



# Fourth quarter 2019 Investor presentation

February 2020

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## 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.



Fourth quarter results 2019

# Firm response in weak markets

Hilde Merete Aasheim,  
President and CEO



# Fourth quarter highlights

- Underlying EBIT of NOK 560 million
- Challenging markets weighing on results
- BNOK 1 in improvement program delivered in 2019, above target of BNOK 0.5
- Cash release in 2019
  - Net operating capital release of BNOK 5.6
  - Capex 9.6 BNOK, reduced from 10.5 BNOK guidance
- Increasing sales of low-carbon products
- Proposed dividend for 2019 of NOK 1.25 per share\*

\* Pending approval from the AGM on May 11, 2020





# Macroeconomic uncertainty affects our markets



Climate policies and Green Deal create opportunities for Hydro



2114	20151	博士眼镜	2345	022	2341	2344	3608
045	4280	捷捷微电	7476	146	7476	7507	25086
829	33343	万兴科技	14289	1299	14289	---	50137
-876	7545	三雄极光	2385	004	2384	2385	10713
2297	9205	华瑞股份	25	-024	2549	2550	2525
528	2397	华测导航	5	032	5994	5997	20589
411	3382	亿联网络	14	571	14646	14648	9000
5610	3323	新劲刚	4	036	4850	4856	3963
508	3697	普利制药		-011	8220	8239	2072
179	8534	久吾高科		060	2857	2858	10914
685	14238	光莆股份		-020	2056	2060	5219
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# Lower Extruded Solutions sales in 2019

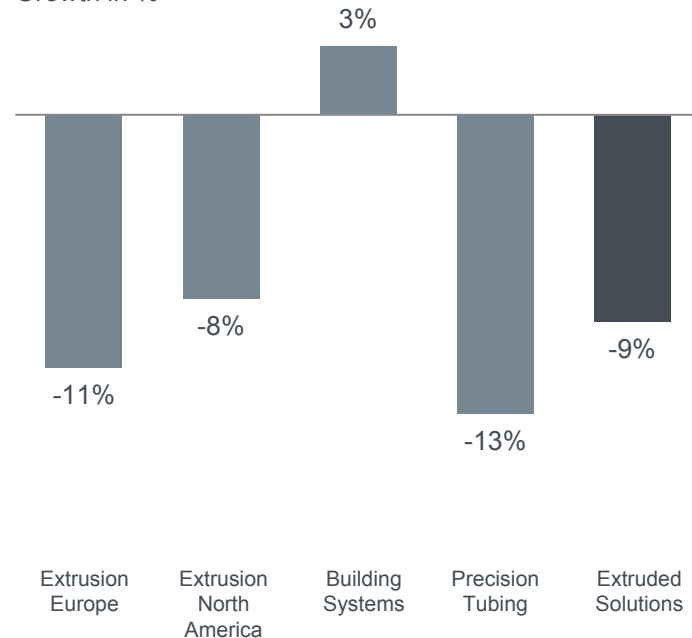


Challenging markets continuing into 2020

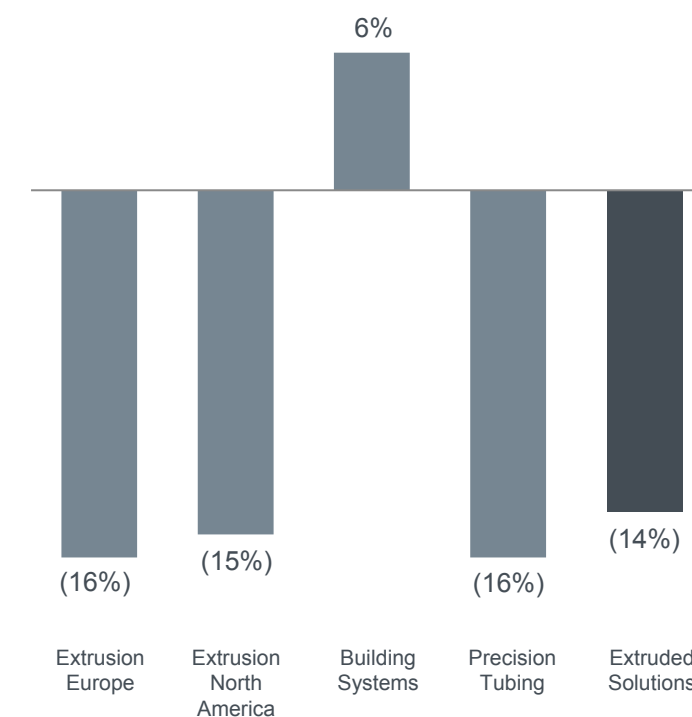
## 2019 vs 2018

Extruded Solutions sales volume

Growth in %



## Q4 2019 vs Q4 2018



## Extruded Solutions volume decline in 2019

- Declining market demand
- Cyber attack impact

## Extrusion market outlook 2020

- Declining trend in 2019 expected to continue into 2020 on overall economic uncertainty
- European market affected by weak automotive and transportation markets, low industrial activity in general
- North American market heavily affected by negative development in truck & trailer
- Limited visibility going forward



# Stable Rolled Products total sales in 2019

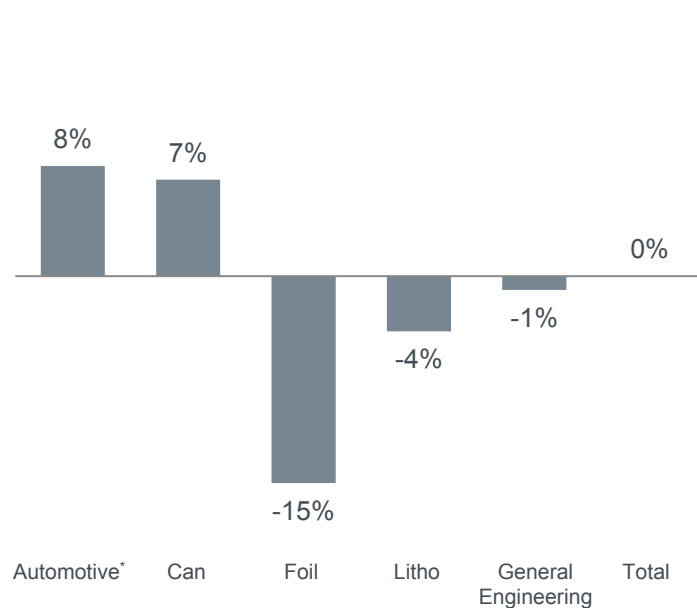


Portfolio shift towards higher-margin segments

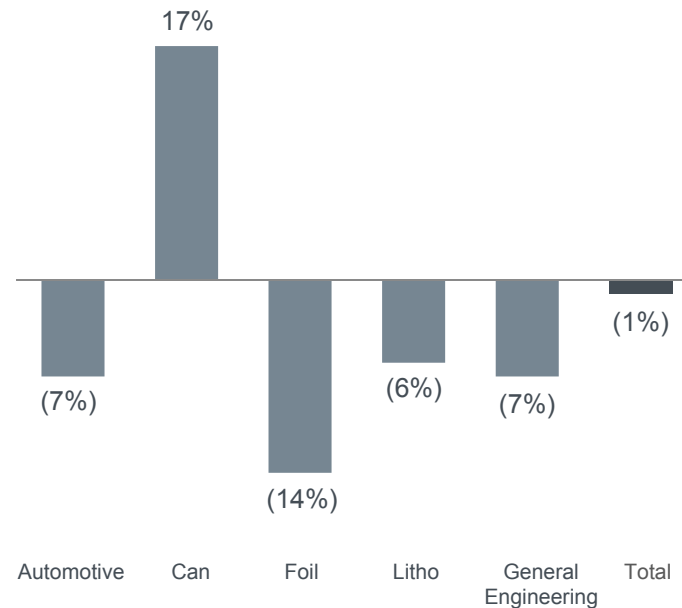
## 2019 vs 2018

Rolled Products sales volume

Growth in %



## Q4 2019 vs Q4 2018



## Stable Rolled Products volumes in 2019

- Strategic growth in automotive and beverage can supported by market substitution
- General engineering, foil and litho down on soft demand and higher competition from China

## Rolling market outlook 2020

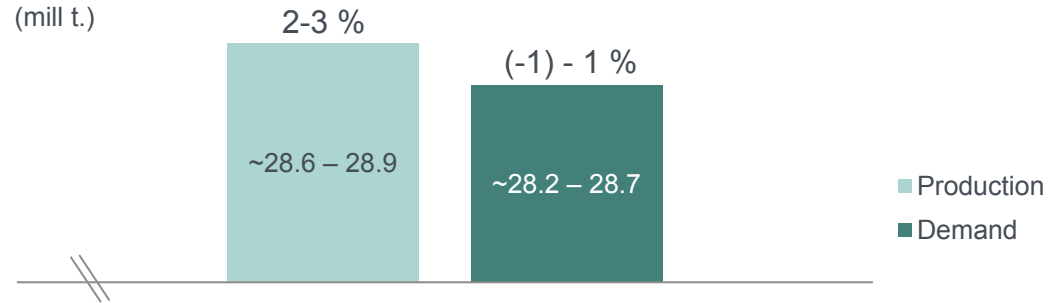
- Overall flat development expected for 2020 in Europe amid economic uncertainty
- Automotive light-weighting continues to drive demand, but negatively affected by current economic environment
- Solid growth rates in packaging, driven by beverage can substitution
- Continued soft demand for general engineering, foil and litho

\* Include Body-in-White sales growth of 12% 2019 vs 2018

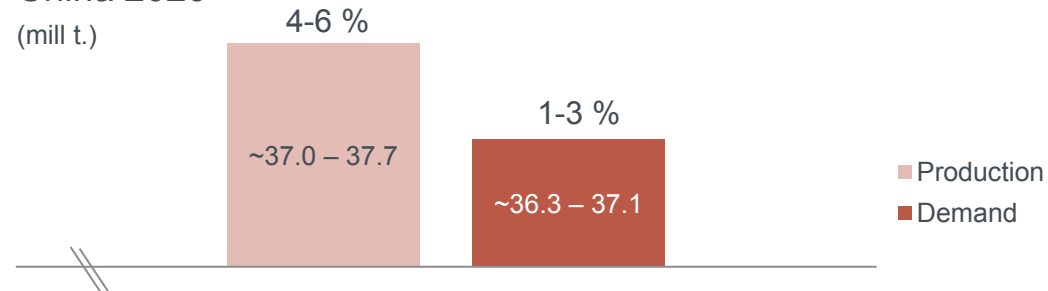
# Surplus expected for 2020 amid higher Chinese production growth and largely balanced market outside China

2020 global demand growth expected at 0 - 2%

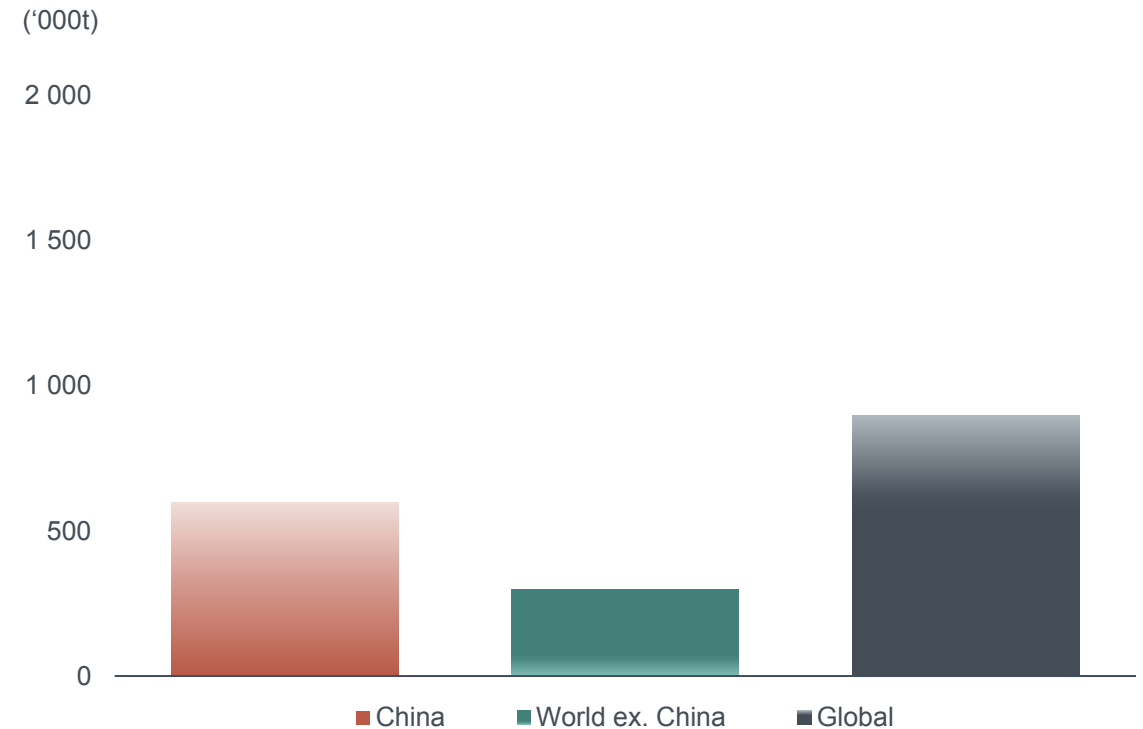
World ex. China 2020  
(mill t.)



China 2020  
(mill t.)



