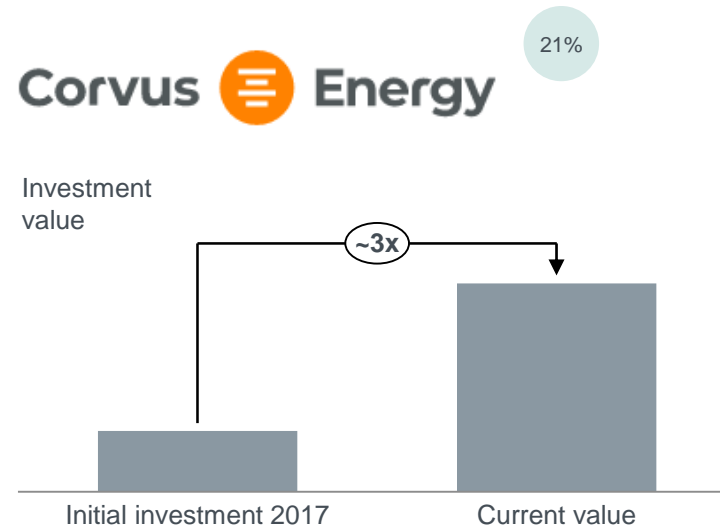
50%

Investments taken
  Not currently active in market
  x% Ownership stake

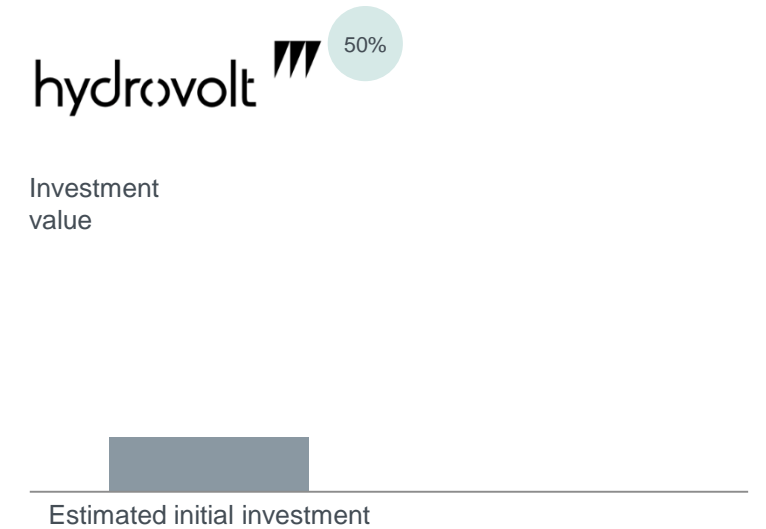
# Strong track record and growth potential within current battery investments



- Start-up on its way to establish as major integrated player in Europe
- Hydro on advisory board



- Marine niche leader – energy storage solutions for all marine segments
- Hydro active industrial ownership position



- Hydro founder with Northvolt and active developer
- Battery recycling enables re-use of mined materials
- Capitalizing on Norwegian EV market; early-mover advantage in Europe
- In partnership with Northvolt and Batteriretur
- Enova support 43.5 MNOK

x% Ownership stake

# Hydro enters into battery MoU with Panasonic and Equinor

- Panasonic, Equinor and Hydro have formed a strategic partnership to explore possibilities for establishing a sustainable and cost-competitive European battery business
- Memorandum of Understanding (MoU) signed to conduct a joint study
- Study will include a market assessment and business case for lithium-ion battery business
- Conclusions from the study are expected around summer next year

FINANCIAL TIMES

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Latest on Batteries

LG Chem hit by GM recall of Bolt electric vehicles


M&G to invest £150m in UK battery start-up Zenobe

Start-ups aim to unlock full potential of 'green' tech

Batteries + Add to myPT

## Tesla supplier Panasonic to make big battery bet in Europe

Japanese group plans to set up its first plant in Norway with Equinor and Norsk Hydro



Despite running the world's largest battery factory with Tesla in Nevada, Panasonic has only a small presence in Europe

Kana Inagaki in Tokyo and Richard Milne in Oslo 16 MINUTES AGO

Panasonic is making a significant push into Europe with plans to set up its first battery factory in Norway, as the Japanese group tries to leverage its success supplying Tesla in the US to win more business from European carmakers.

The group intends to team up with Norwegian state-controlled oil and gas major Equinor and aluminium company Norsk Hydro for a feasibility study on expanding its battery business in Europe to be completed within six months.

50



# Ambition to build a sustainable and profitable battery business

Substantial value creation from completed investments

Established team and strong pipeline of potential projects

Well positioned to take an active role in the battery industry, build business that matters and create substantial value for shareholders

- ✓ Prioritize investments where value **upside is considerable** and where Hydro has a **distinct contribution**
- ✓ Leverage **early investments** and industrializing innovation
- ✓ Invest with **partners**
- ✓ Expose value actively through **listing of businesses**
- ✓ Utilize **scalable approach** to building the portfolio
- ✓ Aim to achieve investments of approximately NOK 2.5 – 3.0 billion until 2025, resulting in pro-rata EBITDA of invested companies of **NOK 600 – 700 million** by 2025 with potential for continued significant growth

# Three levers driving Hydro value creation potential to 2025



## BNOK 8.5 Improvement program

### Maximizing value-creation from current assets/operations

- Operational excellence
- Commercial excellence in daily operations
- Raw material efficiency, procurement
- Volume creep and capacity utilization
- Fixed cost optimization

Initiatives focused on influenceable parameters and continuous improvement

## BNOK 2.0 Commercial ambitions

### Pursuing market and customer-driven growth opportunities

- Pricing and share of the wallet
- Upgrading and developing product portfolio
- Customer-driven incremental growth

Initiatives within the current business portfolio, dependent on market conditions

## Growth and strategic initiatives

### Larger changes in business portfolio and/or strategic direction

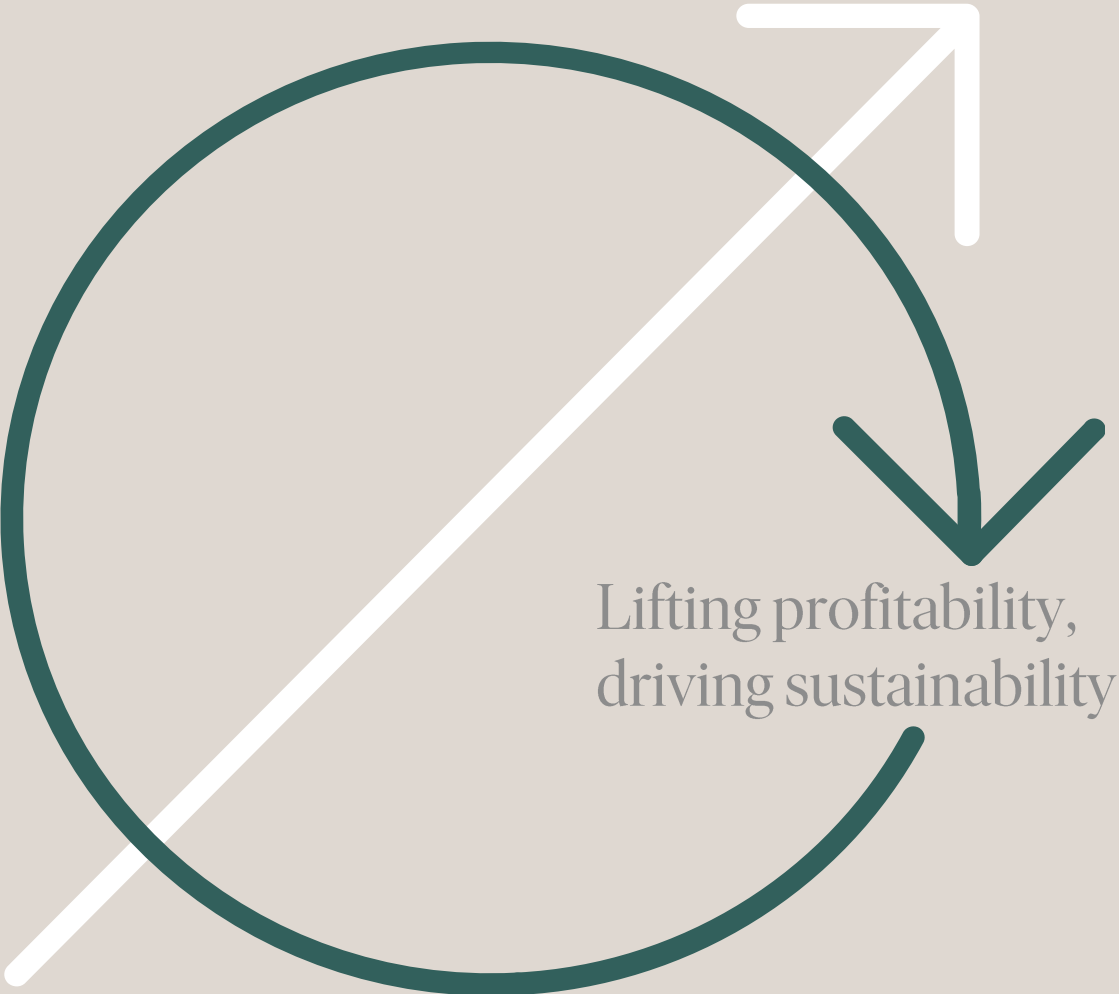
- Recycling: more than doubling post-consumer scrap utilization, creating EBITDA uplift of BNOK 1.0 to 1.5 by 2025
- Renewable Growth: investing into more than 1GW of renewable power projects in 2021
- Battery: Generating pro-rata EBITDA of MNOK 600 – 700

Initiatives outside the current business portfolio or representing a significant strategic move

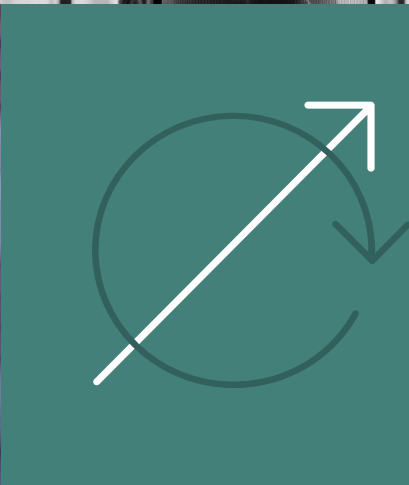
# Hydro 2025 – key strategic priorities



- Deliver on three value-creation levers
- Finalize strategic review Rolled Products
- Achieve 10% RoaCE target over the cycle
- Reduce CO2 emissions by 30% by 2030
- Meet and shape demand for greener products