Estimated primary market balance 2020  
(‘000t)



Source: CRU, Hydro analysis  
%: Growth from 2019 to 2020

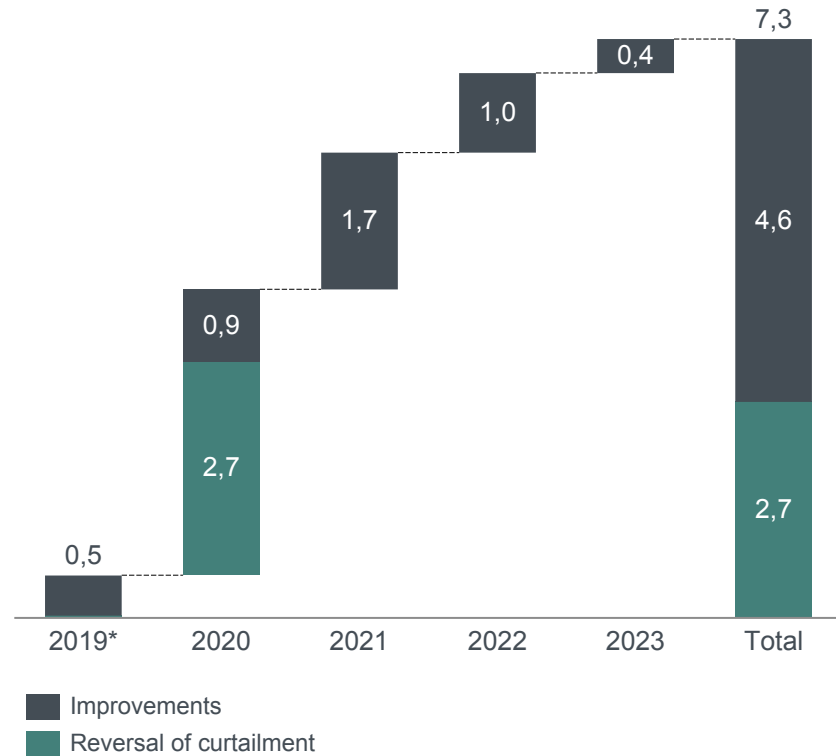


# Improvement program ahead of target

Realizing BNOK 1 in improvements, ahead of BNOK 0.5 BNOK target for 2019

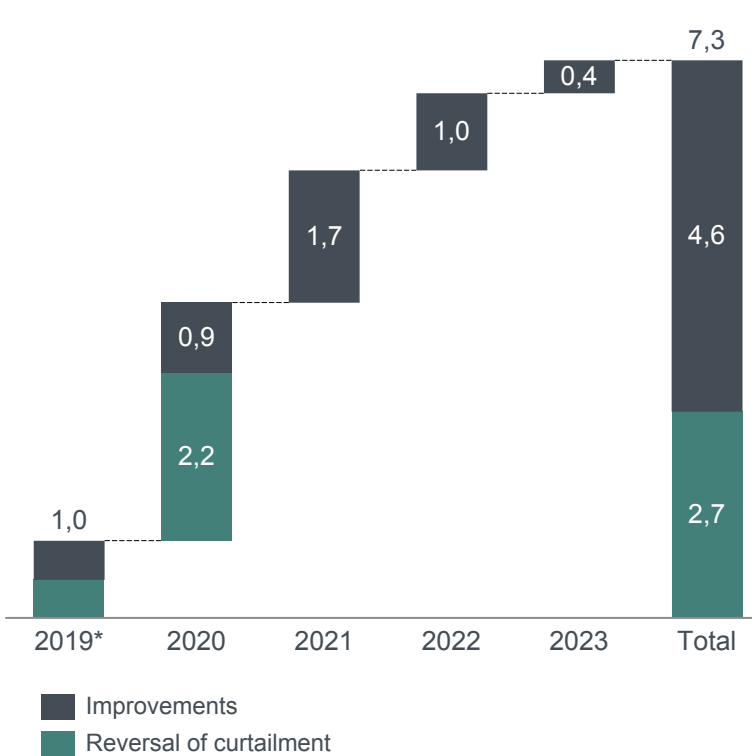
## Planned improvements

In NOK billion



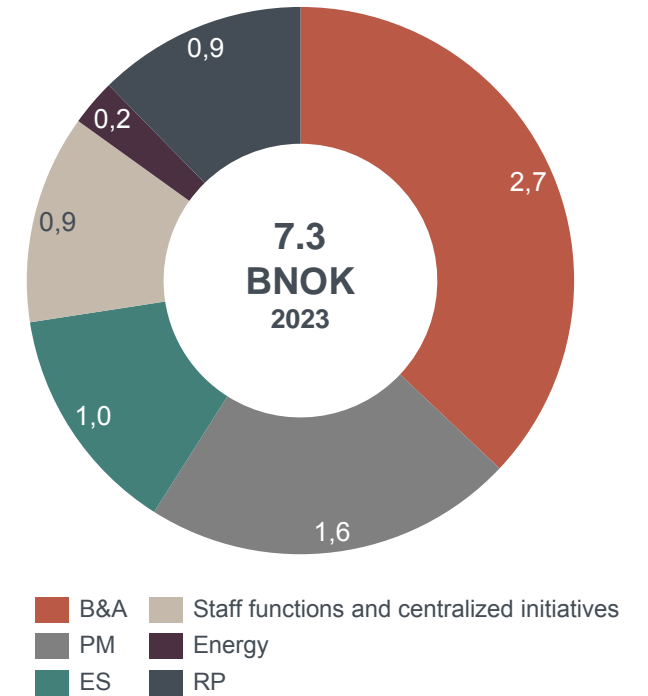
## Improvement status end-2019

In NOK billion



## Improvements by business area

In NOK billion



\* Excludes negative effects of cyber attack for Extruded Solutions . ~10-11 BNOK in capex required to meet the improvement targets

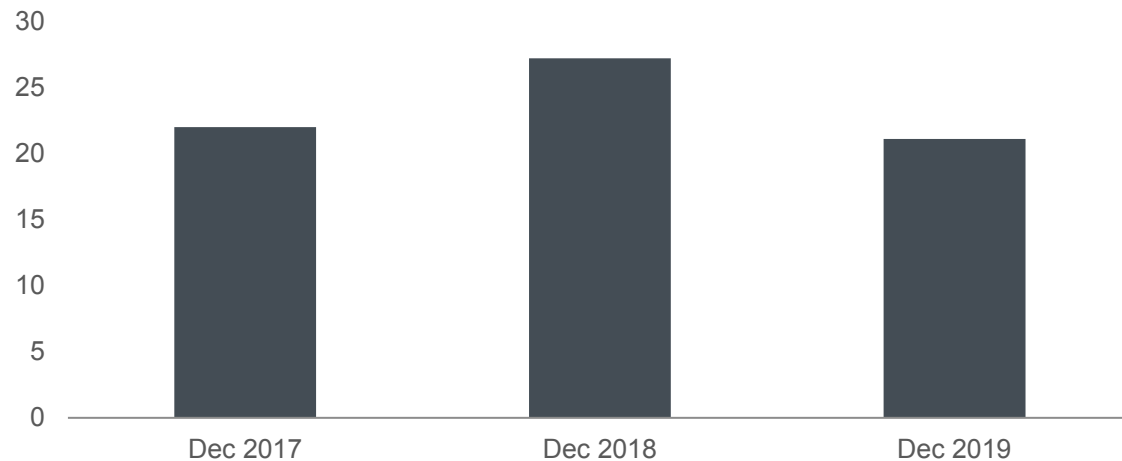
# Cash release ahead of target



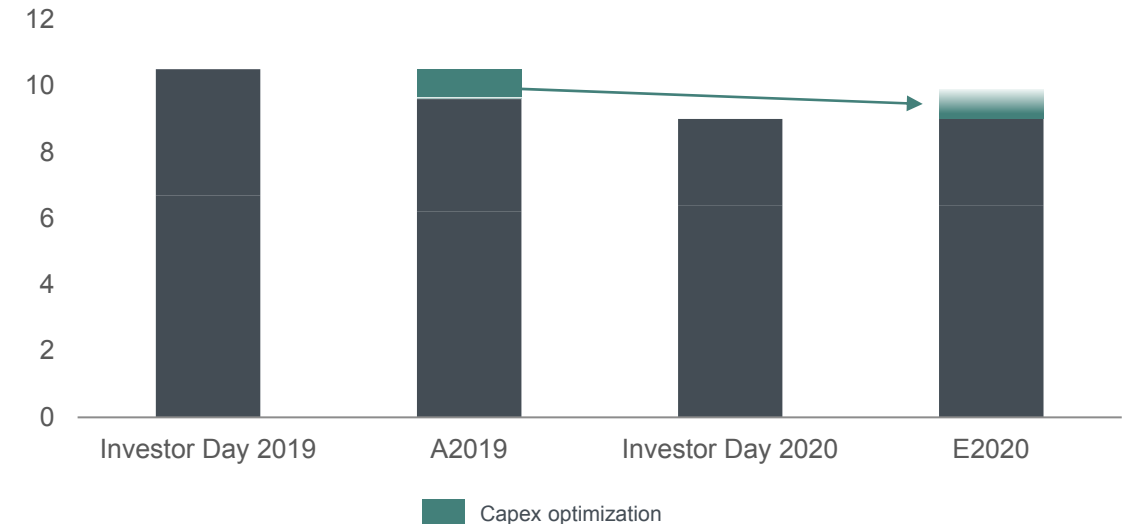
## BNOK 5.6 cash release from net operating capital in 2019

- Net operating capital release of BNOK 5.6 in 2019, above targeted BNOK ~4
- Inventories reduced across all business areas
- Seasonal increase in net operating capital expected in Q1
- 2019 capex BNOK 0.9 below Investor Day estimate
- Capex optimization – moving majority out in time, while evaluating further capex reduction measures

NOC book value in BNOK



Capital expenditure in BNOK

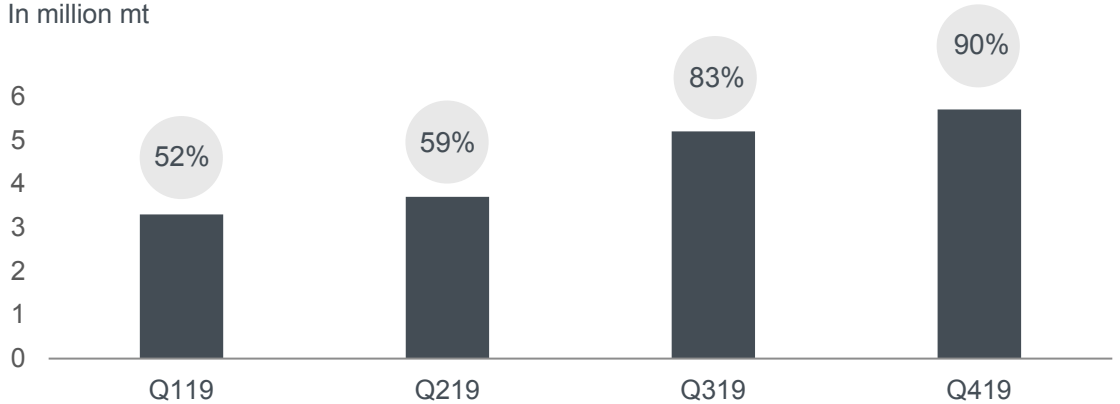




# Bauxite & Alumina improvements ahead of schedule on faster than planned Alunorte ramp-up

Implied alumina cost at pre-curtailment levels

Successful ramp-up at Alunorte, 9<sup>th</sup> pressfilter in operation

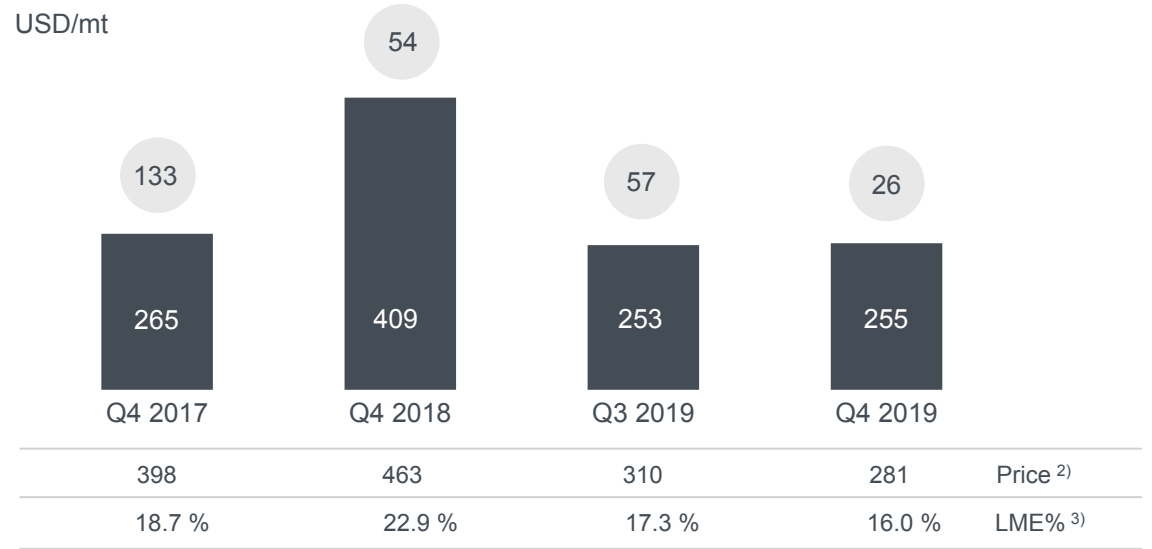


## Ramp up continues, high focus on cash

- Alunorte plan to produce at 90-95% of nameplate in 2020
- Large investments postponed and further capex reduction measures evaluated
- 2019 net operating capital release of BNOK 0.9

XX% Capacity utilization

Implied alumina cost and margin



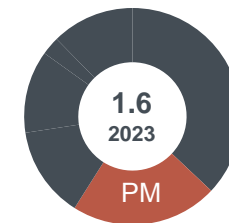
- Implied alumina cost mainly stable in Q419 vs Q319
- Increased production, reduced alumina sourcing costs and positive currency effects from weakening BRL vs USD, offset by increased costs, including Paragominas power outage

■ Implied EBITDA cost per mt<sup>1)</sup> ● EBITDA margin per mt

1) Realized alumina price minus underlying EBITDA for B&A, per mt alumina sales  
 2) Realized alumina price  
 3) Realized alumina price as % of three-month LME price

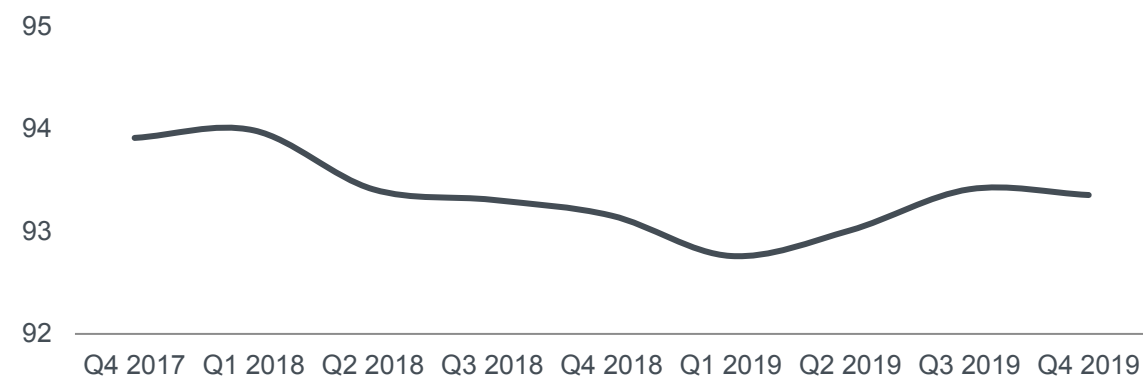
# Primary Metal improves operations, while taking action in challenging markets and preserving cash

Implied costs return to pre-curtailment levels



## Operational parameters improving through 2019

Current efficiency Norwegian primary smelters, in %

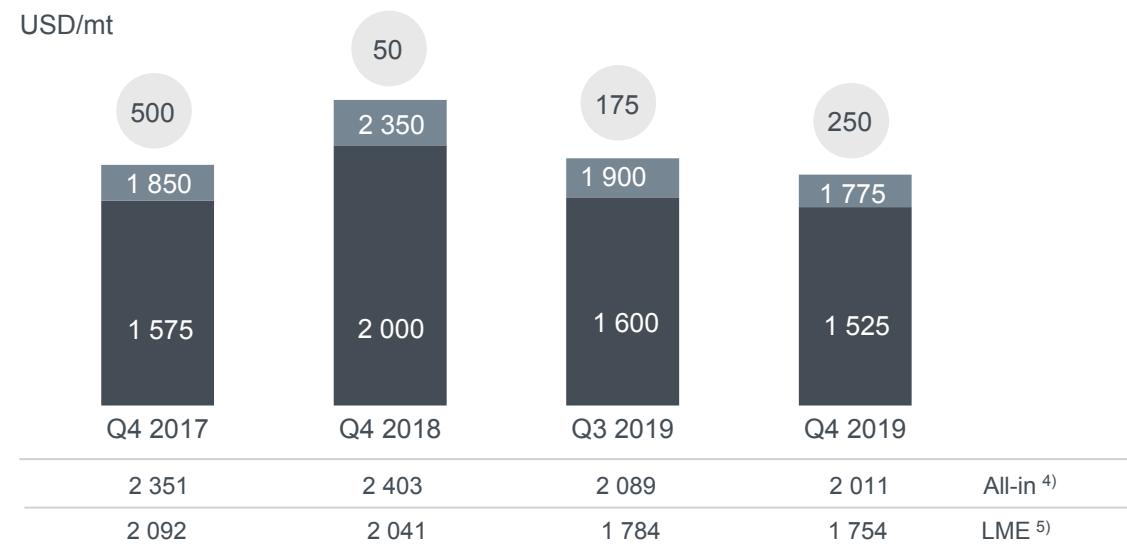


## Responding to challenging markets, high focus on cash

- Reduced casthouse production
- 20% curtailment of Slovalco
- 2019 net operating capital release of BNOK 2.8<sup>1)</sup>

## All-in implied primary cost and margin

USD/mt



- Implied primary cost down in Q419 vs Q319 on reduced raw material costs, mainly alumina

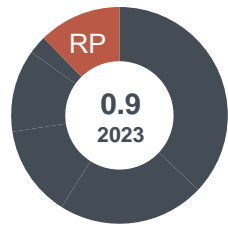
■ All-in Implied EBITDA cost per mt<sup>2)</sup> ■ LME Implied EBITDA cost per mt<sup>3)</sup> ● All-in EBITDA margin per mt

1) Primary Metal and Metal Markets  
 2) Realized all-in aluminium price less underlying EBITDA margin, incl Qatalum, per mt aluminium sold.  
 3) Realized LME aluminium price less underlying EBITDA margin, incl Qatalum, per mt primary aluminium produced  
 4) Realized LME plus realized premiums, including Qatalum

5) Realized LME, including Qatalum  
 Implied primary cost and margin rounded to nearest USD 25

# Improvement activities at full speed in Rolled Products

Strategic review continues



## Improvement initiatives

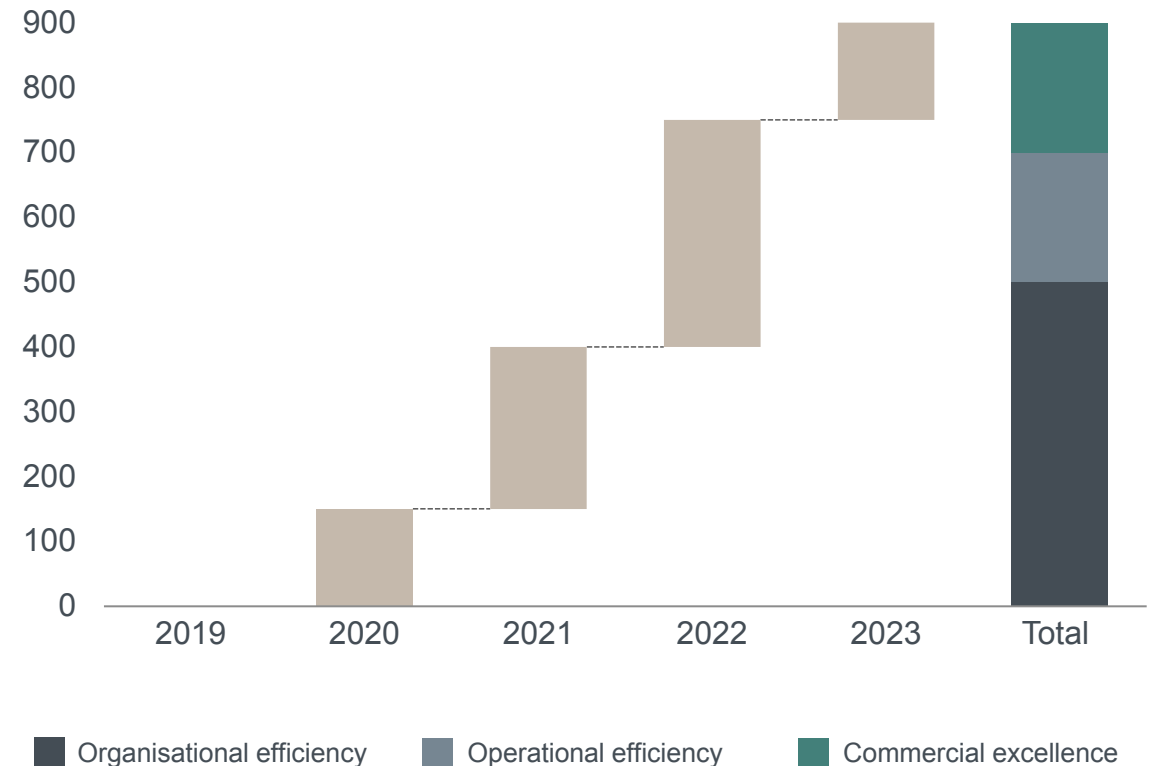
- Restructuring of Grevenbroich well on its way
  - One foil line closed, additional foil line to close during 2020
- Executing on manning reductions – ~25% signed
- Significant pipeline of procurement initiatives, maturing to implementation, with first savings confirmed
- Targeting metal cost improvements through increased recycling and UBC improvements delivered in 2019
- Shifting volumes from foil and litho to more attractive market segments, such as automotive and can

## Cash release

- 2019 net operating capital release of BNOK 0.6

## Strategic review ongoing

Rolled Products improvements per year and category  
In MNOK



# Extruded Solutions delivering improvements through restructuring and cost improvements

## Improvement initiatives

- 2019 actions to optimize and streamline portfolio:
  - Full plant closures in Redditch (UK), Rotherham (UK), Pinto (Spain), Belton (US), Kalamazoo (US)
  - Warehouse closures in Wakefield (UK), Lodz (Poland), Bangalore (India)
  - Office closure in Dusseldorf (Germany)
  - Considerable simplification and demanning in Tewkesbury (UK), Drunen (Netherlands), Szekesfehervar (Hungary), Tønder (Denmark), Vetlanda (Sweden), Itu (Brazil), Tubarao (Brazil), Utinga (Brazil), Kuppam (India)
  - Divestment of operations in Santa Oliva (Spain), Ho Chi Minh JV (Vietnam), Chisineu Cris (Romania)
- 2020 impact of initiatives above estimated to MNOK ~300, supporting ongoing BNOK 1.0 improvement target
- Additional restructuring and cost reduction initiatives under way

## Cash release

- 2019 net operating capital release of BNOK 2.1
- Total sales proceeds from 2019 divestments of MNOK ~300



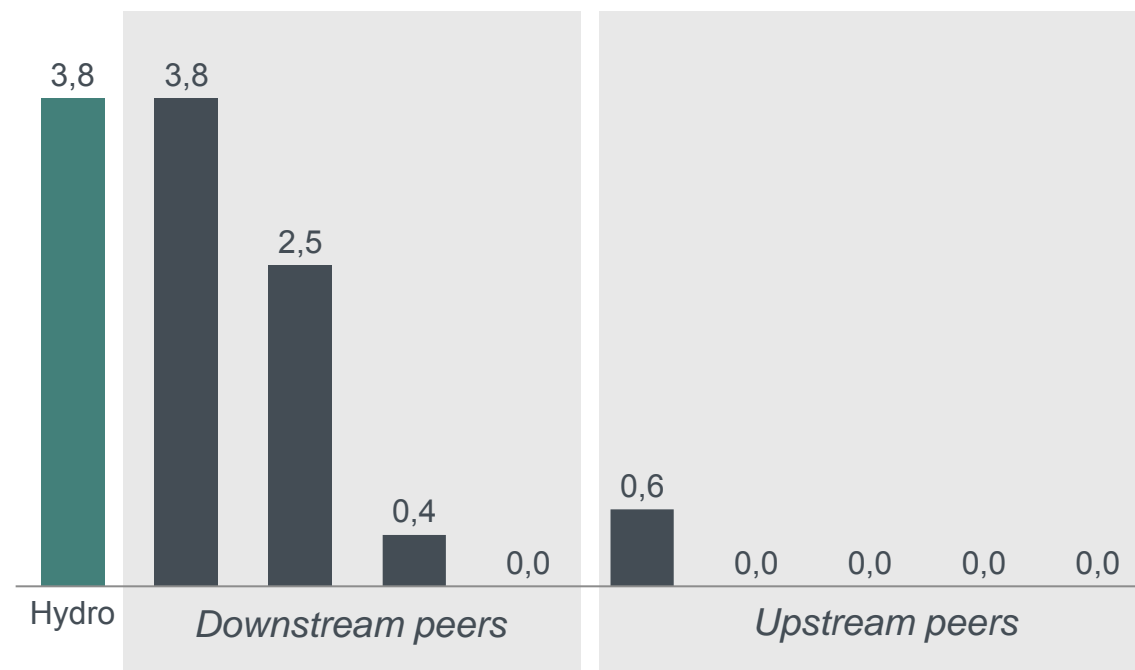


# Proposing dividend of NOK 1.25\* per share for 2019



- Aiming for competitive shareholder returns and dividend yield compared to alternative investments in peers
- Reflects a robust financial situation, taking into account a demanding year for the company and the volatility in the aluminium industry
- Average five-year payout ratio\*\* of ~68%
  - Dividend policy 40% payout ratio of reported net income over the cycle with 1.25 NOK/share considered as floor
- Represents payout of ~NOK 2.6 billion

Aluminium peer group dividend yield\*\*\*, %



\* Pending approval from the AGM on May 11, 2020

\*\* Dividend paid divided by net income from continuing operations attributable to equity holders, including proposed 2019 dividend

\*\*\* Dividend yield defined as dividend per share/share price year end, latest available data (2019 if reported, otherwise 2018).

Peer group includes (in alphabetical order): Upstream: Alcoa, Century, Chalco, Hindalco, Rusal. Downstream: Alcoa, Amag, Constellium, Kaiser

Source: Nasdaq IR Insight

# Sustainability dashboard 2019



## Safety

TRI rate 3.0  
FY 2019

Ambition: Zero fatalities and injury free environment

## Social responsibility



2030 target:  
Empowering 500,000 people with education and skills

## Biodiversity

On track  
2019

Target: 1 to 1 rehabilitation of available mined areas

## Climate

Target of 30% reduction in CO<sub>2</sub> emissions by 2030 launched

## Certifying sustainability

27 plants  
ASI certified, covers entire value chain

## Greener products

10 000 mt CIRCAL produced  
FY 2019

Combined 2020/21 target: 65,000 mt

## Recycling

Recycled 175 000\* mt post consumer scrap  
FY 2019

Ambition: Grow in recycling

## Profitability & Sustainability



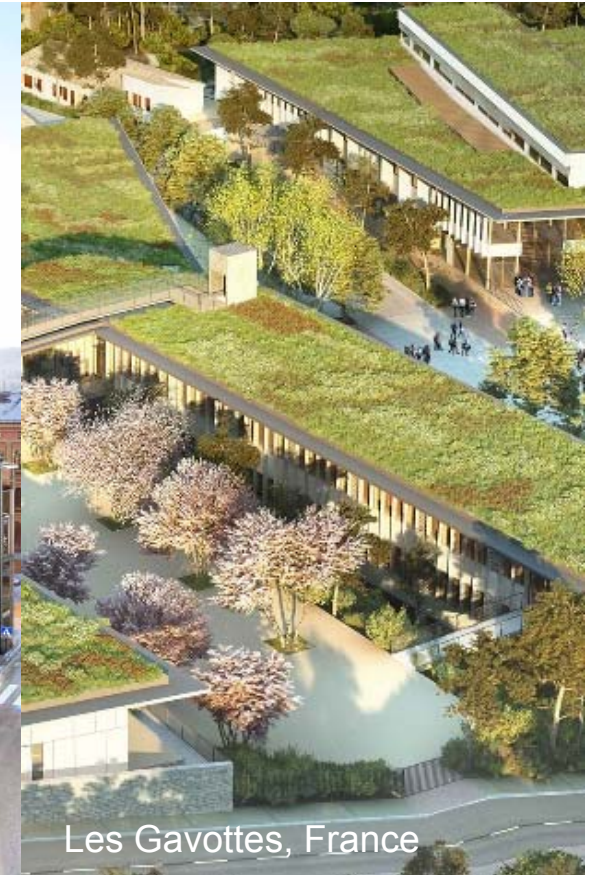
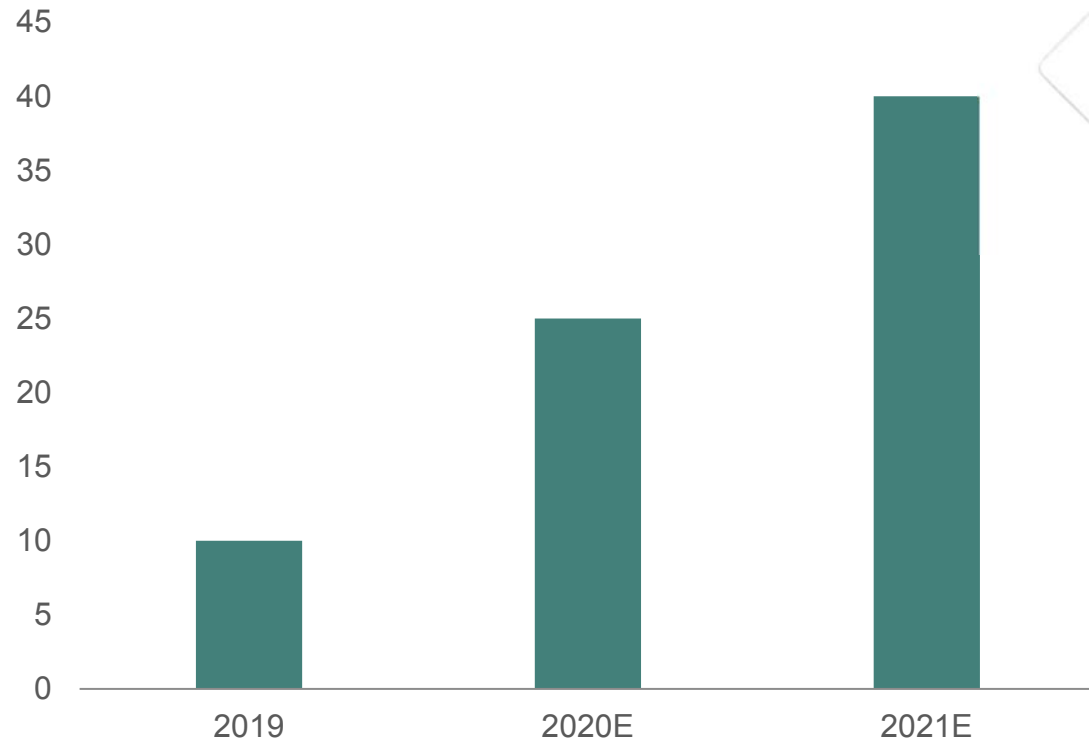
\* Primary Metal and Rolled Products. Extruded Solutions estimate of post-consumer scrap is ~170 000 mt