Lifting profitability,  
driving sustainability



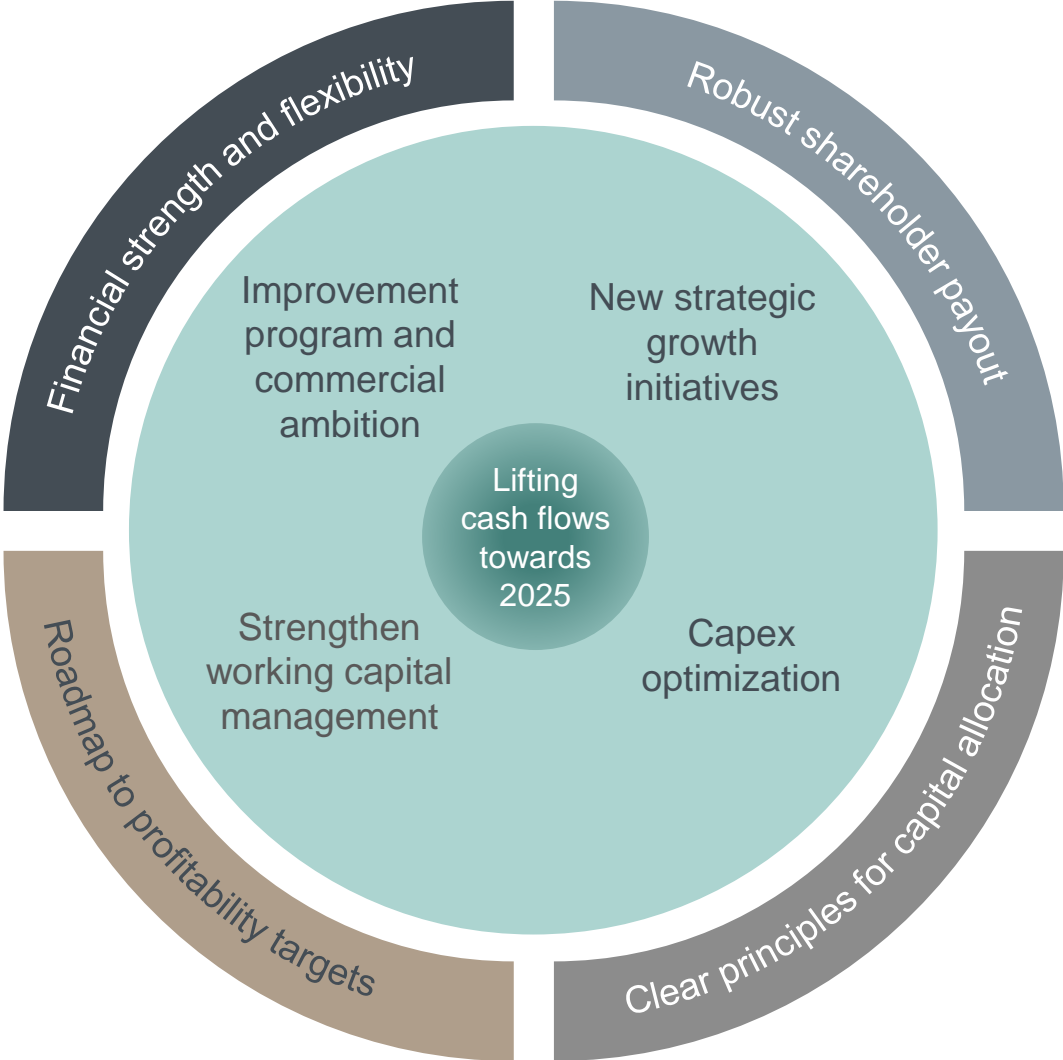




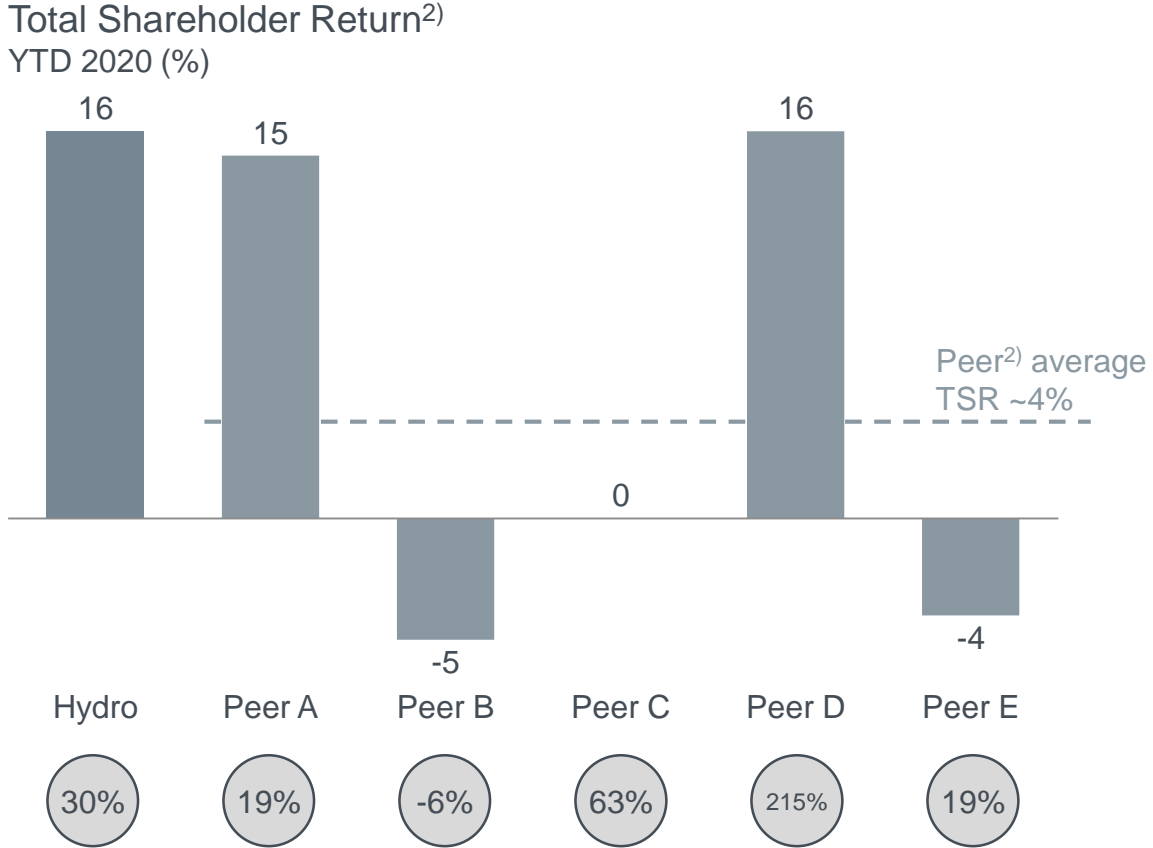
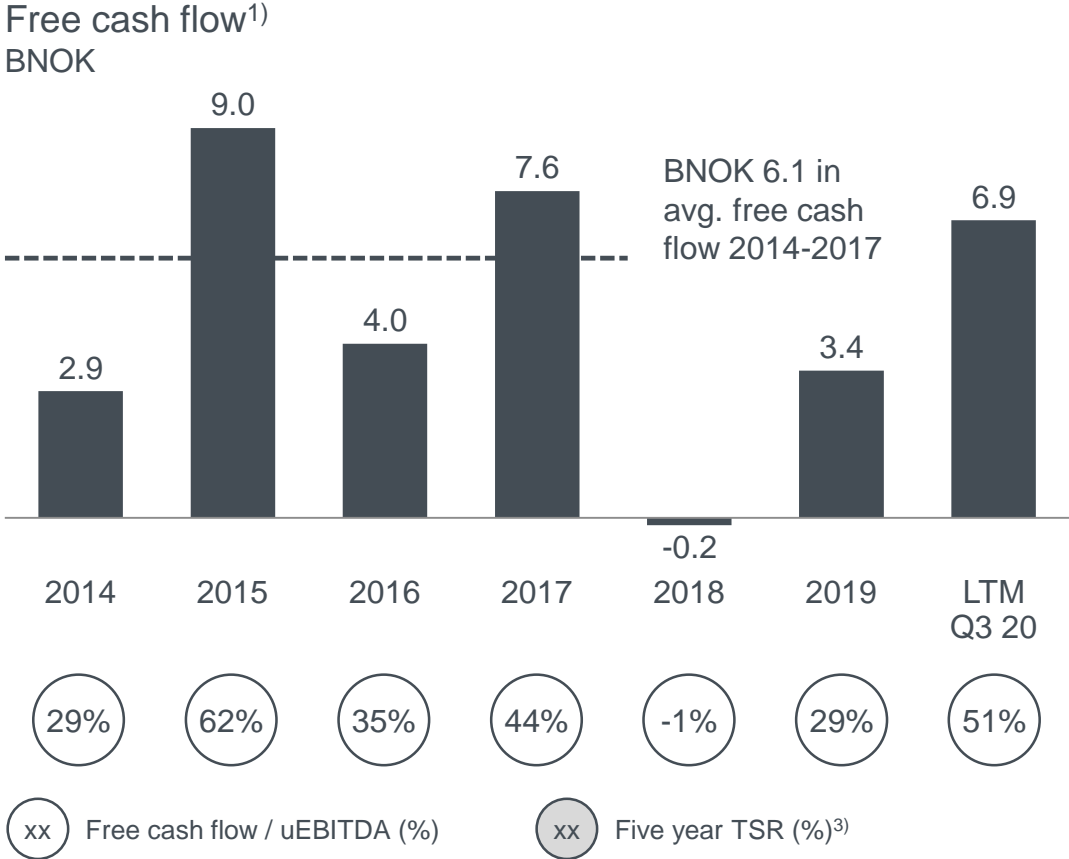
# Lifting cash flow, delivering returns

Pål Kildemo  
EVP and CFO

# Key priority last year to improve cash flow and returns

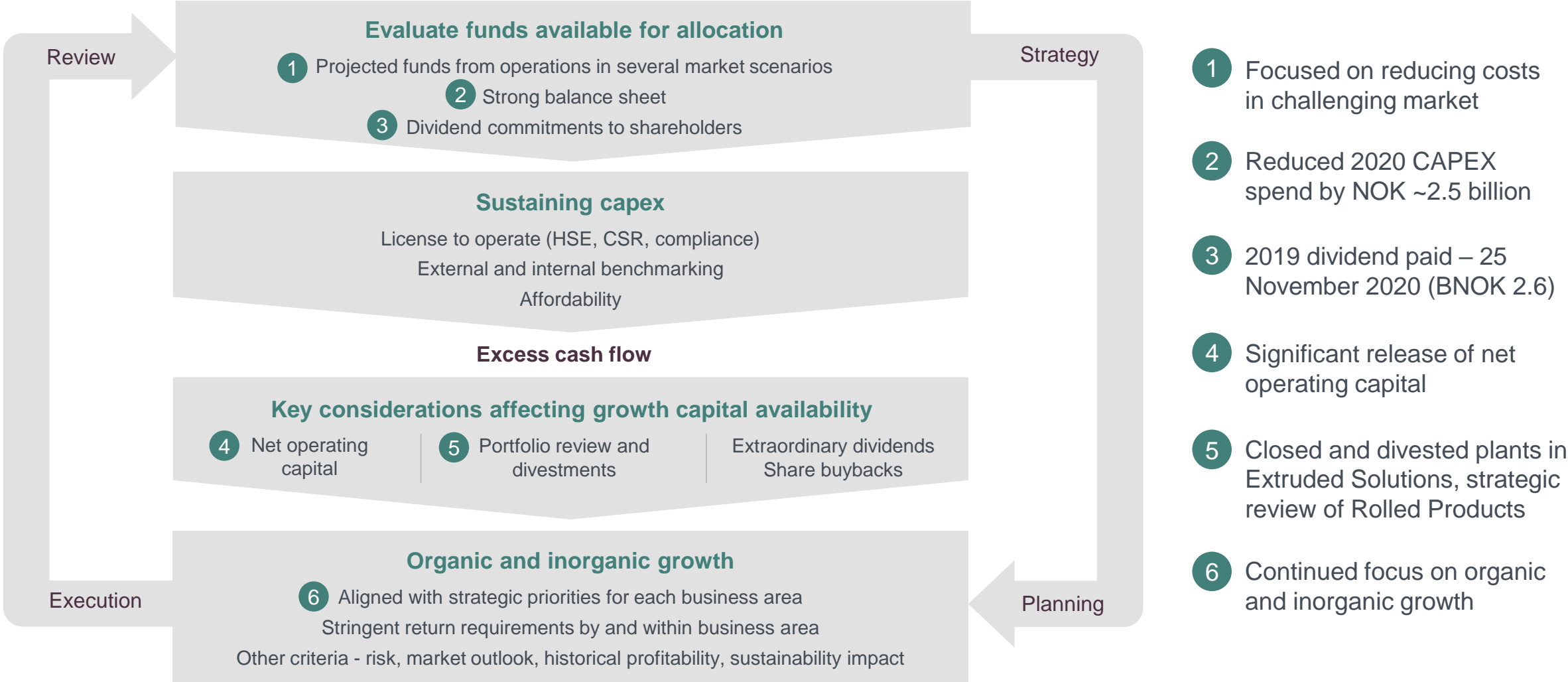


# Over the past 12 months, cash generation and returns improving



1) Free cash flow defined as net cash provided by operating activities plus net cash used in investing activities less purchases of short term investments, less process from sales of short-term investments, less Sapa acquisition  
 2) TSR calculation (Share price Dec 31 2019 – Share price 30 Nov 2020 + Dividends paid in 2020)/Share price Dec 31 2019 2) Peers (in random order) include Alcoa, Rusal, Rio Tinto, Constellium and Chalco  
 3) From Jan 1 2016 to November 30 2020

# Navigating the year with our capital allocation framework



- 1 Focused on reducing costs in challenging market
- 2 Reduced 2020 CAPEX spend by NOK ~2.5 billion
- 3 2019 dividend paid – 25 November 2020 (BNOK 2.6)
- 4 Significant release of net operating capital
- 5 Closed and divested plants in Extruded Solutions, strategic review of Rolled Products
- 6 Continued focus on organic and inorganic growth









# Capital allocated according to strategic modes



Strategic modes reflect global megatrends and high-return opportunities

## Safe, compliant and efficient operations – The Hydro Way



Businesses	 <b>B&amp;A</b>	 <b>Primary Metal</b>	 <b>Recycling</b>	 <b>Energy</b>	 <b>Rolled Products</b>	 <b>Extruded Solutions</b>
Strategic mode	Sustain and improve	Sustain and improve	Selective growth	Selective growth	Strategic review	Selective growth
Towards 2025	Reduce risk, improve sustainability footprint, improve on cost position	Robust and greener, increase product flexibility, improve cost position	Substantial shift in conversion of post-consumer scrap	Grow in batteries and renewables	Deliver Robust 100, conclude strategic review	Platform strategy executed, selective growth



# Lifting cash flows

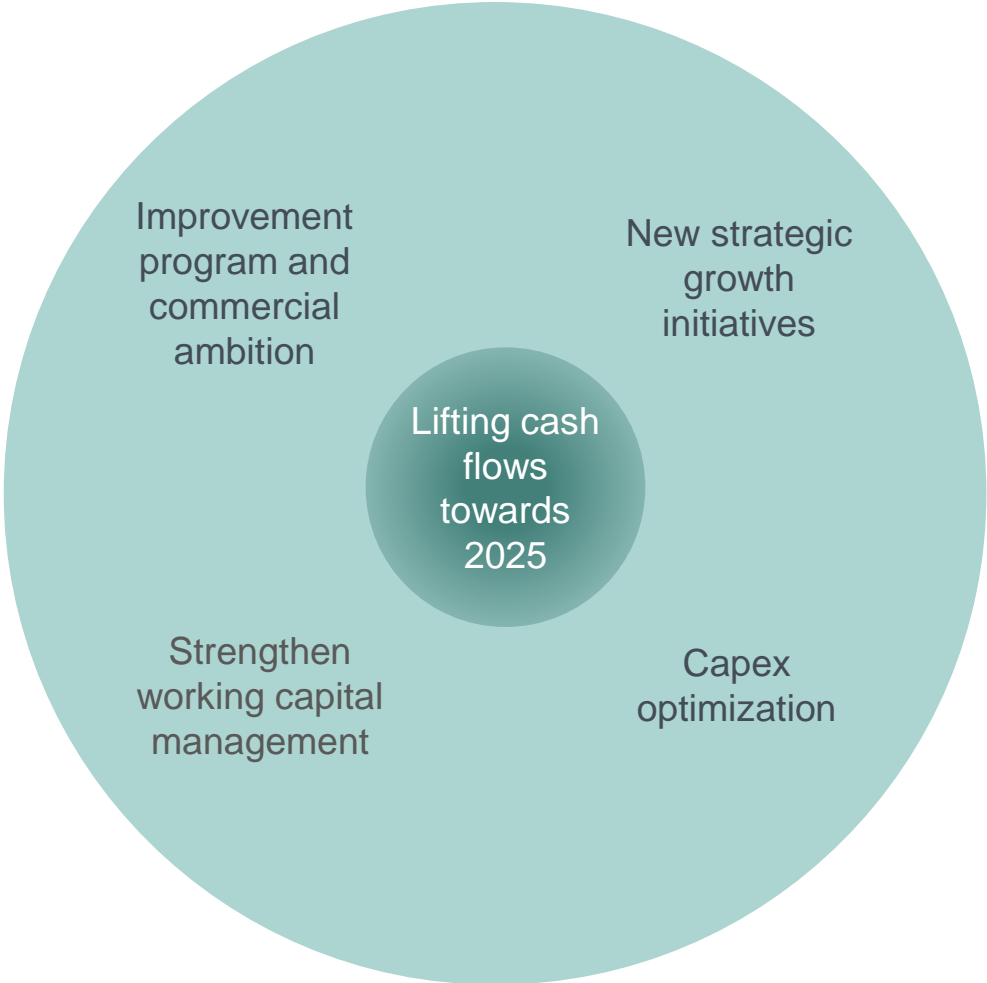
# Maximizing cash generation towards 2025



Cost improvement target increasing from NOK 7.3 billion by 2023 to NOK 8.5 billion by 2025.

In addition, NOK 2 billion in commercial ambitions by 2025

Maintaining efficient level of working capital



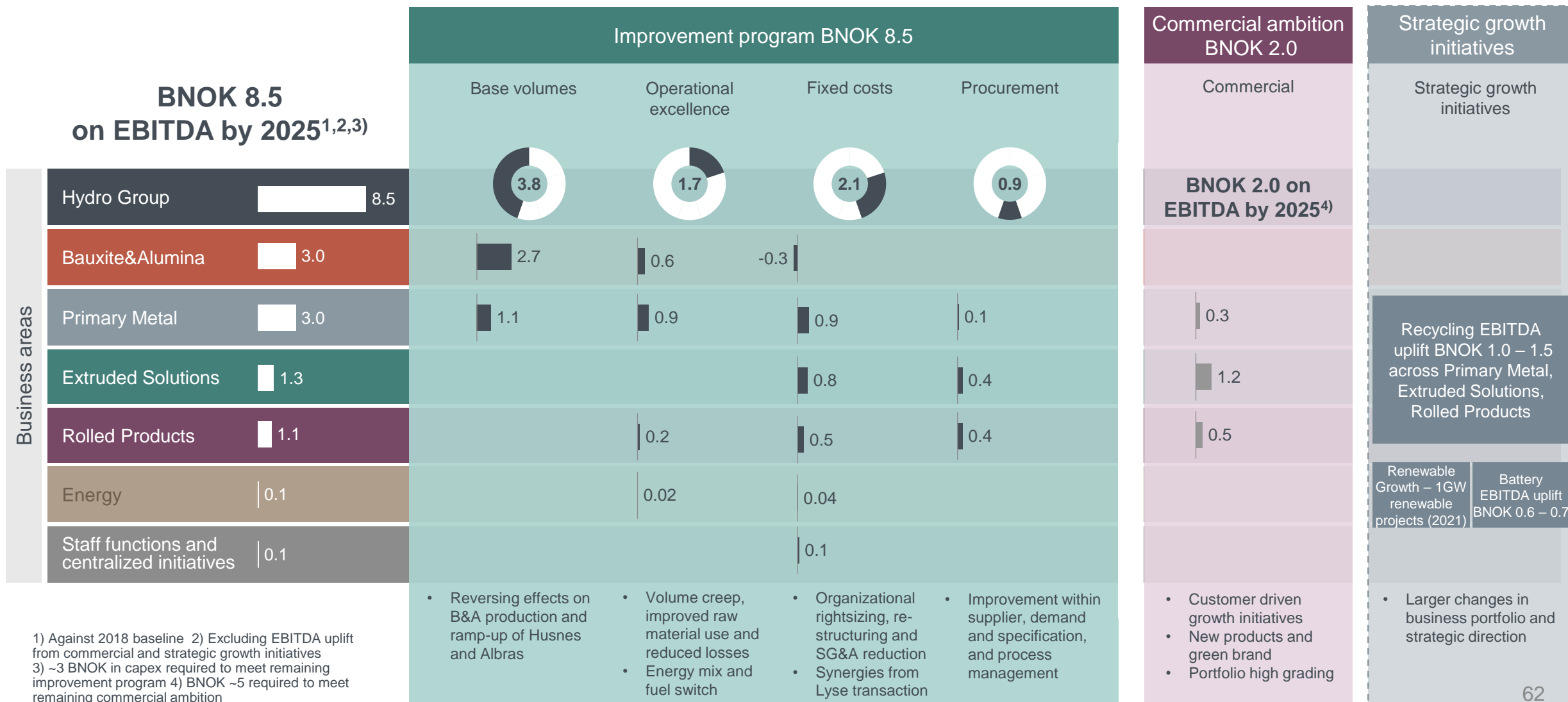
Initiatives in recycling, batteries and renewables

Lower sustaining and return-seeking CAPEX level of BNOK 9.0 – 9.5 from 2021-2025

# Raising the improvement ambitions toward 2025



Cost improvements, commercial ambitions, and strategic growth initiatives



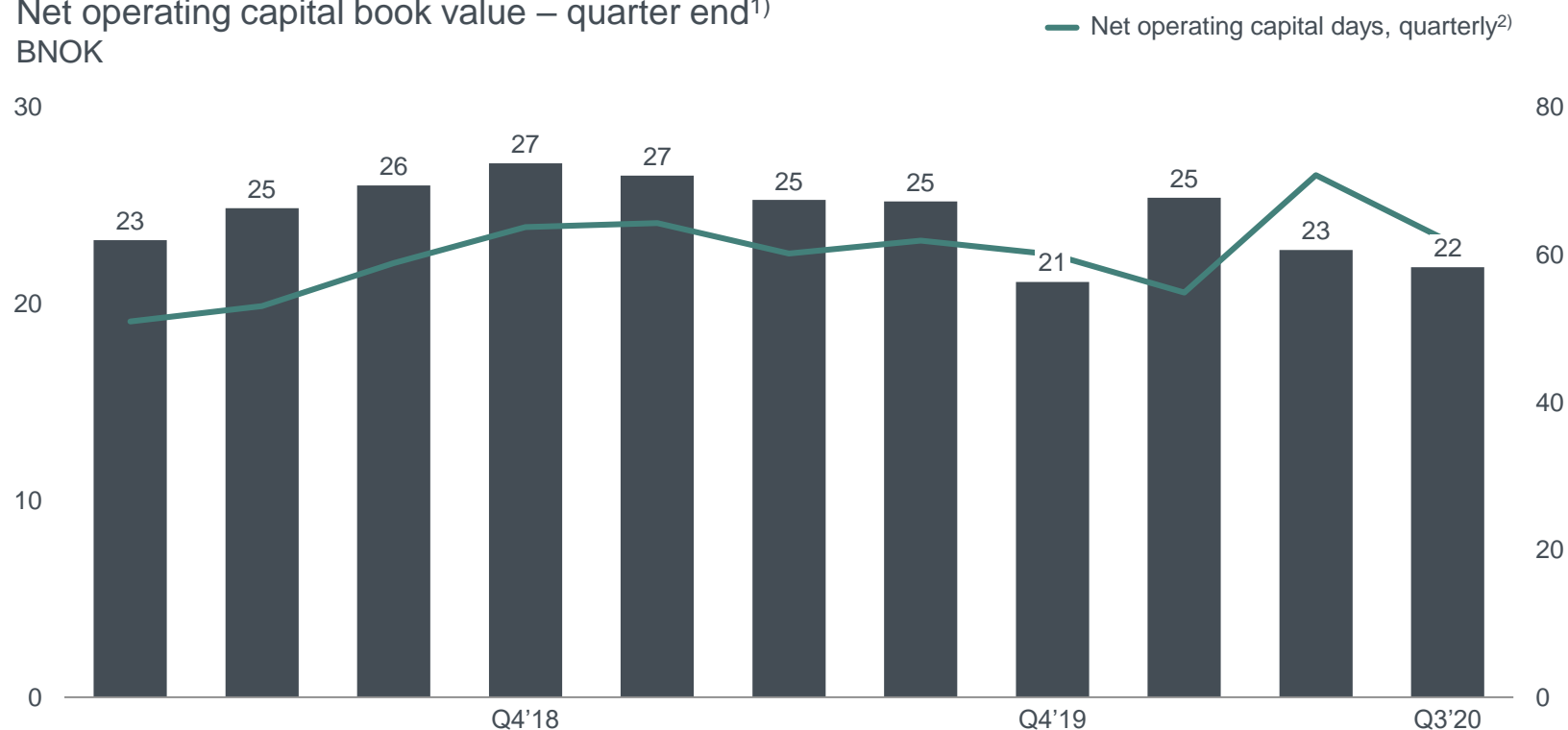
1) Against 2018 baseline 2) Excluding EBITDA uplift from commercial and strategic growth initiatives  
 3) ~3 BNOK in capex required to meet remaining improvement program 4) BNOK ~5 required to meet remaining commercial ambition



# Optimizing net operating capital

NOC days development in 2021 will reflect volume recovery

Net operating capital book value – quarter end<sup>1)</sup>  
BNOK



## Reduction of NOC days

- Reduce inventory levels across all business areas
- Optimize material flow from raw materials to finished goods
- Benchmarking tools and regular follow-up procedures established
- Tight collaboration between sales and metal purchasing