# Growing demand for Hydro's greener products in building facades

60 Hydro CIRCAL projects landed in one year

## Sales targets for Hydro CIRCAL

In thousand mt

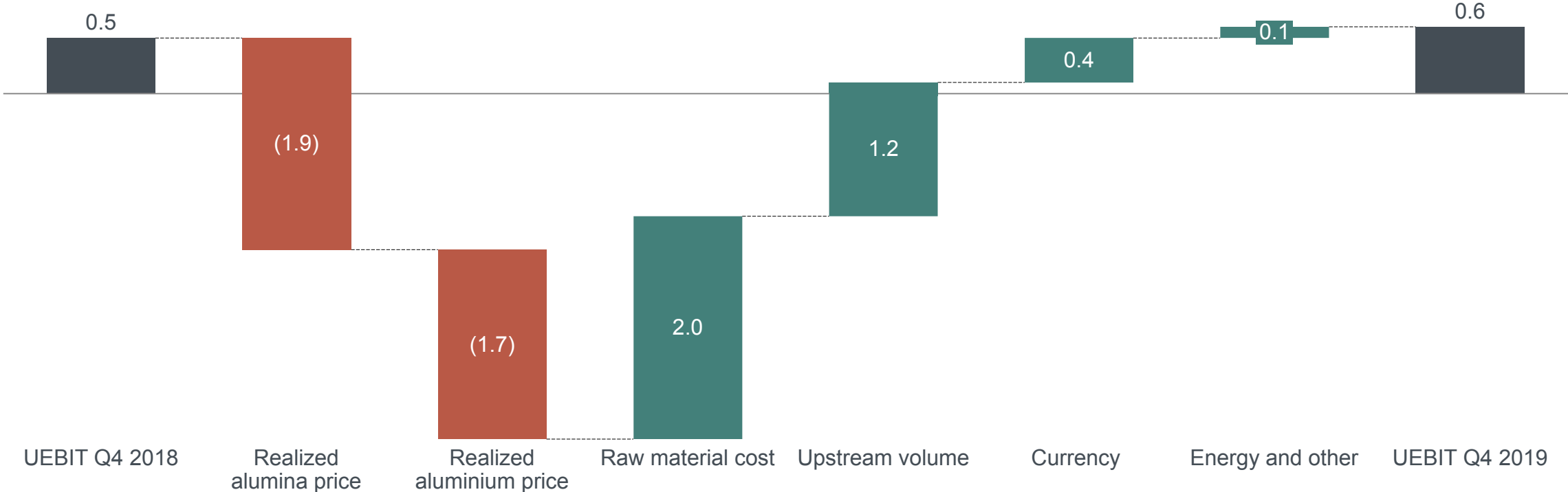


# Stable results as lower raw material costs and higher volumes upstream were offset by lower sales prices



Year-on-year results

Q4 2019 vs Q4 2018  
NOK billion



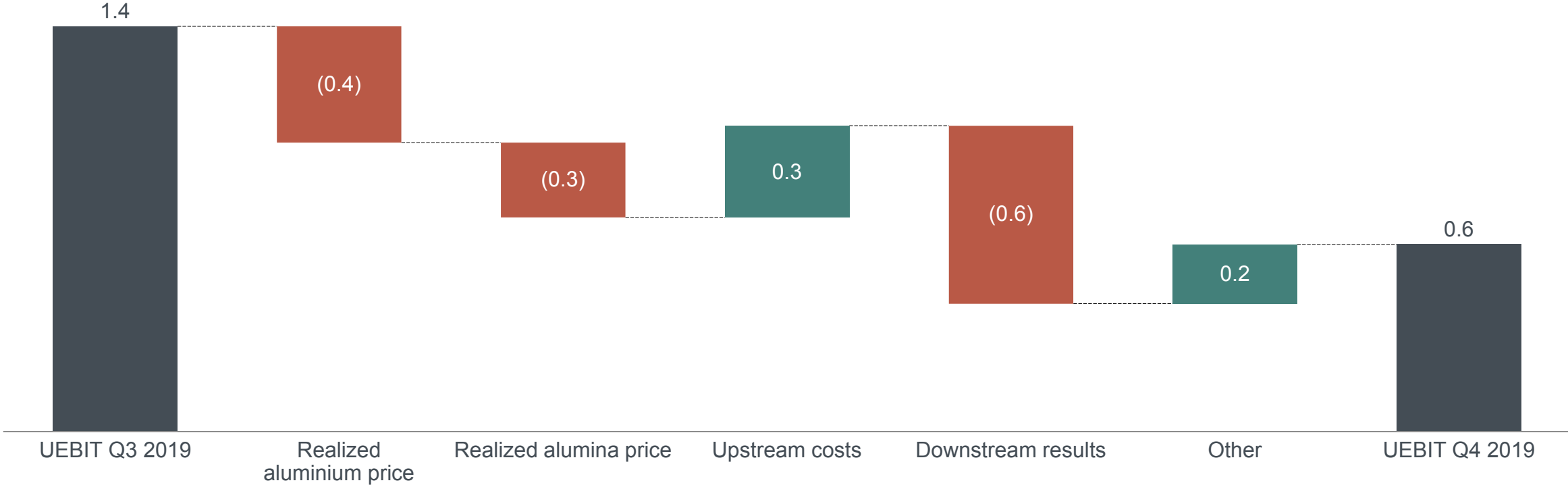


# Results down on lower realized prices and weak downstream results



Quarter-on-quarter results

Q4 2019 vs Q3 2019  
NOK billion

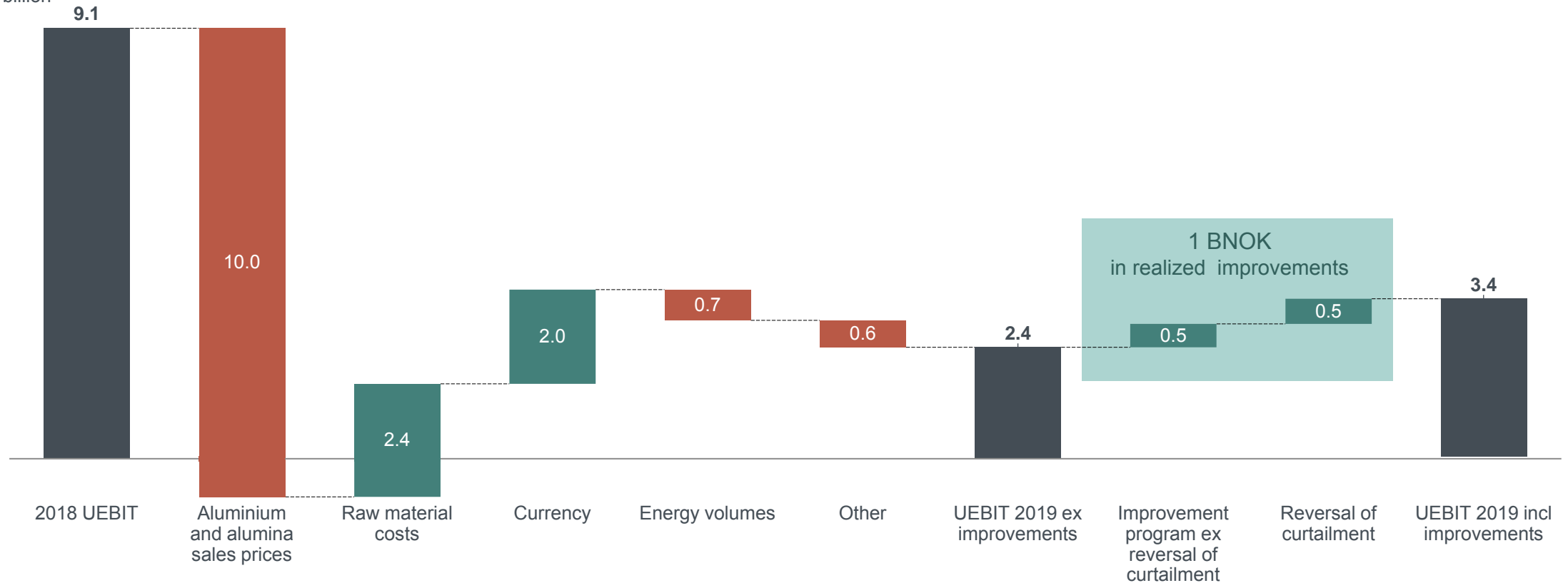


# Results down as improvements are offset by lower realized prices

Year 2019 vs year 2018

Underlying EBIT 2019 vs 2018

NOK billion



# Key financials



NOK million	Q4 2019	Q4 2018	Q3 2019	Year 2019	Year 2018
Revenue	35 490	38 386	37 517	149 766	159 377
<b>Underlying EBIT</b>	<b>560</b>	<b>534</b>	<b>1 366</b>	<b>3 359</b>	<b>9 069</b>
Items excluded from underlying EBIT	959	356	1 144	2 860	547
<b>Reported EBIT</b>	<b>(399)</b>	<b>178</b>	<b>222</b>	<b>499</b>	<b>8 522</b>
Reported EBITDA	2 617	1 854	2 430	9 878	15 796
<b>Underlying EBITDA</b>	<b>2 792</b>	<b>2 210</b>	<b>3 479</b>	<b>11 832</b>	<b>16 344</b>
Financial income (expense)	231	(721)	(1 628)	(2 055)	(2 060)
<b>Income (loss) before tax</b>	<b>(168)</b>	<b>(543)</b>	<b>(1 407)</b>	<b>(1 556)</b>	<b>6 462</b>
Income taxes	(497)	(207)	16	(813)	(2 139)
<b>Net income (loss)</b>	<b>(665)</b>	<b>(750)</b>	<b>(1 390)</b>	<b>(2 370)</b>	<b>4 323</b>
<b>Underlying net income (loss)</b>	<b>(303)</b>	<b>(175)</b>	<b>606</b>	<b>708</b>	<b>5 819</b>
Reported EPS, NOK	(0.23)	(0.34)	(0.62)	(0.88)	2.08
Underlying EPS, NOK	(0.12)	(0.06)	0.33	0.52	2.75

# Excluded a loss of NOK~1 billion from Underlying EBIT



Impairment charges, rationalization and closure costs

NOK million	Q4 2019	Q4 2018	Q3 2019	Year 2019	Year 2018
<b>Underlying EBIT</b>	<b>560</b>	<b>534</b>	<b>1 366</b>	<b>3 359</b>	<b>9 069</b>
Unrealized derivative effects on LME related contracts	(1)	(22)	120	(91)	(39)
Unrealized derivative effects on power and raw material contracts	(8)	82	46	99	260
Metal effect, Rolled Products	23	(93)	(123)	(370)	73
Significant rationalization charges and closure costs	(78)	(79)	(1 206)	(1 484)	(79)
Impairment charges	(783)	-	(95)	(906)	-
Alunorte agreements – provisions	-	-	(30)	(80)	(519)
Transaction related effects	14	-	-	(21)	-
Pension	-	(40)	62	62	(40)
Other effects	(125)	(203)	82	(68)	(203)
<b>Reported EBIT</b>	<b>(399)</b>	<b>178</b>	<b>222</b>	<b>499</b>	<b>8 522</b>



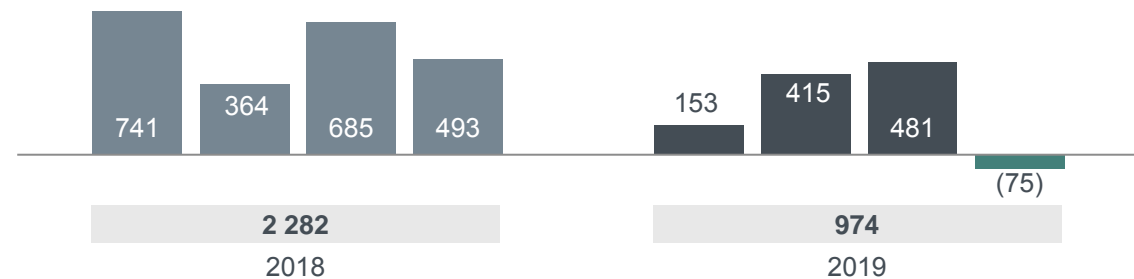
# Bauxite & Alumina

Results down on lower realized alumina prices

Key figures	Q4 2019	Q4 2018	Q3 2019
Alumina production, kmt	1 430	786	1 320
Total alumina sales, kmt	2 164	1 982	2 124
Realized alumina price, USD/mt	281	463	310
Implied alumina cost, USD/mt <sup>1)</sup>	255	409	253
Bauxite production, kmt	2 222	1 254	2 152
Underlying EBITDA, NOK million	504	877	1 071
Underlying EBIT, NOK million	(75)	493	481
Underlying RoaCE, % LTM <sup>2)</sup>	2.5%	6.0%	3.9%

## Underlying EBIT

NOK million



1) Realized alumina price minus underlying EBITDA for B&A, per mt alumina sales

2) URoaCE calculated as underlying EBIT last 4 quarters less 25% tax / Average capital employed last 4 quarters



## Results Q4 19 vs Q4 18

- Lower realized alumina price
- Higher alumina and bauxite production on ongoing ramp-up
  - Alunorte producing at ~90% of nameplate capacity
- Lower raw material and fixed unit costs
- Positive currency effects
- Negative impact from Paragominas power outage

## Outlook Q1 20

- Alunorte expected to produce at ~90-95% of nameplate capacity

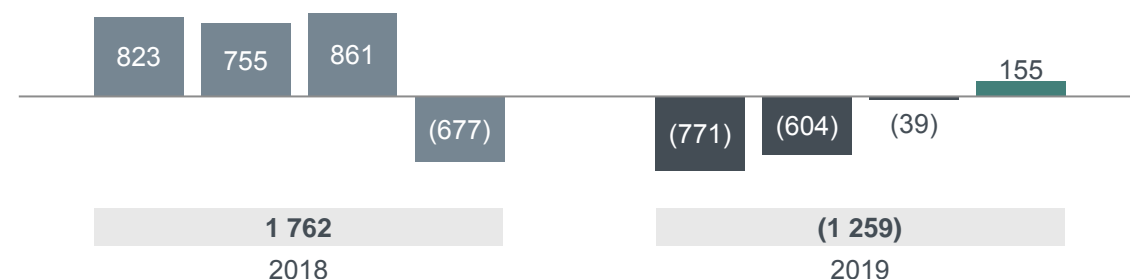
# Primary Metal

Results up on lower raw material costs

Key figures	Q4 2019	Q4 2018	Q3 2019
Primary aluminium production, kmt	545	490	522
Total sales, kmt	529	503	537
Realized LME price, USD/mt	1 754	2 041	1 784
Realized LME price, NOK/mt	15 913	17 038	15 732
Realized premium, USD/mt	257	362	305
Implied all-in primary cost, USD/mt <sup>1)</sup>	1 775	2 350	1 900
Underlying EBITDA, NOK million	812	(176)	550
Underlying EBIT, NOK million	155	(677)	(39)
Underlying RoaCE, % LTM <sup>2)</sup>	(2.6)%	4.7%	(4.5)%

## Underlying EBIT

NOK million



1) Realized all-in aluminium price minus underlying EBITDA margin, including Qatalum, per mt aluminium sold. Including Qatalum volumes.