## 2021 expectations

- NOC days will reflect volume recovery business

1) Including Sapa NOC prior to Q4-17, fully consolidated from Q4-17

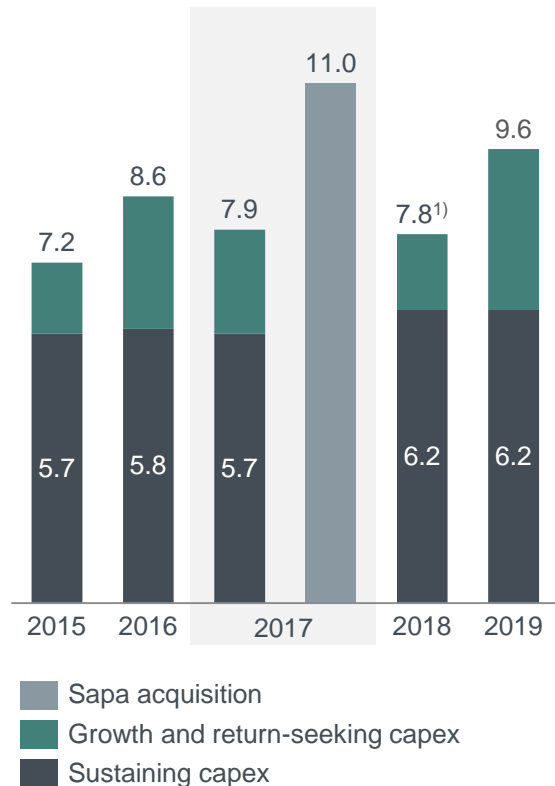
2) NOC-days definition: (average of opening balance and closing balance NOC book value for the quarter / revenue during the quarter) \* number of days in

# Capex guidance of BNOK 9 – 9.5 for 2022-2025

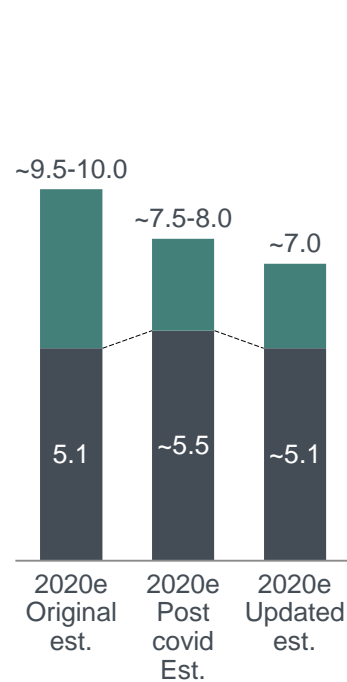


Investments based on strategic priorities and capital allocation framework

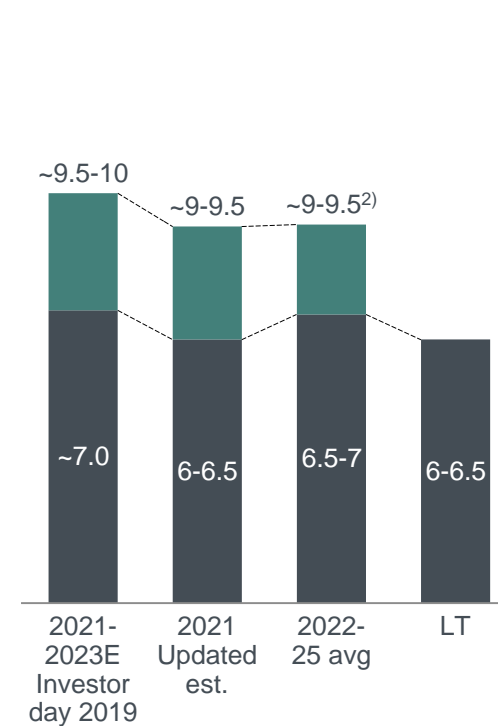
Historical capex BNOK



Updated capex guidance for 2020, BNOK



Guidance capex LT, BNOK



## Sustaining projects

- New mining area in Paragominas (from 2022)
- Pipeline replacement
- Upgrades to Alunorte
- Smelter relining and asset integrity in Primary Metal

## Growth and return-seeking

- Selected customer-driven projects in Extruded Solutions
- Recycling
- Energy wind and battery storage
- Fuel switch project

Capex including Extruded Solutions

1) Excluding the Pis/Cofins adjustments in Brazil in 2018. Including the adjustment, 2018 capex amounted to BNOK 7.0

2) Growth and return-seeking capex guidance 2022-25 avg only includes capex necessary for delivering on targeted improvement ambitions and commercial initiatives



# Delivering returns

# Last year we launched our long-term financial priorities



## Financial strength and flexibility

- Maintain investment grade credit rating
  - Currently BBB (S&P), Baa3 (Moody's)
- Balance sheet ratio
  - Target to maintain Adjusted net debt excl EAI / uEBITDA < 2x over the cycle <sup>1)</sup>
- Strong liquidity

## Roadmap to profitability targets

- URoaCE > 10% over the cycle for Hydro group
- URoaCE > CoC for business areas over the cycle
- Differentiated return requirements by and within business areas



## Robust shareholder payout

- 40% payout ratio of Net Income over the cycle
- Dividend floor of 1.25 NOK/share
- Supplementary share buybacks or extraordinary dividends

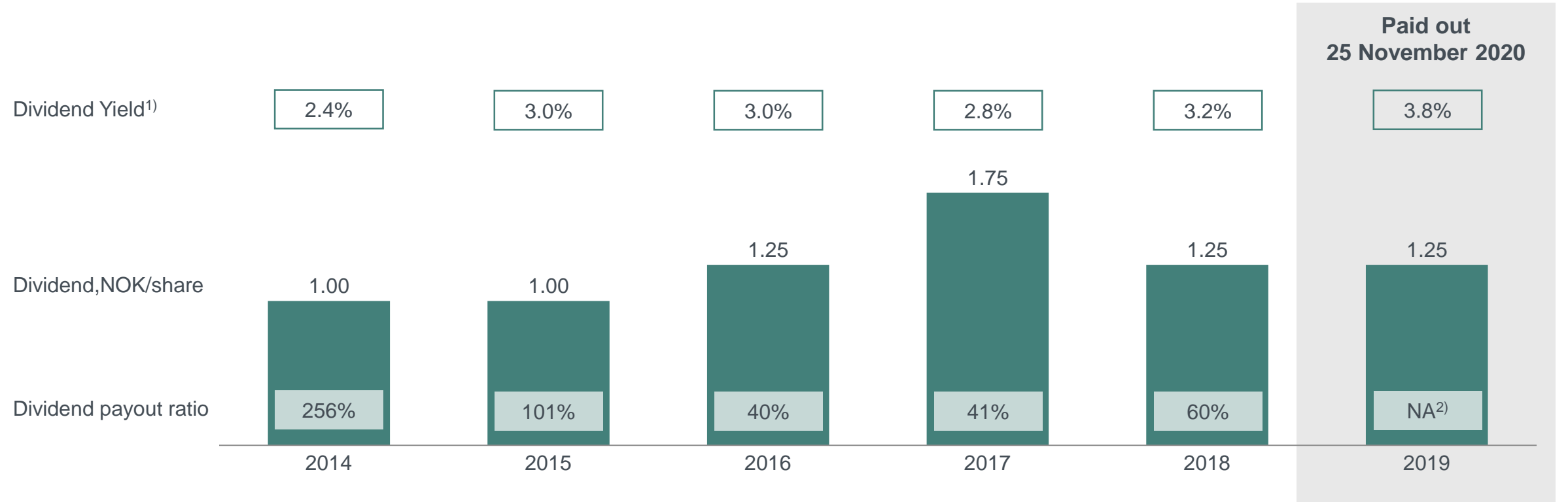
## Clear principles for capital allocation

- Capital allocation in line with strategic priorities and return requirements by business area
- Competitive and affordable sustaining capex
- Strict prioritization, continuous review and reallocation

1) Consistent with previous target to maintain funds from operations / Adjusted net debt incl EAI > 40% over the cycle



# Continued strong shareholder focus, 2019 dividends paid in November



## Long term dividend policy:

- Pay out, on average, 40 percent of net income as ordinary dividend over the cycle
- Floor of NOK 1.25 per share

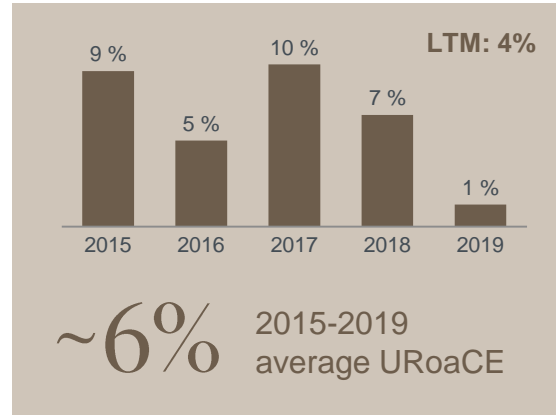
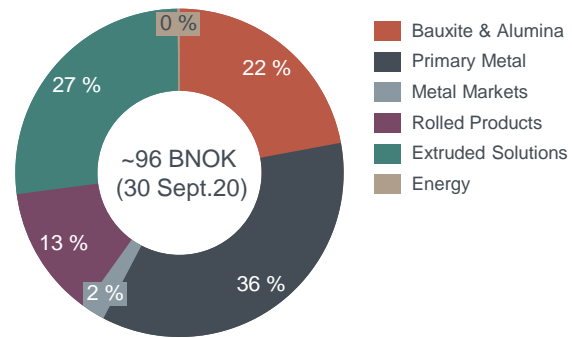
1) Based on share price at year end 2) Negative net income

# Capital return dashboard for Hydro



Hydro targets URoaCE above 10% over the cycle

## Capital employed<sup>1)</sup>



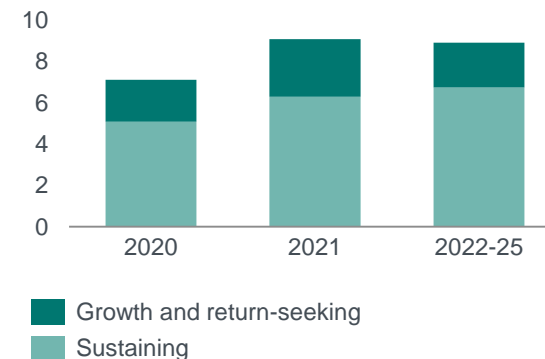
**10%**  
URoaCE target over the cycle

**9%**  
Nominal long-term cost of capital

**8.5 + 2.0**  
**BNOK**  
on EBITDA by 2025 in improvement potential and commercial ambitions

Additional earnings potential represented through strategic growth initiatives

## Capex, BNOK



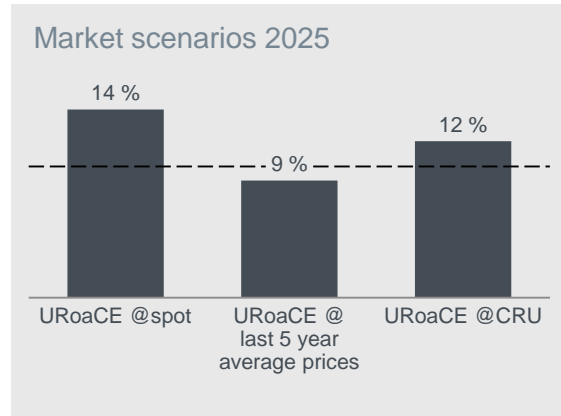
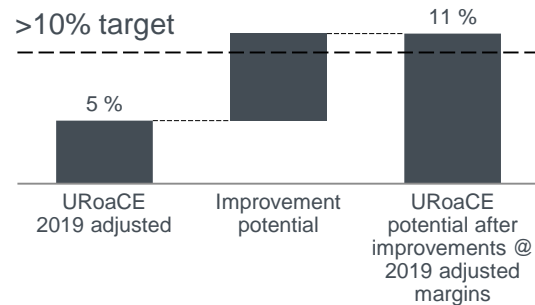
1) Graph excludes (6.8) BNOK in capital employed in Other & Elimination

# Hydro roadmap to profitability



Main drivers – improvement measures and market developments

## URoACE potential



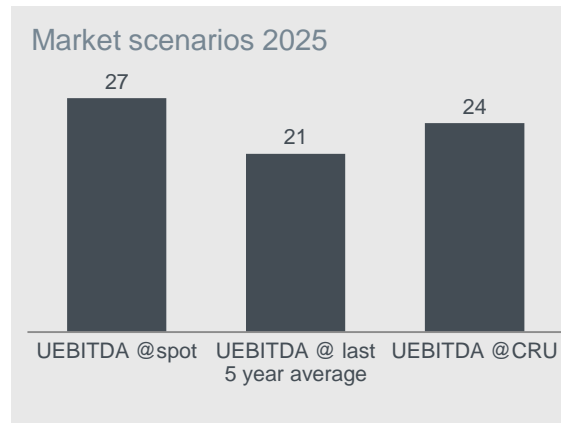
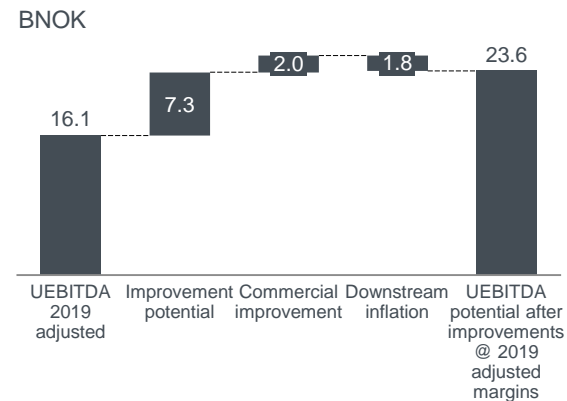
## Main further upside drivers

- Sustainability differentiation and premium
- Positive market and macro developments
- Additional CO2 compensation from 2021
- High-return growth projects
- Technology and digitization
- Portfolio optimization

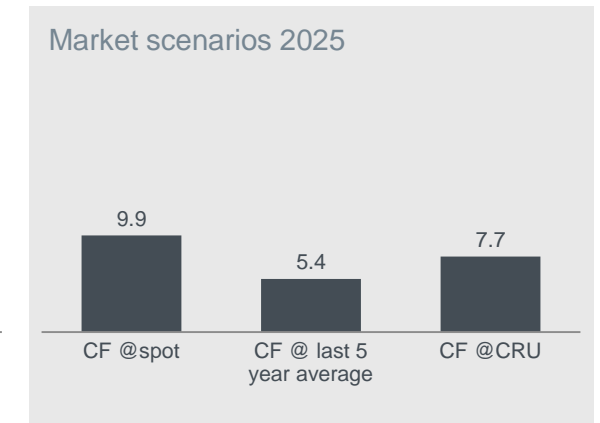
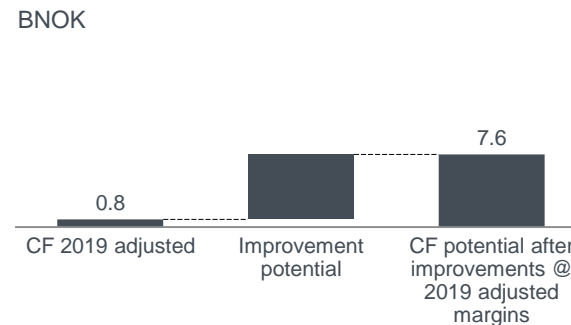
## Main downside risks

- Negative market and macro developments, incl. trade restrictions
- Operational disruptions
- Project execution and performance
- Deteriorating relative positions
- Regulatory frameworks, CSR and compliance

## UEBITDA potential



## Cash flow potential after capex, tax and dividend floor

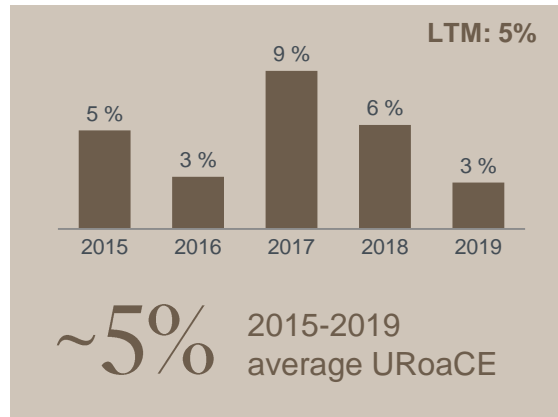
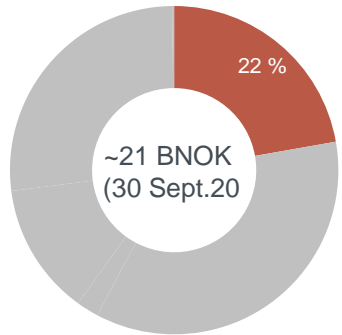


# Capital return dashboard for Bauxite & Alumina



Returns below the cost of capital reflecting challenging markets, embargo and operational issues during the early years

Capital employed in B&A



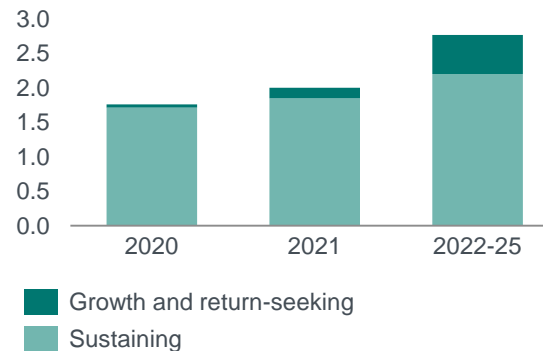
URoCE > CoC

10-11%  
Nominal long-term  
cost of capital

**3.0 BNOK**  
on EBITDA by 2025 in  
improvement potential

Fuel switch  
project supporting  
improvement  
program and  
sustainability targets

Capex, BNOK



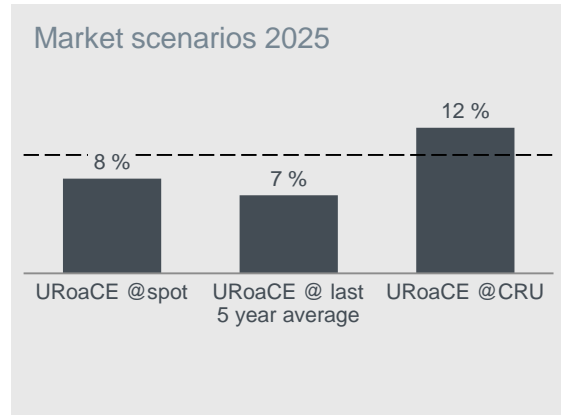
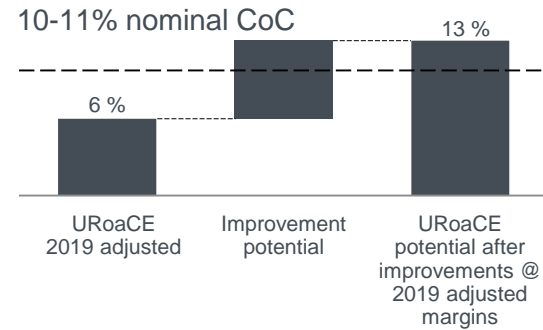


# Bauxite & Alumina roadmap to profitability



Main drivers – volumes and raw material optimization, market developments

## URoaCE potential



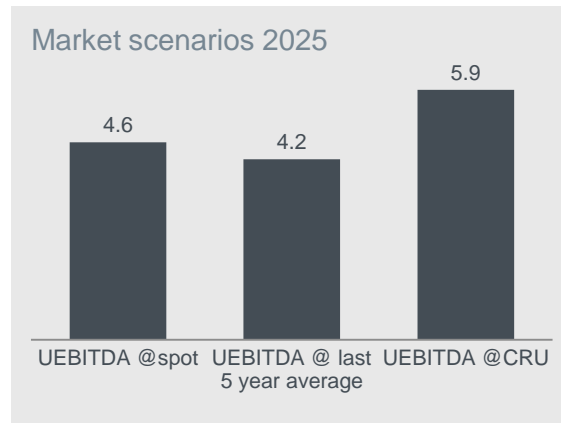
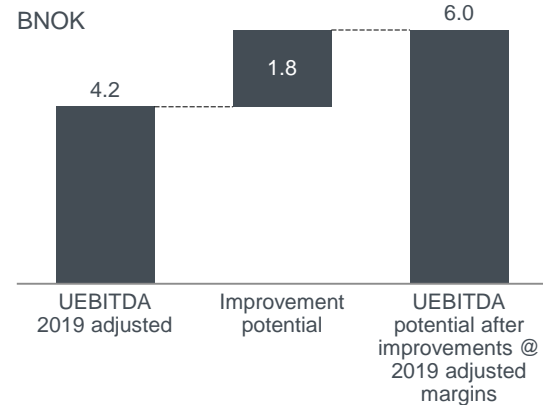
## Main further upside drivers

- Positive market and macro developments
- Commercial performance, incl. shift from LME to PAX contracts
- Fleet optimization at the mine
- Sustaining capex optimization

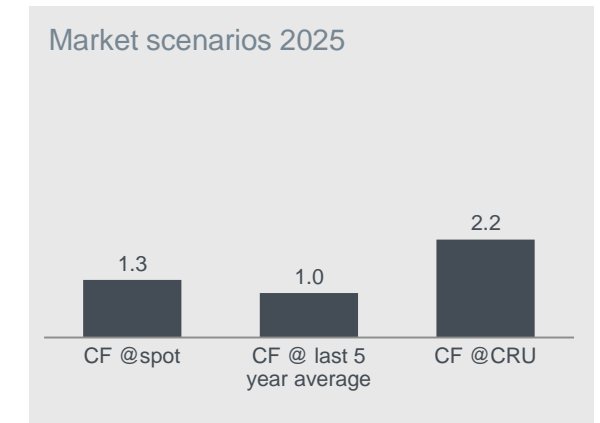
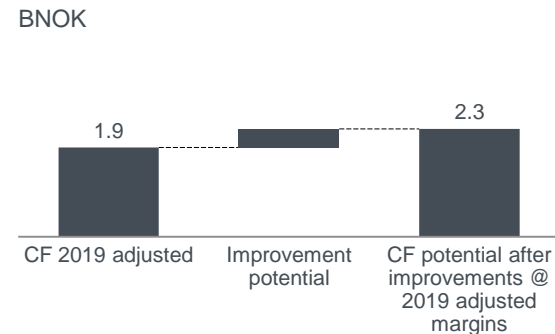
## Main downside risks

- Operational disruptions
- Negative market and macro developments
- Regulatory, CSR and country risk

## UEBITDA potential



## Cash flow potential after capex, tax



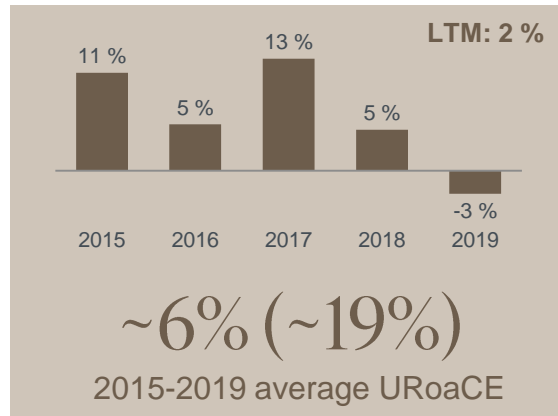
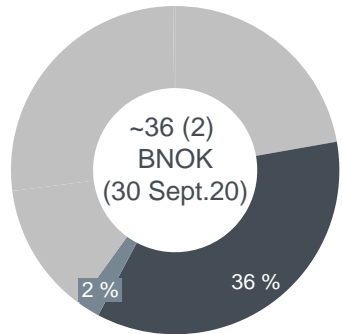
Assumptions and sources behind the scenarios can be found in the Additional information  
Sources: Republished under license from CRU International Ltd., LME, Hydro analysis

# Capital return dashboard for Primary Metal & Metal Markets



Returns below the cost of capital mainly reflecting challenging markets and the Alunorte situation.  
Good returns in recycling

Capital employed in PM (MM)



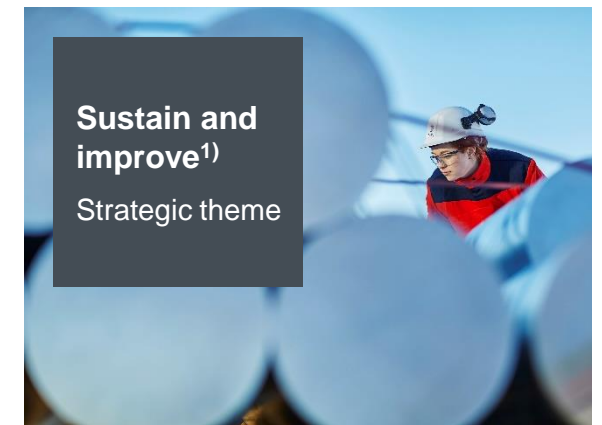
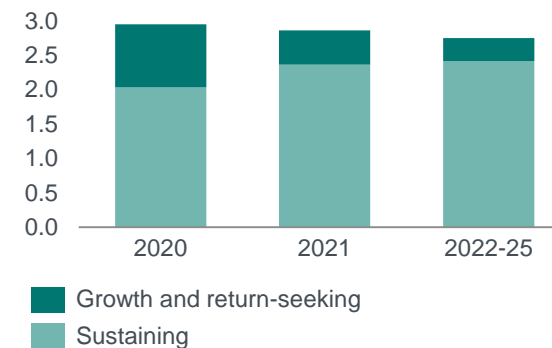
URoCE > CoC