2) URoaCE calculated as underlying EBIT last 4 quarters less 25% tax / Average capital employed last 4 quarters

3) Bookings as per 31.12.2019



## Results Q4 19 vs Q4 18

- Lower raw material costs
- Lower realized LME price and premium
- Higher sales volumes on completed Albras ramp-up
- Positive currency effects

## Outlook Q1 20

- ~ 50% of primary production for Q1 priced at USD ~1 750 per mt<sup>3)</sup>
- ~ 55% of premiums affecting Q1 booked at USD ~260 per mt<sup>3)</sup>
  - Q1 realized premium expected in the range of USD 200-250 per mt
- Raw material costs trending downwards
- Slovalco partially curtailed
- Husnes restart commencing as planned in H1 2020

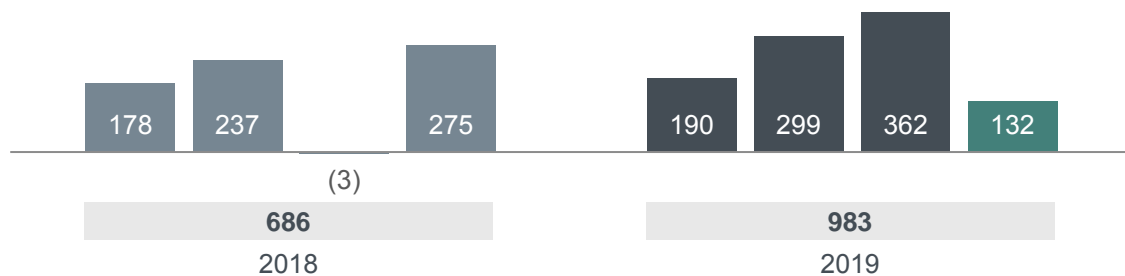
# Metal Markets

Results down on lower results from remelters and negative currency effects

Key figures	Q4 2019	Q4 2018	Q3 2019
Remelt production, kmt	121	135	125
Metal products sales, kmt <sup>1)</sup>	648	682	662
Underlying EBITDA, NOK million	167	301	395
Underlying EBIT excl currency and inventory valuation effects, NOK million	184	217	338
Underlying EBIT, NOK million	132	275	362
Underlying RoaCE, % LTM <sup>2)</sup>	27.3%	19.4%	28.8%

## Underlying EBIT

NOK million



1) Includes external and internal sales from primary casthouse operations, remelters and third-party metal sources.  
 2) URoaCE calculated as underlying EBIT last 4 quarters less 25% tax / Average capital employed last 4 quarters



## Results Q4 19 vs Q4 18

- Weaker results from remelters on lower volumes and margins
- Currency and inventory valuation effects negative NOK (52) million in Q4 19 vs positive NOK 58 million in Q4 18

## Outlook Q1 20

- Softening market conditions for remelters
- Volatile trading and currency effects



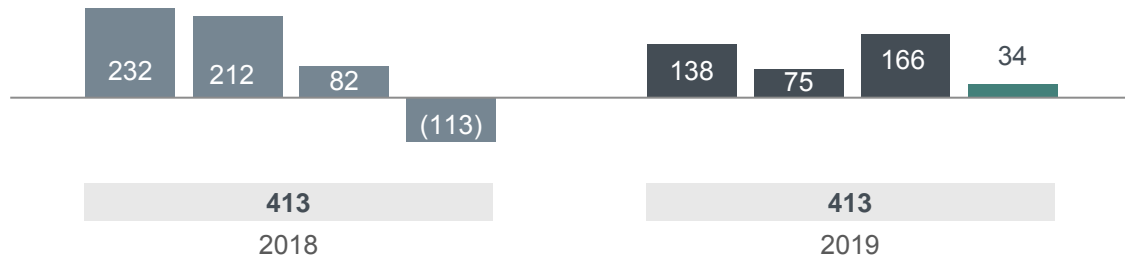
# Rolled Products

Results up on lower raw material costs in Neuss smelter

Key figures	Q4 2019	Q4 2018	Q3 2019
External sales volumes, kmt	219	220	245
Underlying EBITDA, NOK million	308	133	430
Underlying EBIT, NOK million	34	(113)	166
Underlying RoaCE, % LTM <sup>1)</sup>	2.4%	2.3%	1.5%

## Underlying EBIT

NOK million



1) URoaCE calculated as underlying EBIT last 4 quarters less 25% tax / Average capital employed last 4 quarters



## Results Q4 19 vs Q4 18

- Stable results from the rolling mills
- Improved results from Neuss smelter on lower raw material costs

## Outlook Q1 20

- Continued market demand weakness
- Neuss results driven by all-in metal and raw material price development

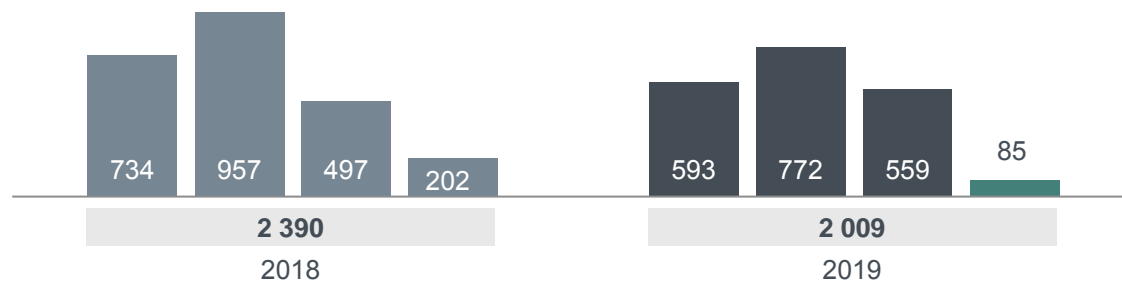


# Extruded Solutions

Results down on 14% lower volumes  
Cyber insurance compensation of 187 MNOK

Key figures	Q4 2019	Q4 2018	Q3 2019
External sales volumes, kmt	272	318	316
Underlying EBITDA, NOK million	655	645	1 099
Underlying EBIT, NOK million	85	202	559
Underlying RoaCE, % LTM <sup>1)</sup>	5.7%	7.2%	5.9%

## Underlying EBIT NOK million



1) URoaCE calculated as underlying EBIT last 4 quarters less 25% tax / Average capital employed last 4 quarters



## Results Q4 19 vs Q4 18

- 187 MNOK in cyber insurance compensation
- 14% lower volumes due to weaker market demand
- Higher margins driven by value-over-volume strategy

## Outlook Q1 20

- Declining market demand in Europe and North America
- Q1 19 affected by the cyber attack

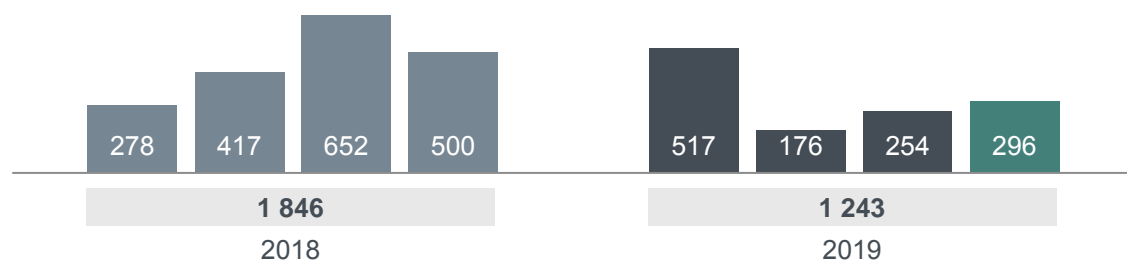
# Energy

## Results down on lower volumes and prices

Key figures	Q4 2019	Q4 2018	Q3 2019
Power production, GWh	2 332	2 822	2 273
Net spot sales, GWh	520	1 166	582
Southwest Norway spot price (NO2), NOK/MWh	392	455	328
Underlying EBITDA, NOK million	365	566	319
Underlying EBIT, NOK million	296	500	254
Underlying RoaCE, % LTM <sup>1)</sup>	12.9% <sup>2)</sup>	18.8%	21,3%

### Underlying EBIT

NOK million



1) URoaCE calculated as underlying EBIT last 4 quarters less 70% tax/ Average capital employed last 4 quarters  
 2) 80% tax rate applied for full year 2019



### Results Q4 19 vs Q4 18

- Significantly lower volumes
- Lower power prices
- Positive commercial contribution

### Outlook Q1 20

- Volume and price uncertainty
- Average NO2 power price 244 NOK/MWh in January

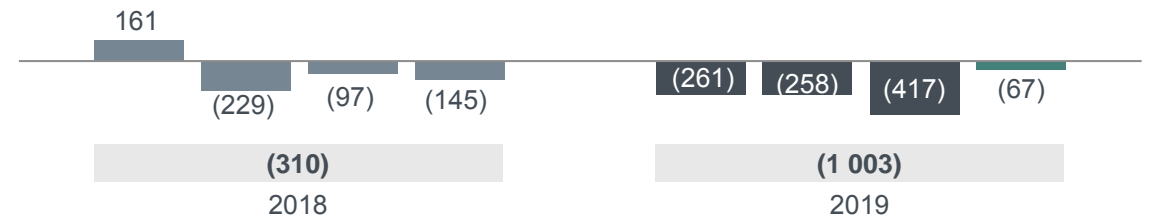




# Other and Eliminations

Underlying EBIT, NOK million	Q4 2019	Q4 2018	Q3 2019
Other	(223)	(299)	(160)
Eliminations	156	154	(257)
<b>Other and Eliminations</b>	<b>(67)</b>	<b>(145)</b>	<b>(417)</b>

## Underlying EBIT NOK million

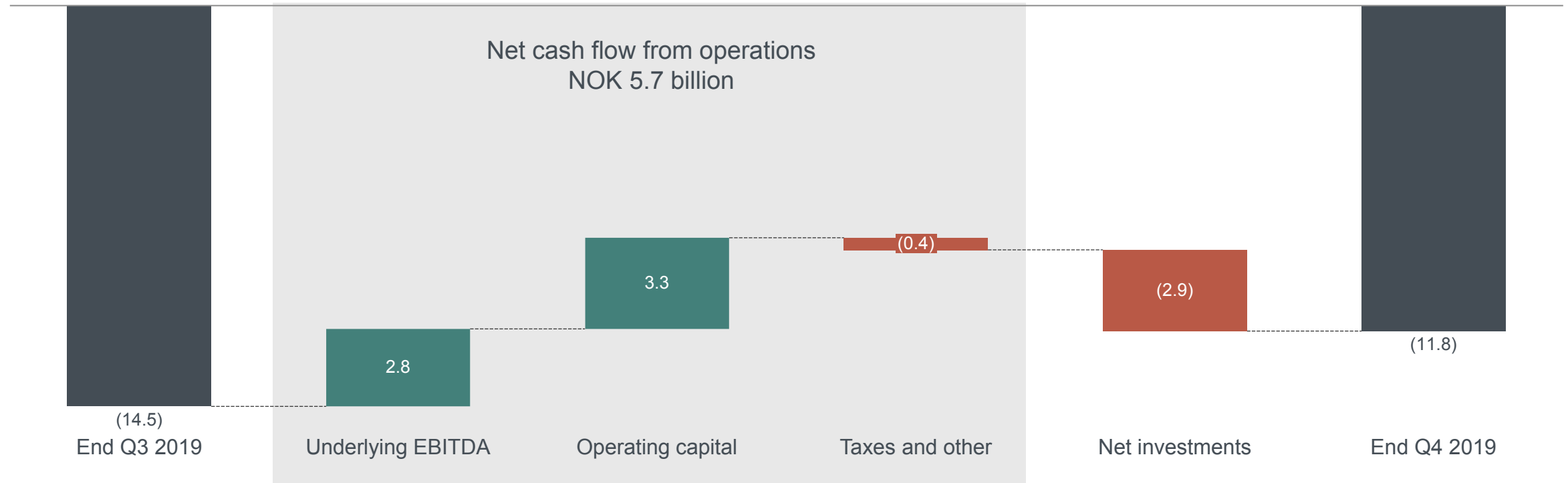


# Net debt 2.7 BNOK down in Q4 2019



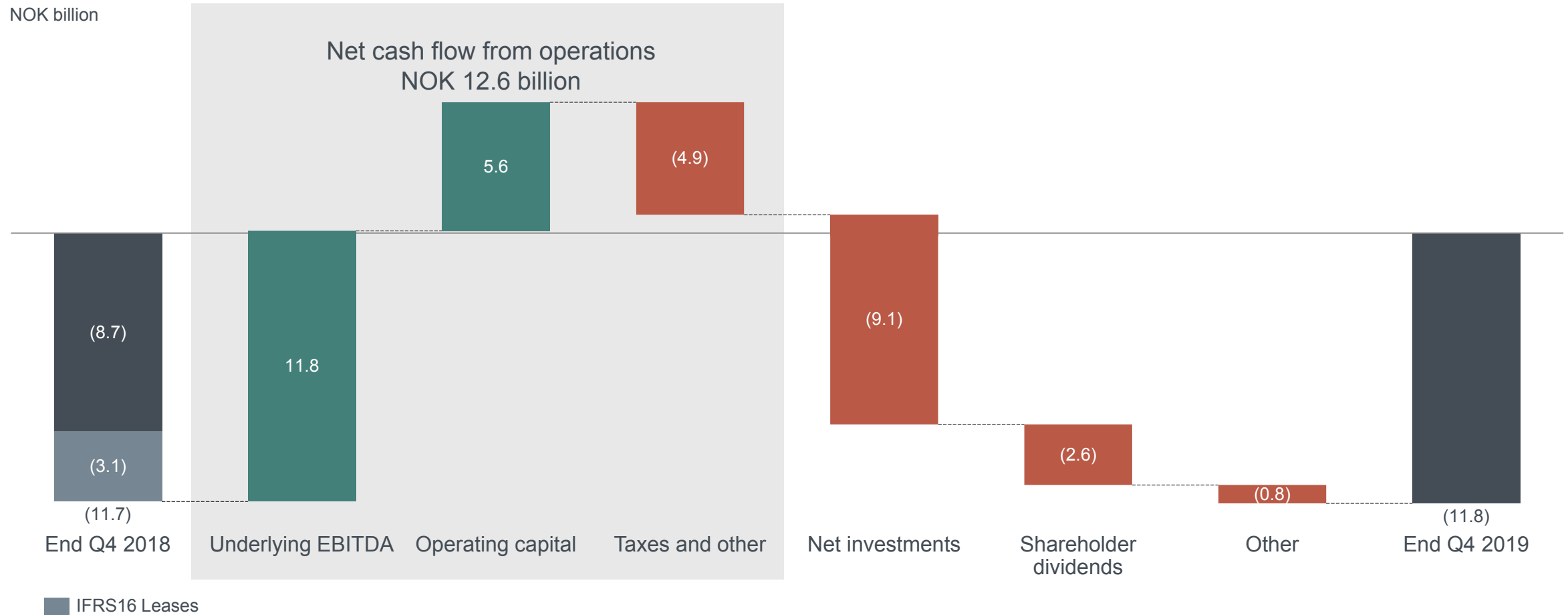
Further NOC release and reduced investments

NOK billion



# Net debt stable in 2019

Significant net operating capital release





# Adjusted net debt down in Q4

Lower net debt, net pension liability and net debt in Qatalum

NOK billion	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Dec 31, 2018 <sup>2)</sup>
Cash and cash equivalents	12.3	10.6	10.6	6.0
Short-term investments	1.0	0.9	1.1	1.0
Short-term debt	(6.2)	(6.1)	(8.2)	(9.4)
Long-term debt	(18.9)	(20.0)	(18.6)	(9.3)
<b>Net cash/(debt)</b>	<b>(11.8)</b>	<b>(14.5)</b>	<b>(15.1)</b>	<b>(11.7)</b>
Net pension liability at fair value, net of expected tax benefit	(8.6)	(10.3)	(8.8)	(8.8)
Other adjustments <sup>1)</sup>	(5.1)	(4.8)	(4.0)	(4.0)
<b>Adjusted net debt ex. EAI</b>	<b>(25.4)</b>	<b>(29.6)</b>	<b>(27.9)</b>	<b>(24.5)</b>
Net debt in EAI	(4.7)	(5.4)	(5.4)	(5.6)
<b>Adjusted net debt incl. EAI</b>	<b>(30.1)</b>	<b>(35.0)</b>	<b>(33.3)</b>	<b>(30.1)</b>

1) "Other adjustments" include, e.g., asset retirement obligations, cash and short-term investments in Industriforsikring

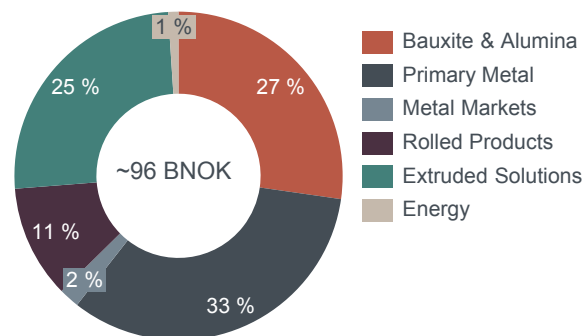
2) Restated with implementation of IFRS16 - Leases



# Capital return dashboard 2019

Hydro targets URoaCE above 10% over the cycle

Capital employed<sup>1)</sup>



## Capital returns

URoaCE  
1.3%<sup>2)</sup>

10% target over the cycle

## Balance sheet

FFO/aND  
27%<sup>3)</sup>

>40% target over the cycle

## Free cash flow

3.4 BNOK<sup>4)</sup>

## Improvement program

1.0 BNOK

2023 target 7.3 BNOK  
2019 target 0.5 BNOK

## Net operating capital

5.6 BNOK release

Target 12 NOC days reduction  
(~ 4 BNOK) from end-2018 to end-2020

## Capex

9.6 BNOK

2019 estimate ~10.5 BNOK

## Shareholder payout

1.25 NOK/share<sup>5)</sup>  
68% average 5-yr payout ratio

40% payout ratio over the cycle  
1.25 NOK/share dividend floor

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

2) URoaCE Hydro (Annual definition) calculated as underlying EBIT last 4 quarters less Income tax expense adjusted for tax on financial items/ Average capital employed last 4 quarters.