10%-11%  
(7-8%)  
Nominal long-term  
cost of capital

3.0 + 0.3  
BNOK  
on EBITDA by 2025 in  
improvement potential and  
commercial ambitions

Potential CO<sub>2</sub>  
compensation  
from 2021

Capex, BNOK



1) Creep and recycling with high profitability

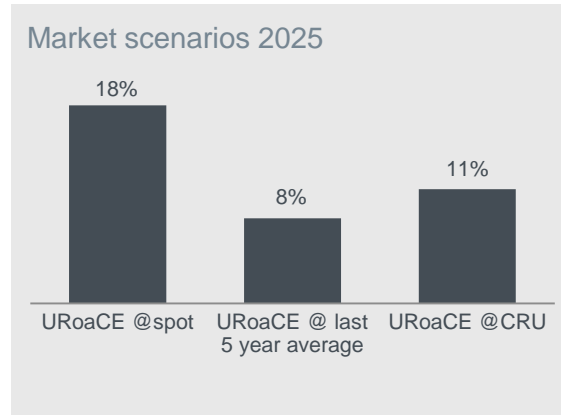
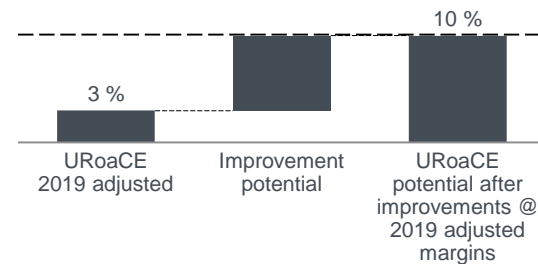
# Primary Metal and Metal Markets roadmap to profitability



Main drivers – volumes, cost reductions, efficiency gains, and market development

## URoACE potential

10-11% nominal CoC



## Main further upside drivers

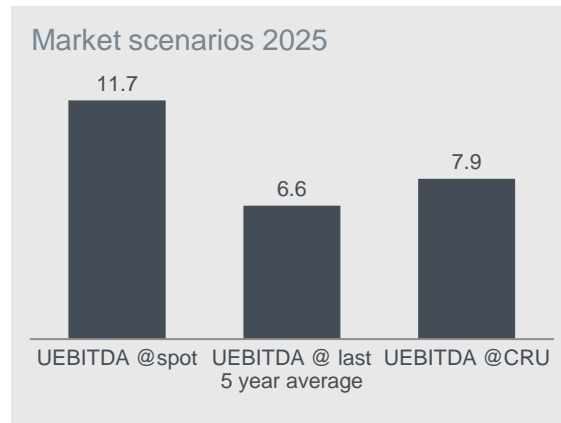
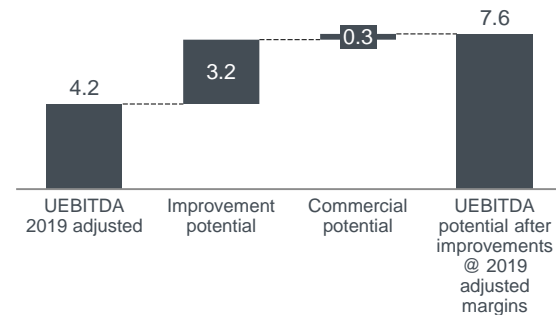
- Positive market and macro developments
- Commercial differentiation, incl. greener brands
- Additional CO2 compensation from 2021
- Recycling opportunities
- Portfolio optimization
- Further potential in automation, process control and efficiency, operational excellence

## Main downside risks

- Negative market and macro developments
- Deteriorating relative cost and market positions
- Operational disruptions and project execution
- Regulatory and country risks, incl. tax

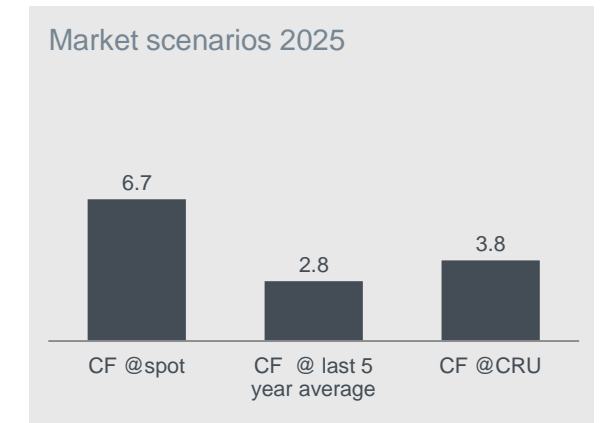
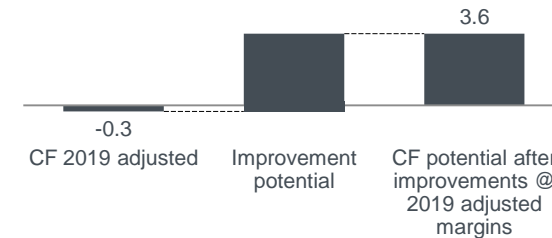
## UEBITDA potential

BNOK



## Cash flow potential after capex, tax

BNOK



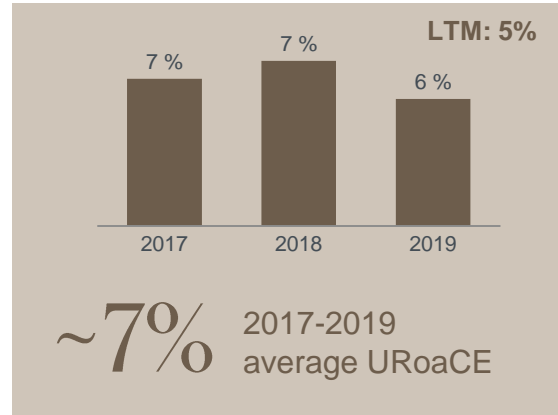
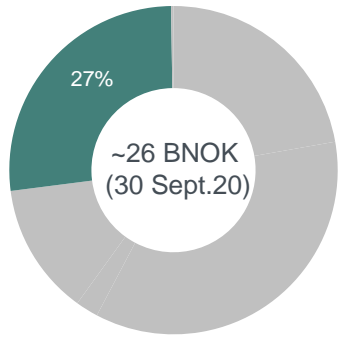
Assumptions and sources behind the scenarios can be found in the Additional information  
Sources: Republished under license from CRU International Ltd., LME, Hydro analysis

# Capital return dashboard for Extruded Solutions



Returns in line with the cost of capital reflecting leading market positions in high value segments and portfolio optimization

Capital employed in ES



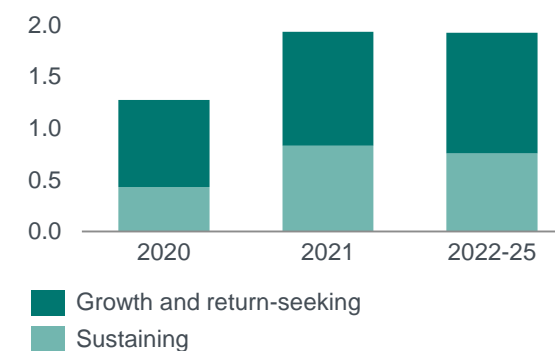
URoaCE > CoC

7-8%  
Nominal long-term cost of capital

1.3 + 1.2  
BNOK  
on EBITDA by 2025 in improvement potential and commercial ambitions

Operating and fixed cost optimization

Capex, BNOK





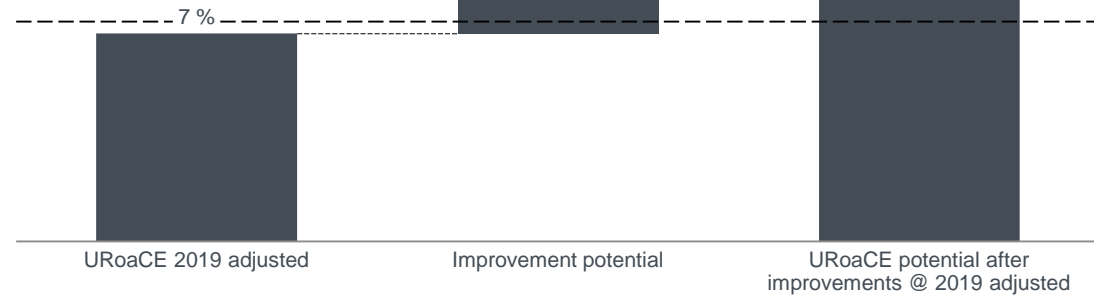
# Extruded Solutions roadmap to profitability



Main drivers – improvement program and commercial ambition

## URoaCE potential

7-8% nominal CoC



## Main further upside drivers

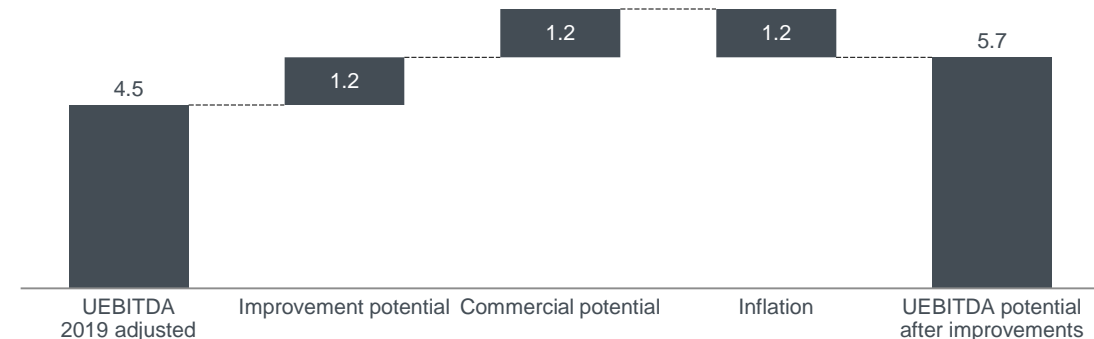
- Selective profitable growth including larger projects
- Continuous portfolio review and optimization
- Operating and fixed cost optimization
- Positive market and macro developments

## Main downside risks

- Negative market and macro developments, incl. trade restrictions
- Operational disruptions and project execution
- Loss of large customer contracts

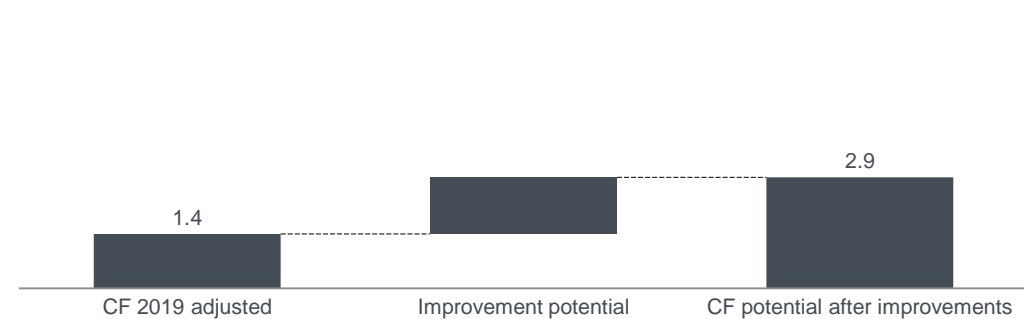
## UEBITDA potential

BNOK



## Cash flow potential after capex and tax

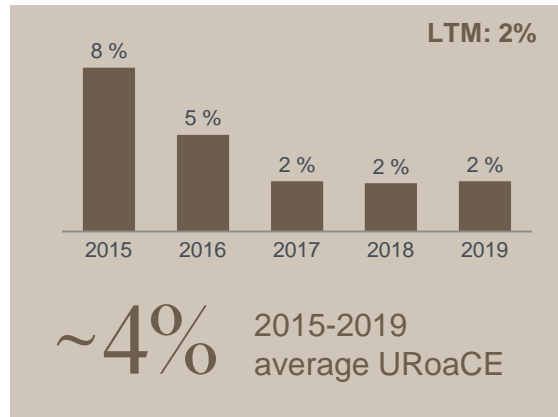
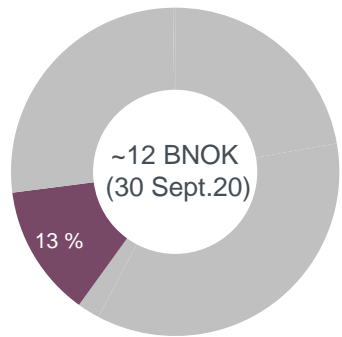
BNOK



# Capital return dashboard for Rolled Products

Returns below the cost of capital due to continuous margin pressure and operational challenges

Capital employed in RP



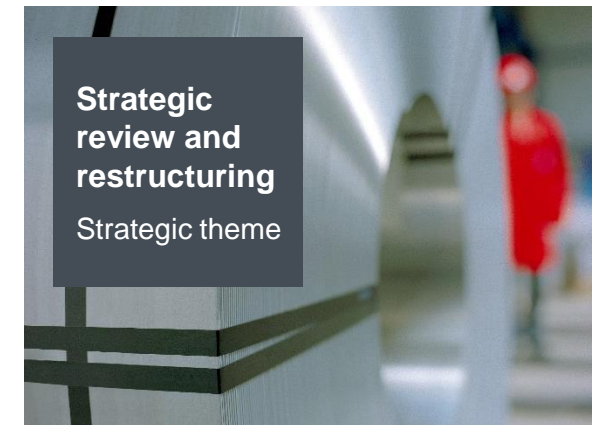
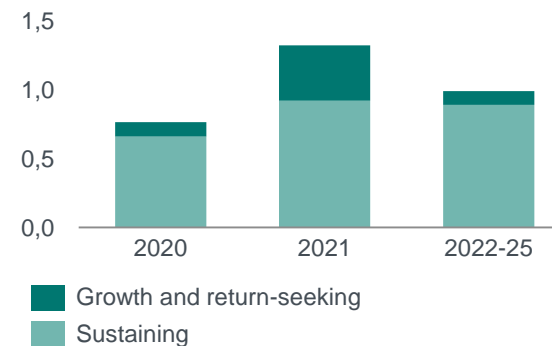
URoCE > CoC

7-8%  
Nominal long-term cost of capital<sup>1)</sup>

1.1 + 0.5  
BNOK  
on EBITDA by 2025 in improvement potential and commercial ambitions

Strategic review process

Capex<sup>2)</sup>, BNOK



1) Relevant for the rolling business. CoC for the Neuss smelter in line with 10-11% for the upstream business  
2) Excluding limited capital expenditures related to the manning reduction.

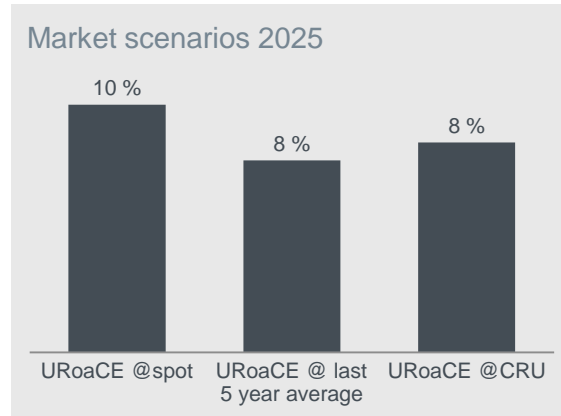
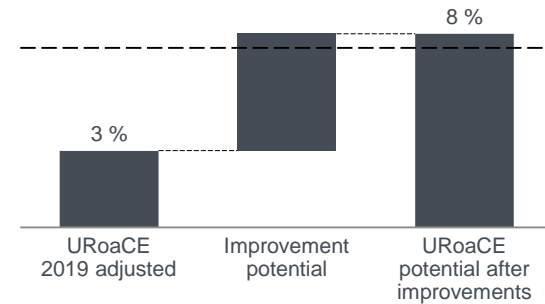
# Rolled Products roadmap to profitability



Main drivers – restructuring focused on cost and efficiency improvements

## URoACE potential

7-8% nominal CoC



## Main further upside drivers

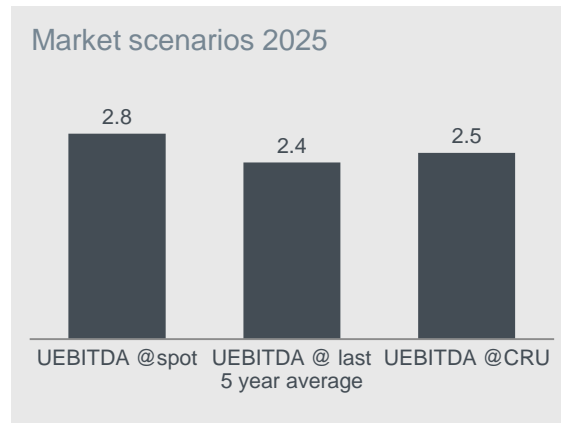
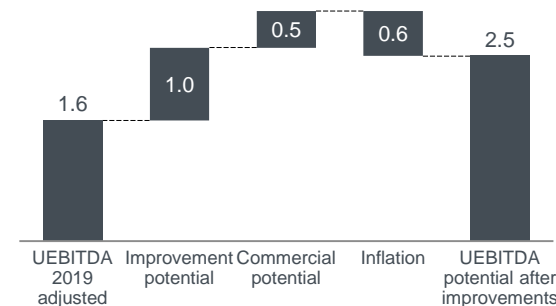
- Growth in attractive market segments
- Recycling (Metal cost optimization)
- Process improvements with digitization and automation
- Outcome of strategic review
- Positive market and macro developments

## Main downside risks

- Negative market and macro developments, incl. trade restrictions
- Increased competition
- Operational disruptions and performance
- Restructuring execution

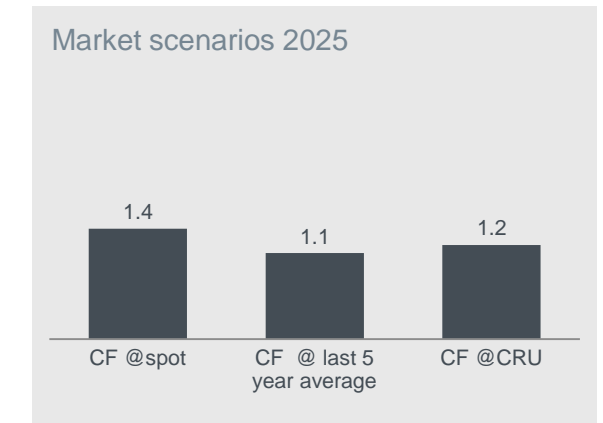
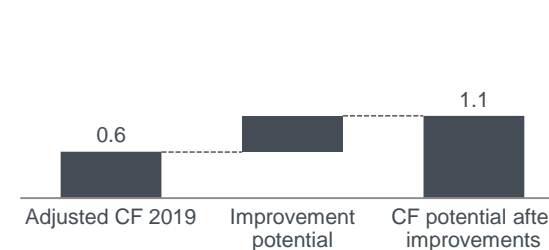
## UEBITDA potential

BNOK



## Cash flow potential after capex and tax

BNOK

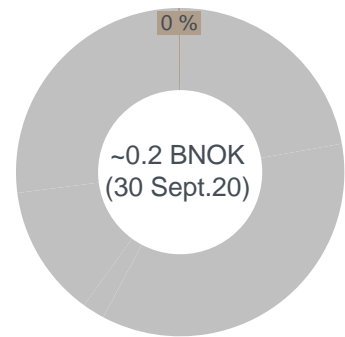


# Capital return dashboard for Energy

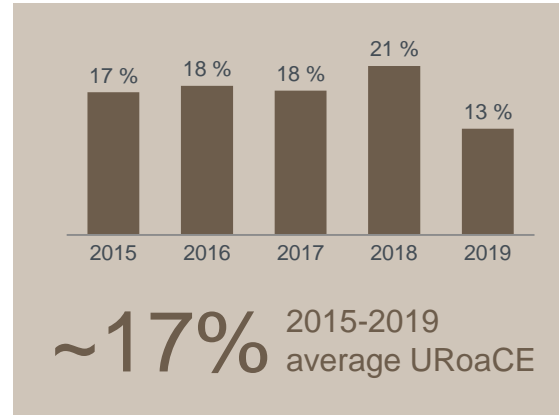


Returns above the cost of capital reflecting the depreciated asset base

## Capital employed in Energy



The RSK-Lyse transaction expected to increase capital employed from 2021



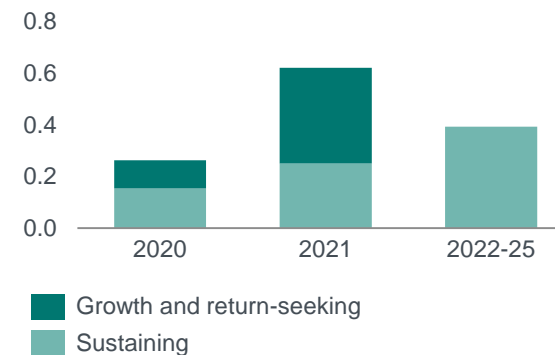
URoaCE > CoC

6-7%  
Nominal long-term cost of capital

0.1 BNOK  
on EBITDA by 2025 in improvement potential

0.7 BNOK  
in EBIT upside due to the new contract portfolio from 2021

## Capex, BNOK

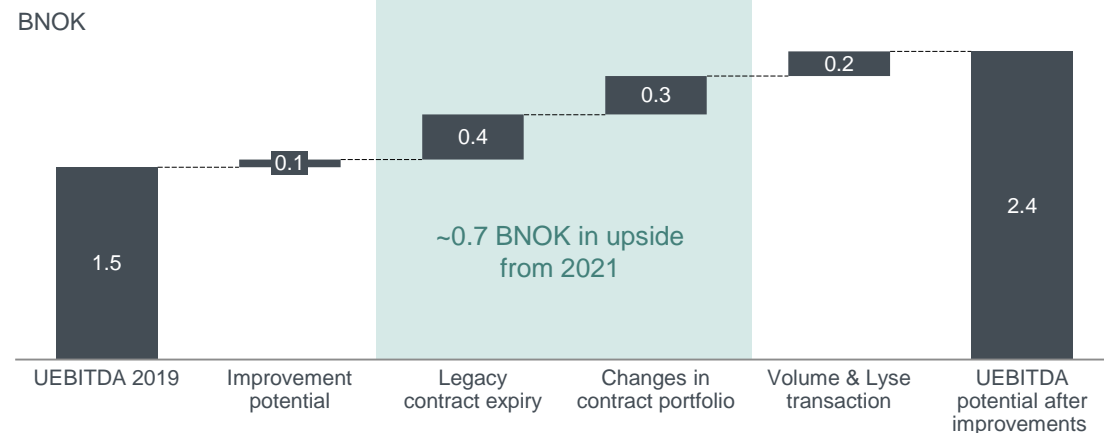




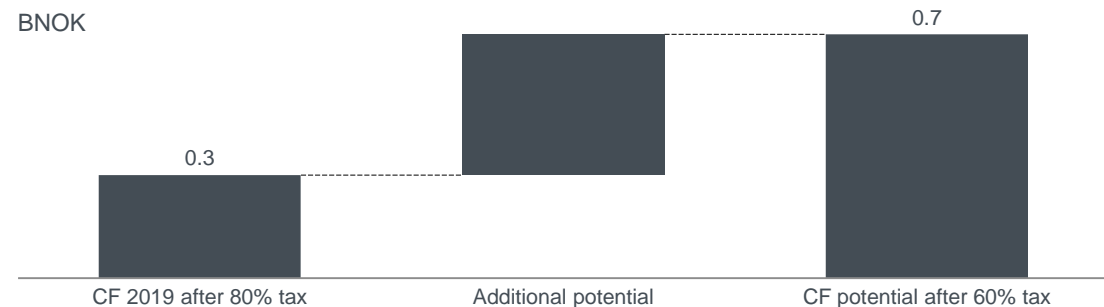
# Energy with an upside to cash generation

Main drivers – changes in contract portfolio from 2021

## UEBITDA potential <sup>1)</sup>



## Cash flow potential after capex and tax<sup>3)</sup>



~0.9 BNOK in upside from 2021

- ~0.4 BNOK from expiry of the legacy supply contract entered in 2008
- ~0.3 BNOK due to the changes in contract portfolio, incl. a new 8TWh internal EUR denominated contract with Primary Metal in Norway
  - Net power sourcing cost, internal and external, to Primary Metal largely unchanged<sup>2)</sup>
- ~ 0.2 BNOK from increased volumes from low 2019 levels (9.2 TWh), adjusted for effect of RSK-Lyse transaction (volumes 9.4 TWh and higher quality assets)

## Main further upside drivers

- Additional growth opportunities
- Further commercial and operational improvements
- Positive market and macro developments

## Main downside risks

- Negative market and macro developments
- Regulatory and framework conditions, incl. tax
- New project execution

## New Energy initiatives

- In addition, there are growth projects in Renewable Growth and Batteries that have not been included in the UEBITDA potential

Assumptions behind the scenarios can be found in the Additional information

1) Does not reflect accounting effects relating to the RSK-Lyse transaction (e.g equity accounted investment)

2) The contract is priced in accordance with average external contract prices. EUR/NOK exposure in PM increases from 2021 as a result of the new contract portfolio. As such, power costs in PM will vary with the EUR/NOK exchange rate.