3) Funds from operation LTM/Average LTM adjusted net debt

4) Free cash flow – operating cash flow less investing cash flow excl. sales/purchases of short-term investments

5) Pending approval from the AGM on May 11, 2020



**Lifting profitability,  
driving sustainability**

## **2020 Priorities**

- Safe and efficient operations
- Delivering on improvement programs
- Cash focus through strict capital discipline
- Proactive measures in challenging markets
- Commercializing on low-carbon position



# Market

Investor presentation, February 2020

# Macro trends and favorable properties drive aluminium demand

Hydro's strategic direction aims to realize full potential of aluminium's strong qualities and versatility



## Aluminium

- ✓ Lightness and strength
- ✓ Durability and formability
- ✓ Corrosion resistance
- ✓ Conductivity
- ✓ Recyclability
- ✗ Energy-intensity



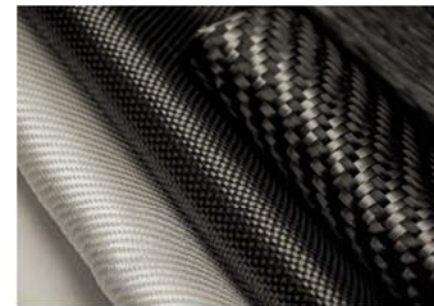
## Steel

- ✓ Strength and durability
- ✓ Recyclability
- ✓ Price
- ✗ Weight
- ✗ Corrosion
- ✗ Energy-intensity



## Copper

- ✓ Conductivity
- ✓ Corrosion resistance
- ✓ Recyclability
- ✗ Price
- ✗ Weight
- ✗ Energy-intensity



## Composites

- ✓ Lightness
- ✓ Strength
- ✗ Price
- ✗ Recyclability
- ✗ Climate footprint
- ✗ Energy-intensity



## PVC

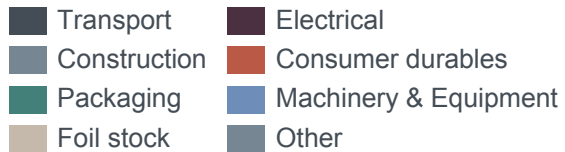
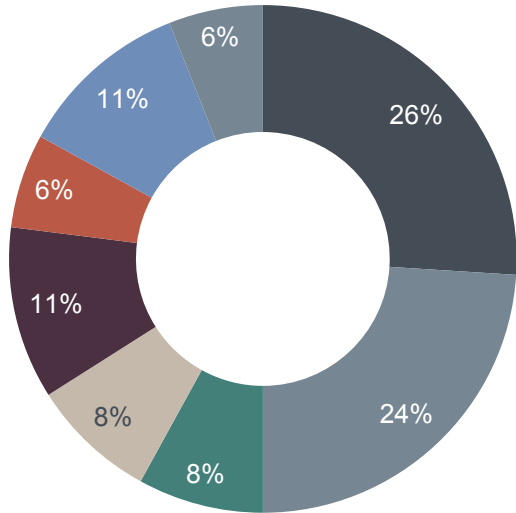
- ✓ Lightness and formability
- ✓ Corrosion resistance
- ✓ Price
- ✗ Climate footprint
- ✗ Recyclability
- ✗ Durability



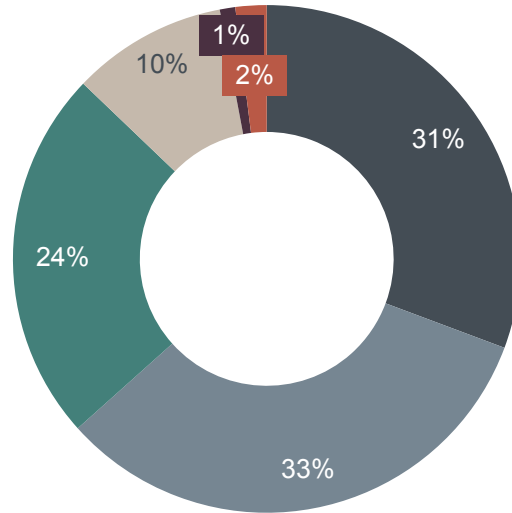
# Transport & construction key semis demand segments

Global semis demand 2019: ~90 million tonnes

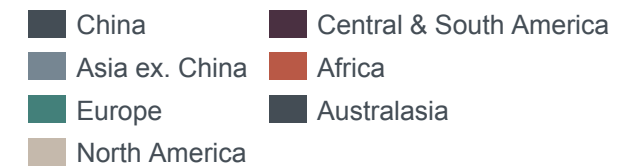
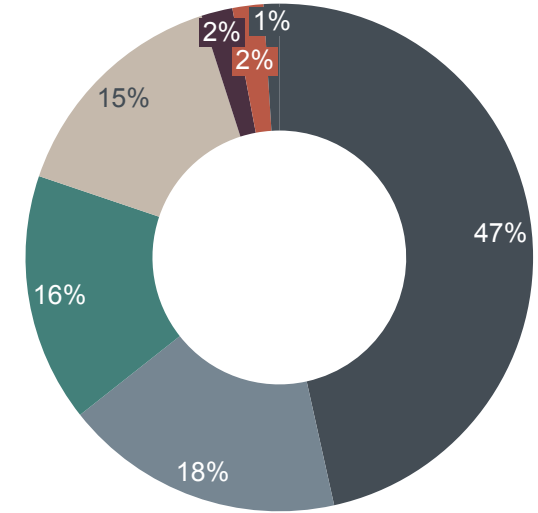
Per segment



Per product form

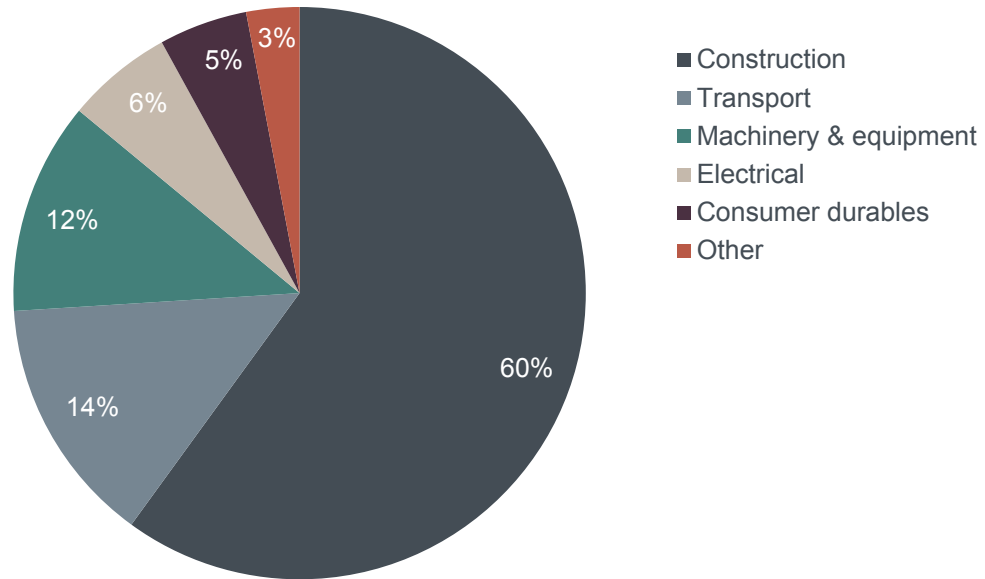


Per region

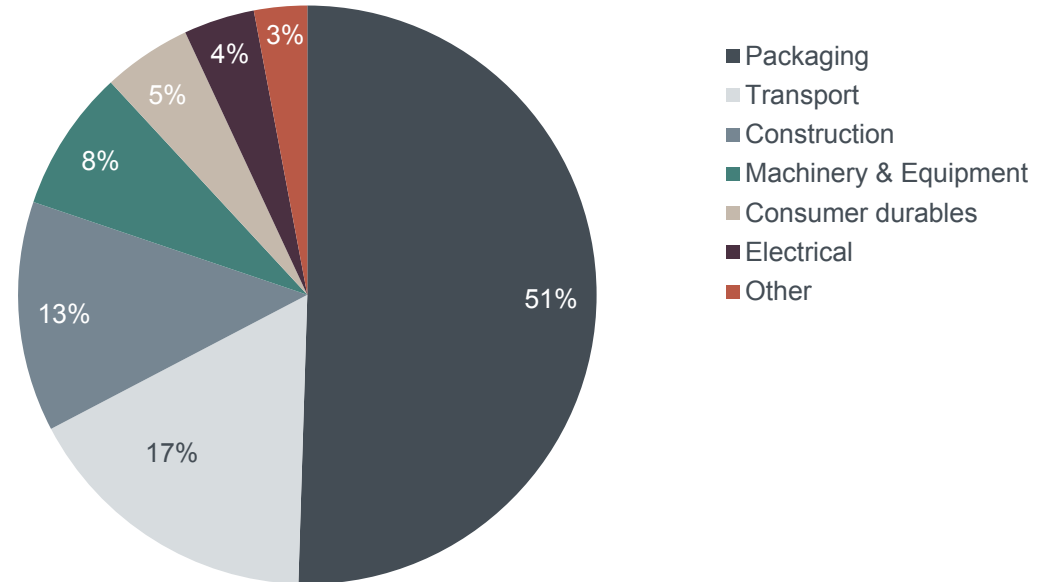


# Segment composition in extruded and rolled products

Global segment composition, extrusions  
(2019)



Global segment composition, rolled products  
(2019)



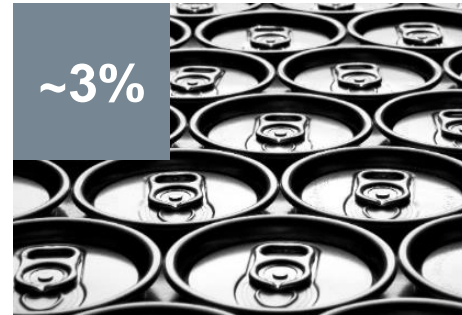
# Strong growth drivers across segments providing solid long-term demand outlook

## Solid demand growth across main segments

### Transport



### Packaging



### Buildings and construction

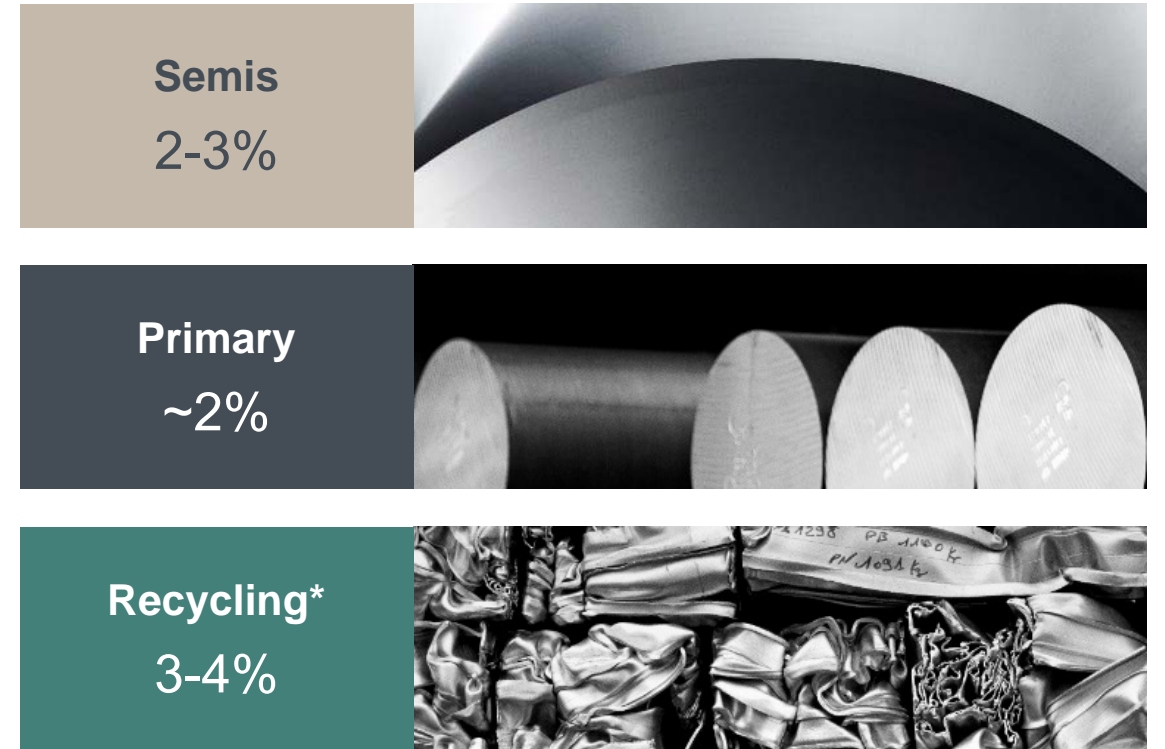


### Electrical, consumer durables & industrial



Semis demand growth in segment, CAGR 2018-23

## Global demand increasingly supplied by recycled material



Demand growth, CAGR 2018-23

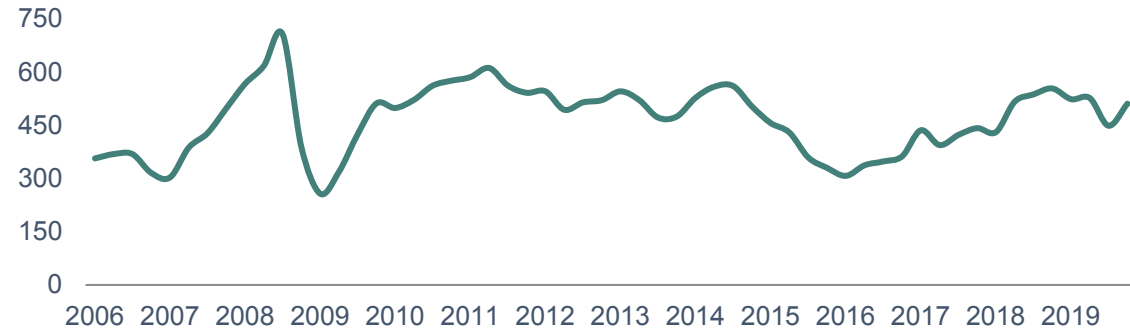
Source: CRU, IAI, Hydro

\* Includes both post consumer and fabricated scrap

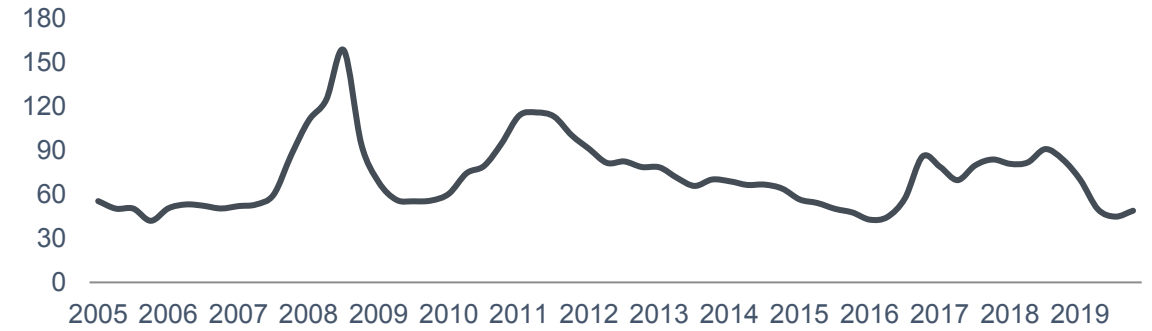
# Commodity prices drive industry costs



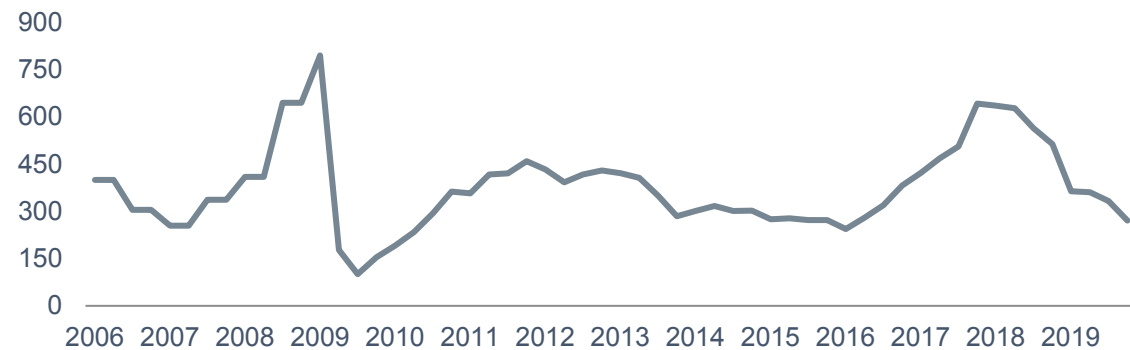
Fuel oil A1 (USD/mt)