3) Effective tax rate for Energy is expected to decrease from around 80% in 2019 to around 60% from 2021 mainly due to expiry of legacy contract and positive EBIT effects not being subject to resource rent tax

# Guidance 2021



## Alunorte production:

- Nameplate capacity (6.3 mt)

## Primary Metal and Metal Markets

- Liquid production around 2.2 – 2.3 million tonnes
- Remelter production back to normal levels at around 550 kt

## Extruded Solutions and Rolled Products

- 2021 volumes expected to be broadly in line with market growth estimates

## Energy:

- Estimate normal production levels (9.4 TWh)

## Hedges:

- B&A BRLUSD Hedge
  - USD 383 million sold forward for 2021 and 2022 at average rate of 5.53 BRL/USD
    - USD 194 million 2021 at rate 5.46
    - USD 189 million 2022 at rate 5.61
- USDBRL hedge in Alunorte, 30% of B&A exposure, 2021-22
- Margin hedge 100 kt 2021 (LME, caustic soda, fuel oil, done in NOK/t). Allocated to PM and B&A, including fixed price alumina agreement

## Reporting metrics from 2021

- Target to maintain Adjusted net debt excl EAI / uEBITDA < 2x over the cycle <sup>1)</sup>
- EBITDA main performance metric going forward

1) Consistent with previous target to maintain funds from operations / Adjusted net debt incl EAI > 40% over the cycle

# To conclude – Why invest in Hydro?



## Attractive asset base

1st and 2nd  
quartile cost  
performance  
upstream



## Strong market positions downstream

~45%  
of total downstream  
volumes in growth  
segments<sup>1)</sup>



## Greener products leadership

2.3 and 4.0  
tons CO2 per ton  
aluminium in  
greener products



## Robust cash position and balance sheet

2x  
Adjusted net debt  
excl. EAI / uEBITDA  
and IG<sup>2)</sup> rating



## Strong shareholder focus

11  
consecutive years of  
dividend payout



## Sustainable growth journey

Investment in  
recycling, renewable  
growth, and battery  
value chain



1) Growth segments including automotive, can and building & construction, based on 2019 exposures 2) Investment grade

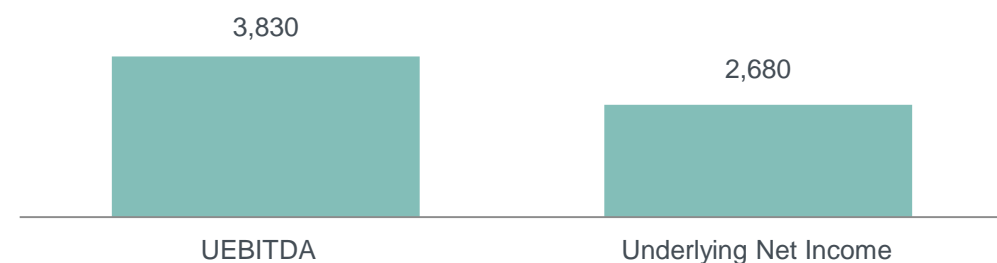


# Additional information

# Significant exposure to commodity and currency fluctuations

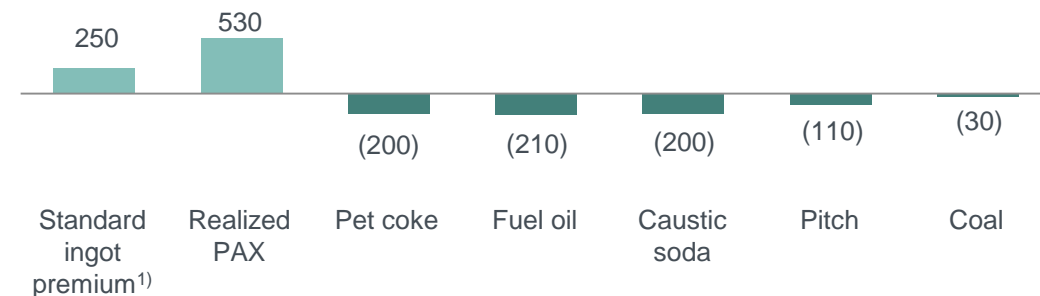
## Aluminium price sensitivity +10%

NOK million



## Other commodity prices, sensitivity +10%

NOK million



## Currency sensitivities +10%

Sustainable effect:

NOK million	USD	BRL	EUR
UEBITDA	3 030	(850)	(230)

One-off reevaluation effect:

Financial items	(40)	770	(3 900)
-----------------	------	-----	---------

- Annual underlying (unhedged) sensitivities based on normal annual business volumes. LME USD 2 015 per mt, standard ingot premium 120 USD/mt, PAX 280 USD/mt, fuel oil USD 350 per mt, petroleum coke USD 240 per mt, pitch 580 EUR/t, caustic soda USD 360 per mt, coal USD 40 per mt, USD/NOK 8.80, BRL/NOK 1.70, EUR/NOK 10.67
- Aluminium price sensitivity is net of aluminium price indexed costs and excluding unrealized effects related to operational hedging
- BRL sensitivity calculated on a long-term basis with fuel oil assumed in USD. In the short-term, fuel oil is BRL-denominated
- Excludes effects of priced contracts in currencies different from underlying currency exposure (transaction exposure)
- Currency sensitivity on financial items includes effects from intercompany positions
- 2021 Platts alumina index (PAX) exposure used
- U NI sensitivity calculated as UEBITDA sensitivity after 30% tax

1) Europe duty paid

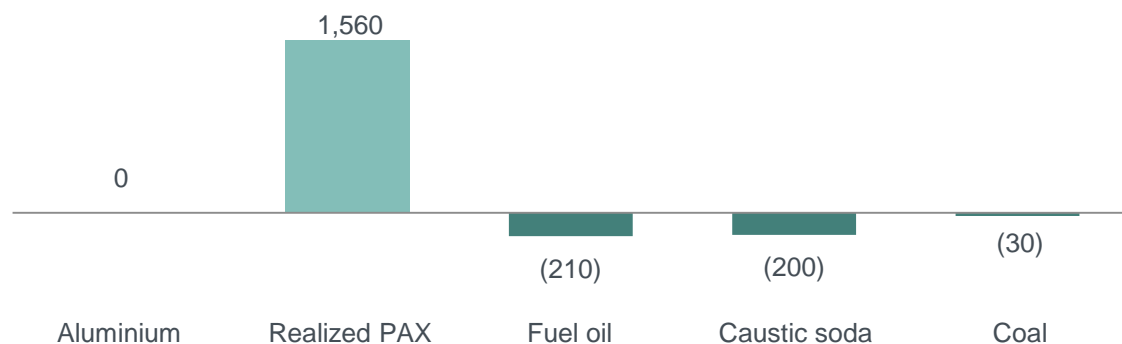


# Bauxite & Alumina sensitivities



## Annual sensitivities on underlying EBITDA if +10% in price

NOK million



## Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBITDA	940	(470)	-

## Revenue impact

- ~14% of 3-month LME price per tonne alumina with one month lag
- Realized alumina price lags PAX by one month

## Cost impact

### *Bauxite*

- ~2.45 tonnes bauxite per tonne alumina
- Pricing partly LME-linked

### *Caustic soda*

- ~0.1 tonnes per tonne alumina
- Prices based on IHS Chemical, pricing mainly monthly per shipment

### *Energy*

- ~0.12 tonnes coal per tonne alumina, Platts prices, one year volume contracts, weekly per shipment pricing
- ~0.11 tonnes heavy fuel oil per tonne alumina, prices set by ANP/Petrobras in Brazil, weekly pricing (ANP) or anytime (Petrobras)
- Increased use of coal as energy source in Alunorte

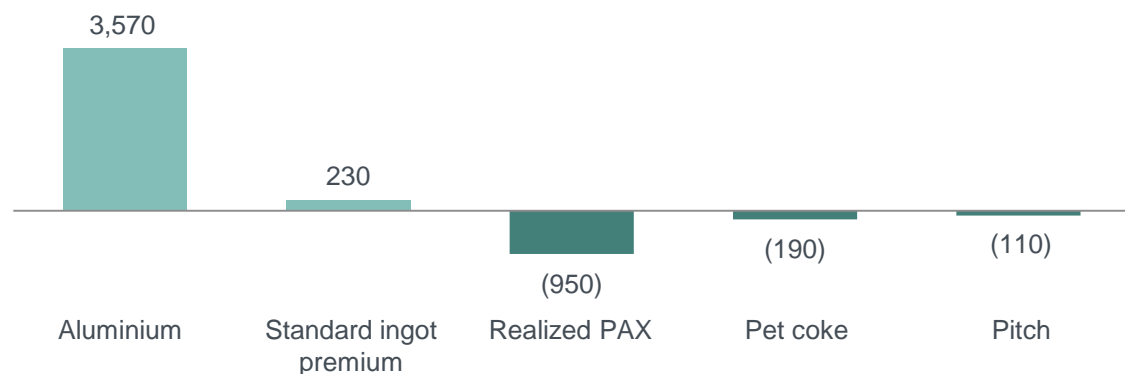
Annual underlying (unhedged) sensitivities based on normal annual business volumes. LME USD 2 015 per mt, standard ingot premium 120 USD/mt, PAX 280 USD/mt, fuel oil USD 350 per mt, petroleum coke USD 240 per mt, pitch 580 EUR/t, caustic soda USD 360 per mt, coal USD 40 per mt, USD/NOK 8.80, BRL/NOK 1.70, EUR/NOK 10.67  
BRL sensitivity calculated on a long-term basis with fuel oil assumed in USD. In the short-term, fuel oil is BRL-denominated. 2021 Platts alumina index (PAX) exposure used

# Primary Metal sensitivities



## Annual sensitivities on underlying EBITDA if +10% in price

NOK million



## Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBITDA	2 500	(550)	(250)

## Revenue impact

- Realized price lags LME spot by ~1-2 months
- Realized premium lags market premium by ~2-3 months

## Cost impact

### Alumina

- ~1.9 tonnes per tonne aluminium
- ~14.5% of 3-month LME price per tonne alumina, increasing volumes priced on Platts index
- ~ 2-3 months lag

### Carbon

- ~0.40 tonnes petroleum coke per tonne aluminium, Pace Jacobs Consultancy, 2-3 year volume contracts, quarterly or half yearly pricing
- ~0.08 tonnes pitch per tonne aluminium, CRU, 2-3 year volume contracts, quarterly pricing

### Power

- 14.0 MWh per tonne aluminium
- Long-term power contracts with indexations

# Assumptions behind scenarios



Scenarios are not forecasts, but illustrative earnings, cash flow and return potential based on sensitivities

- Starting point – UEBITDA 2019 with LME price adjusted to 2016-2018 average, PAX to 17% of LME, and adjusted for Alunorte curtailment Q1-Q2, cyber attack and portfolio changes in Energy. Production, fixed costs and other raw material costs as realized in 2018
- Upstream improvement potential based on fixed real 2019 margins. Downstream improvement programs adjusted for inflation
- Cash flow calculated as UEBITDA less EBIT tax and 2022-2025 average capex, less 1.25 NOK/share in dividend floor for the Hydro Group
  - Tax rates: 25% for business areas, 60% for Energy
- URoaCE calculated as UEBIT after tax divided by capital employed Q3-20
- The actual earnings, cash flows and returns will be affected by other factors not included in the scenarios, including, but not limited to:
  - Production volumes, alumina sales priced on PAX, raw material prices, downstream margin developments, premiums, inflation, currency, depreciation, taxes, investments, interest expense, competitors' cost positions, and others

## Price assumptions

	2019		2025	
		Spot	5-year average	CRU
Starting point, USD/t	LME 1811 PAX 343 USDNOK 8.8 BRLNOK 2.23			
Prices used in scenarios				
LME USD/t	1900 (2016-18 average)	2015	1830	2075 (deflated by 2%)
PAX, USD/t	330	280	308 <sup>1</sup>	355 (deflated by 2%)
USDNOK	8.8	8.8	8.58	8.73
BRLNOK	2.23	1.7	2.3	2.05

Next events

# Q4 Presentation February 12, 2021

For more information see  
[www.hydro.com/ir](http://www.hydro.com/ir)

## Investor Relations in Hydro



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**Hydro**

*Industries that matter*