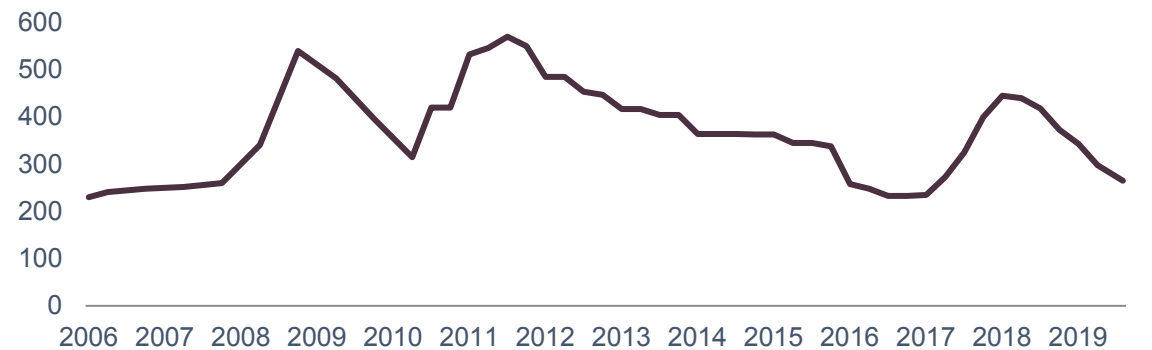
Steam coal (USD/mt)



Caustic soda (USD/mt)



Petroleum coke FOB USG (USD/mt)

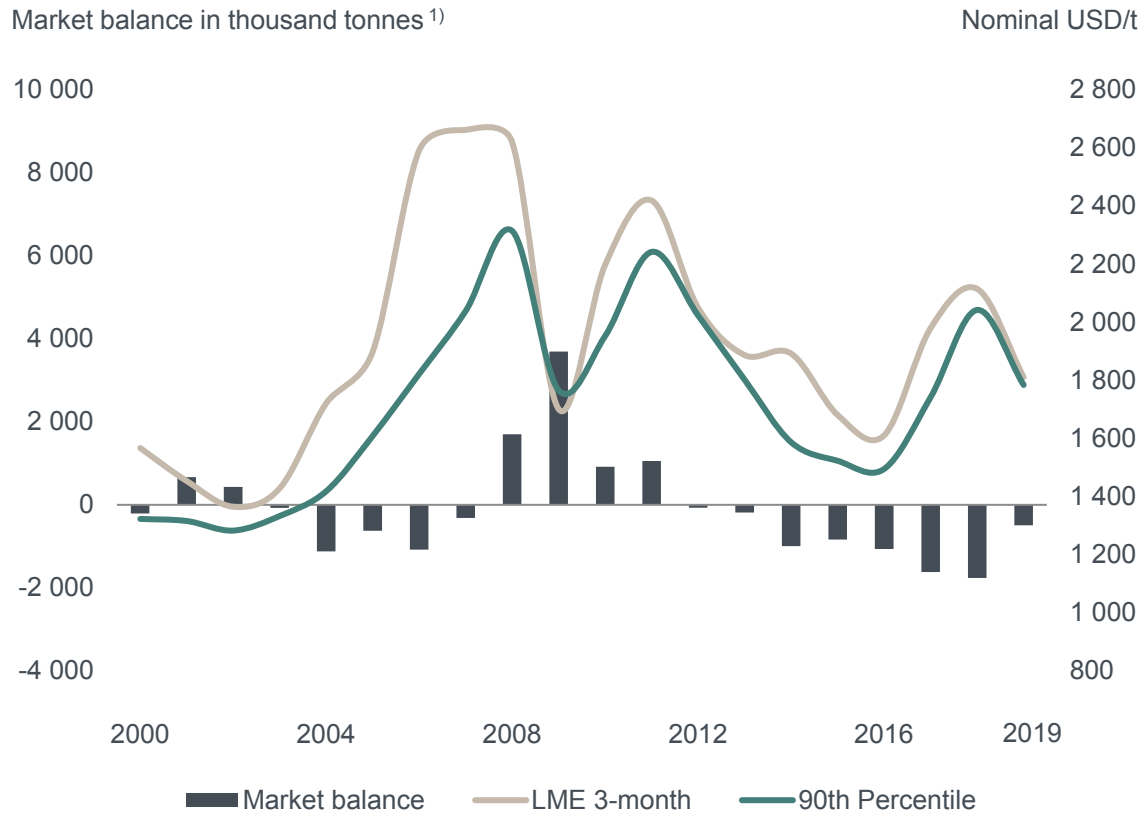


# Historical strong correlation between LME and 90th percentile smelters

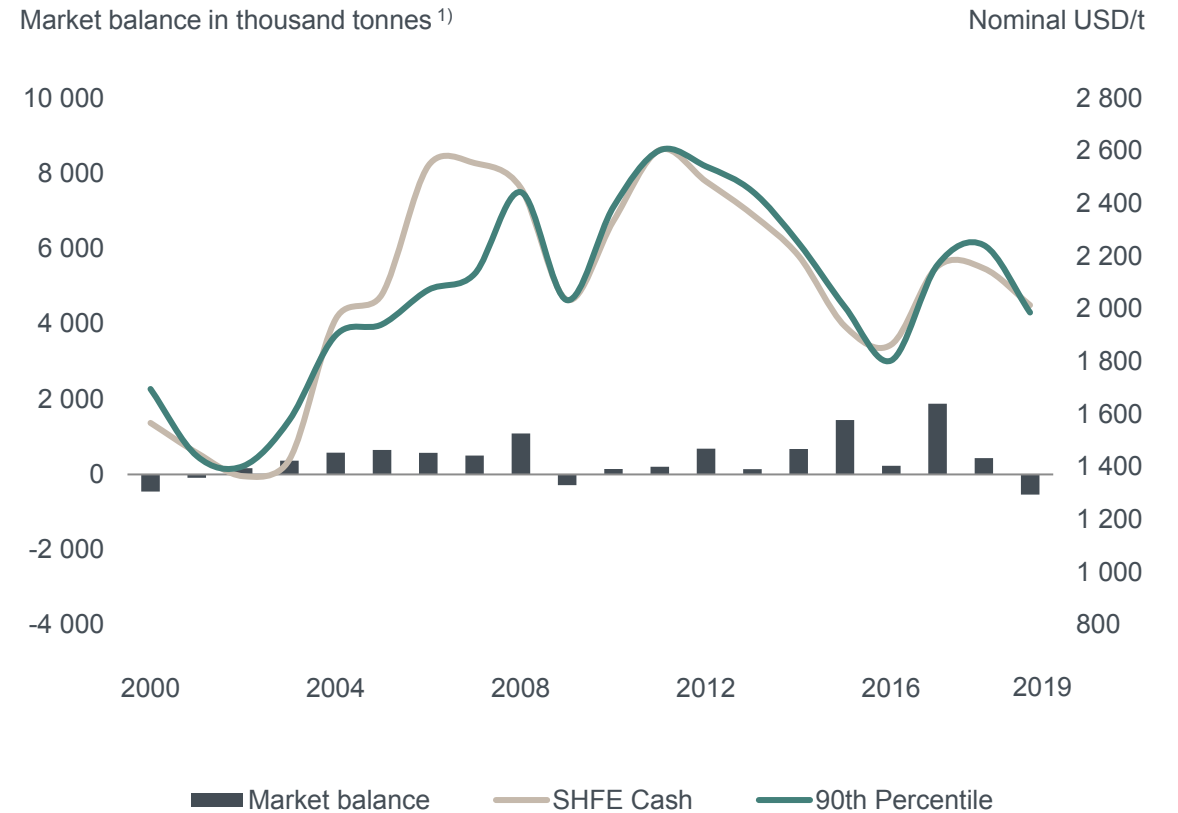


## Primary metal market

### World ex-China



### China



Source: CRU, Hydro Analysis  
1) Primary production less primary demand



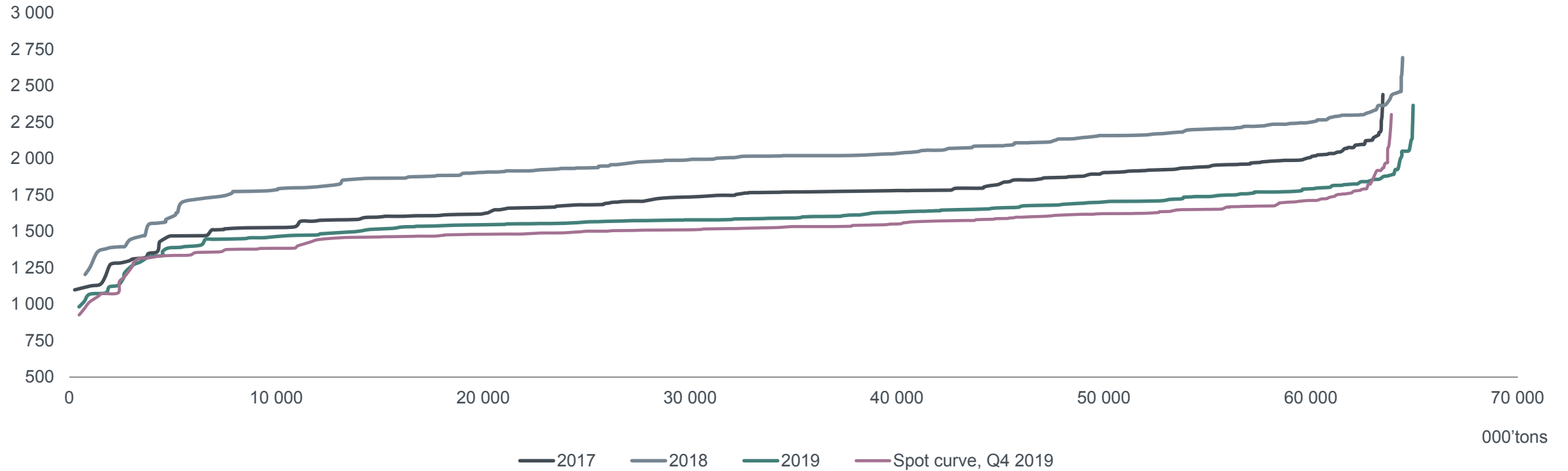
# Global cost curve lower in 2019 as raw materials cost normalize



Primary metal market

CRU BOC curve by smelter

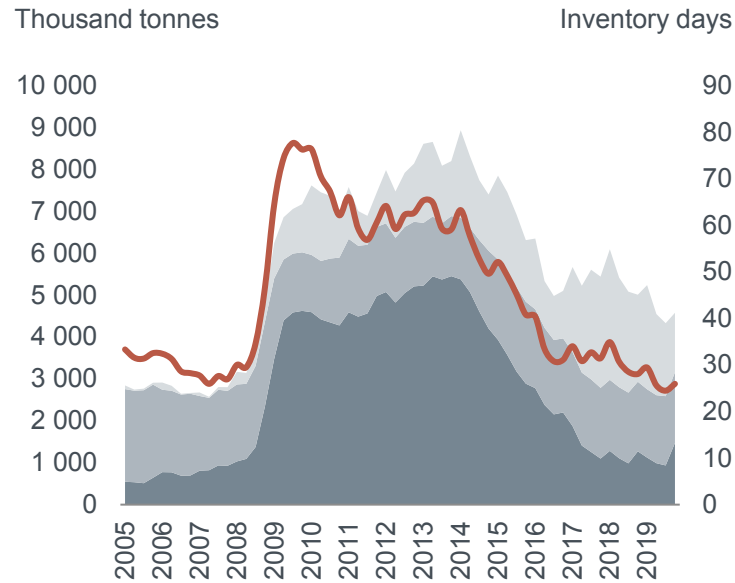
USD/t



# Total global inventory days trending downwards

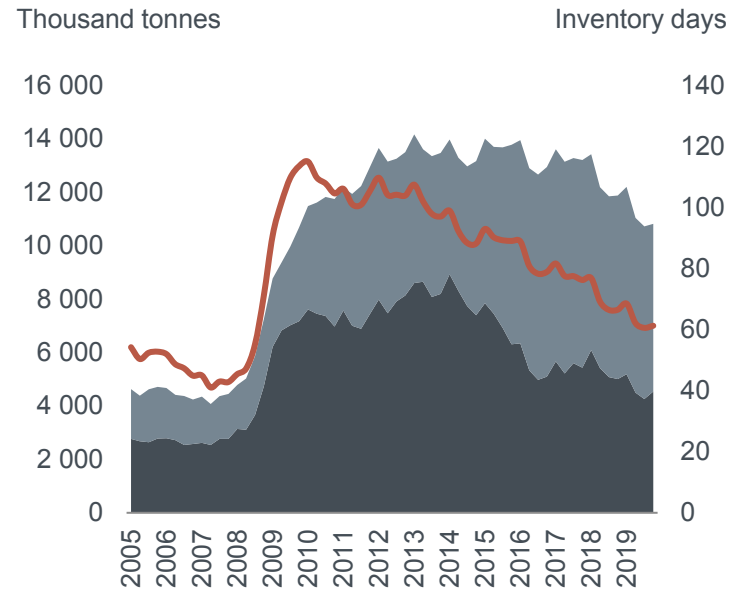
## Primary metal market

Global reported stocks and inventory days



- Reported China
- Other reported ROW
- LME stocks
- Global reported inventory days

Total global stocks and inventory days



- Global estimated unreported
- Global reported
- Global total inventory days

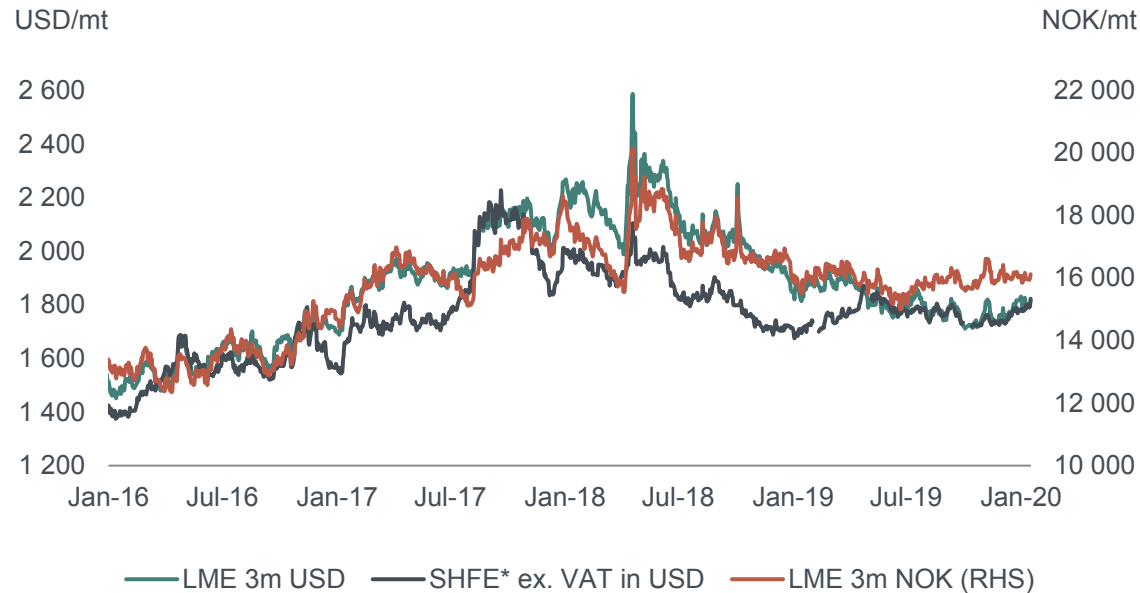
- Reported stocks increasing in Q4-19
  - Reported stocks ex. China up, drop in reported stocks China on the back of production disruptions
- LME stocks up in Q4
- High uncertainty regarding absolute level of unreported volumes

# Aluminium prices largely stable in Q4



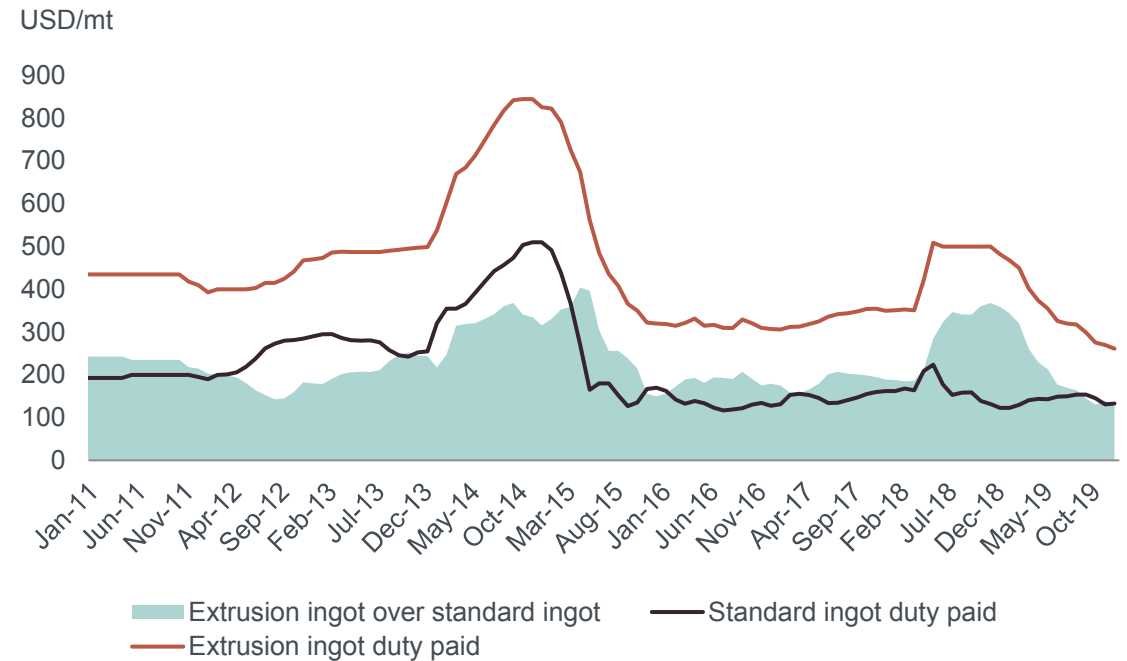
Tightening spread between standard ingot and product premiums

LME and SHFE aluminium prices



- LME mostly trading between 1 750 and 1 800 USD/t in Q3
- Continued low price differential between LME and SHFE

European extrusion ingot margin over standard ingot



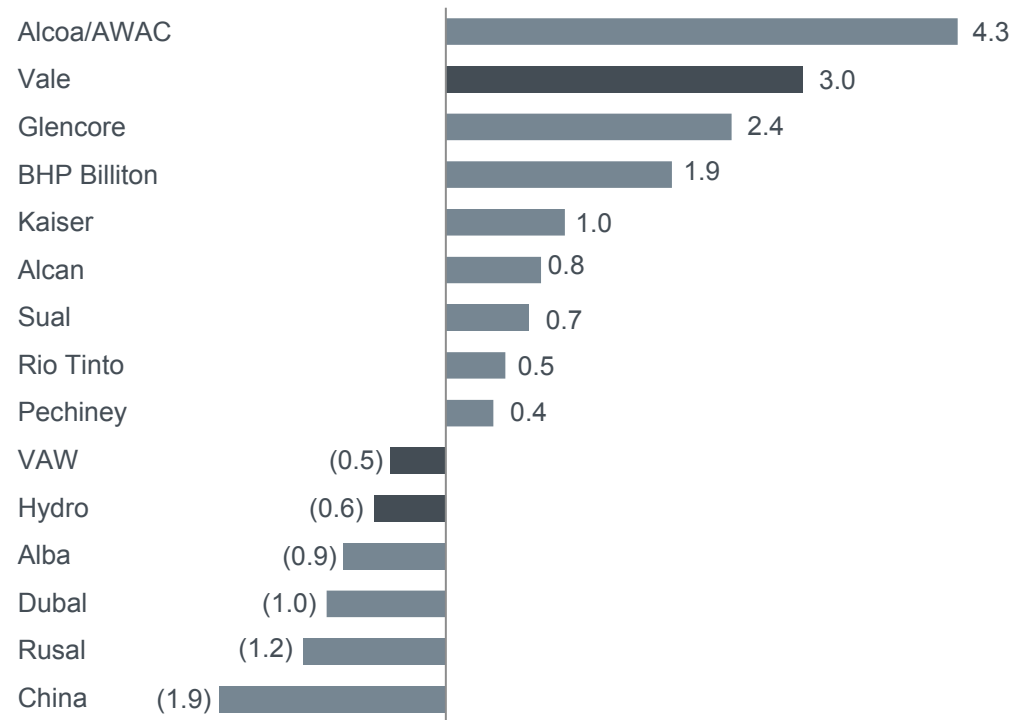
- Largely stable standard ingot premiums
- Declining extrusion ingot premiums on reduced demand

# Alumina market consolidating, becoming more integrated

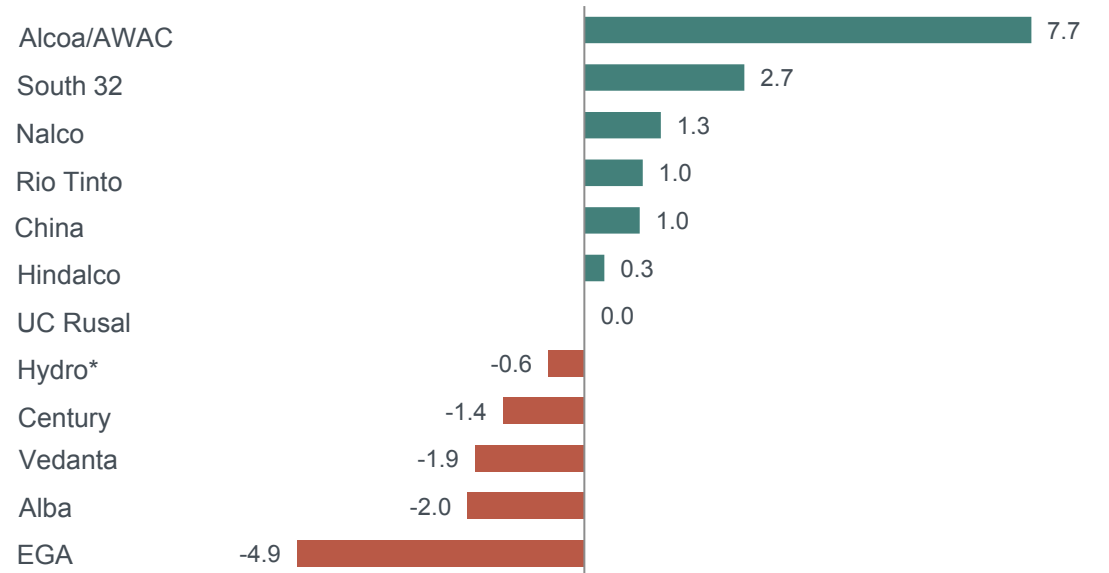


Estimated net equity alumina position, in million tonnes

## 2000



## 2018



Source: CRU, Hydro

\*Hydro's alumina position was affected by the 50% production embargo at Alunorte from March 2018 to May 2019. Prior to the curtailment Hydro had a long alumina position of 1.7 million tonnes.

# Stable alumina prices on Q4, increasing alumina imports to China

Platts alumina index (PAX)



Monthly Chinese alumina trade balance (kt)

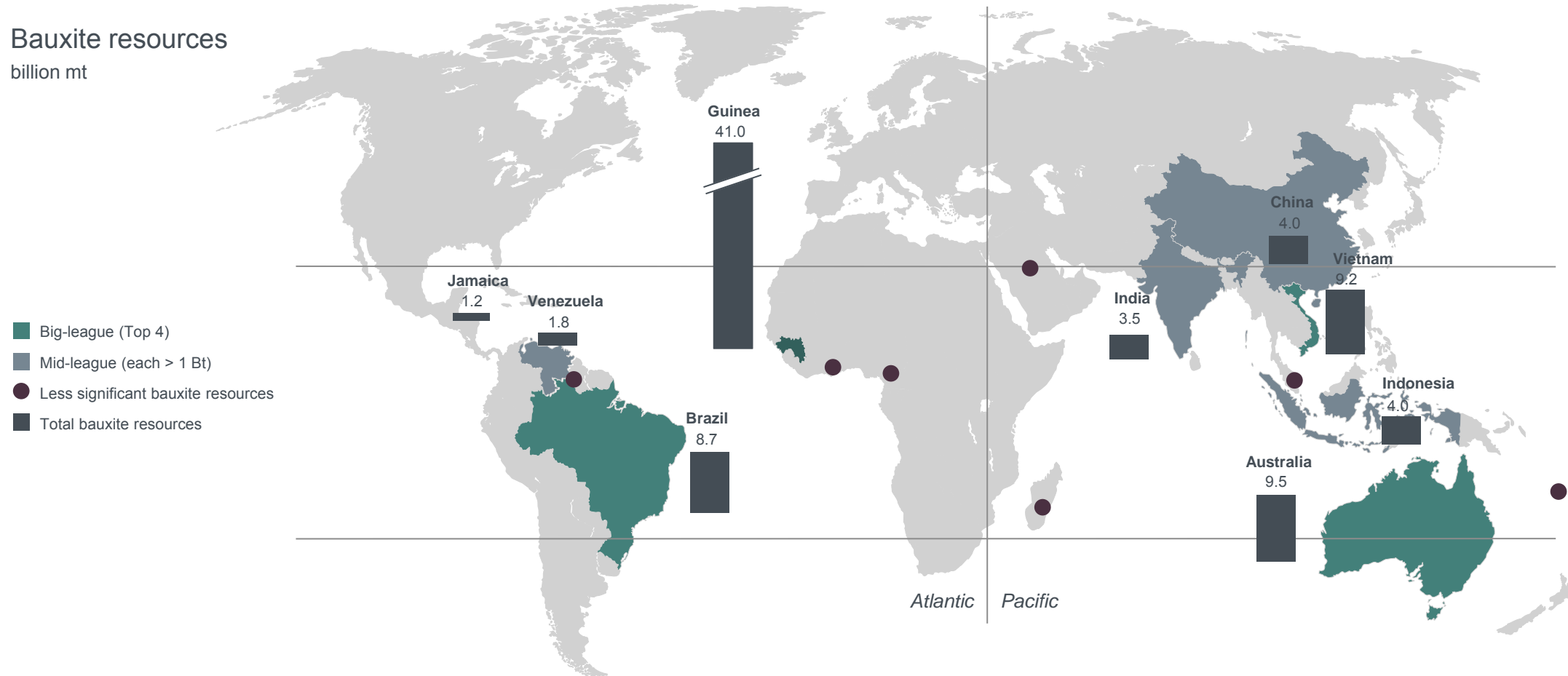




# Large and concentrated bauxite resources

Guinea stands out as a long-term source

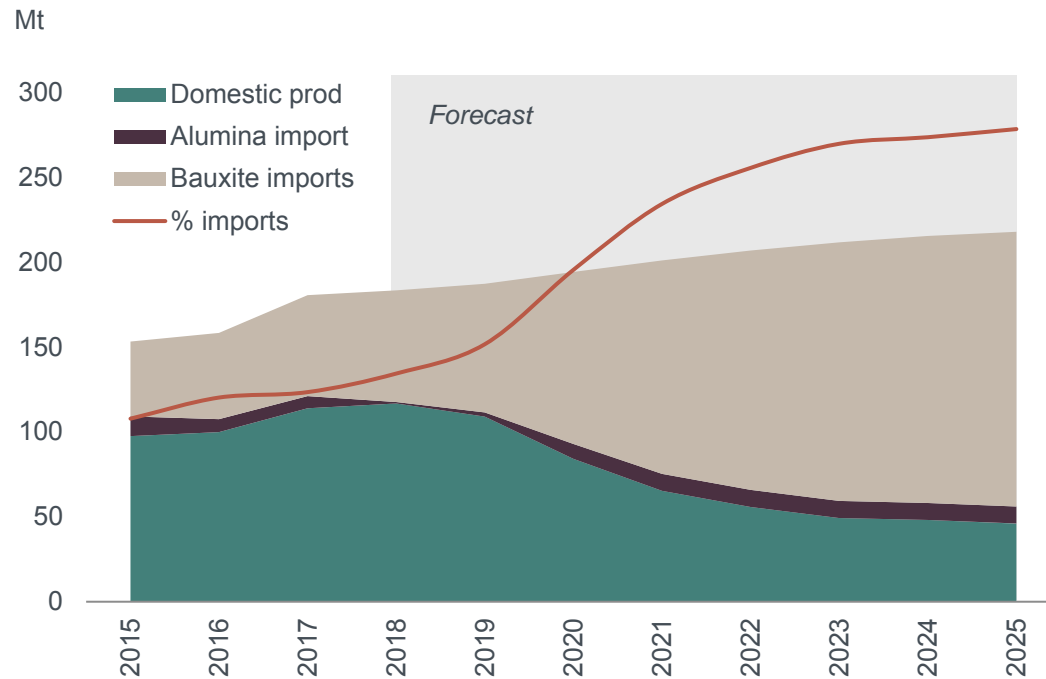
Bauxite resources  
billion mt



# China increasingly reliant on bauxite imports

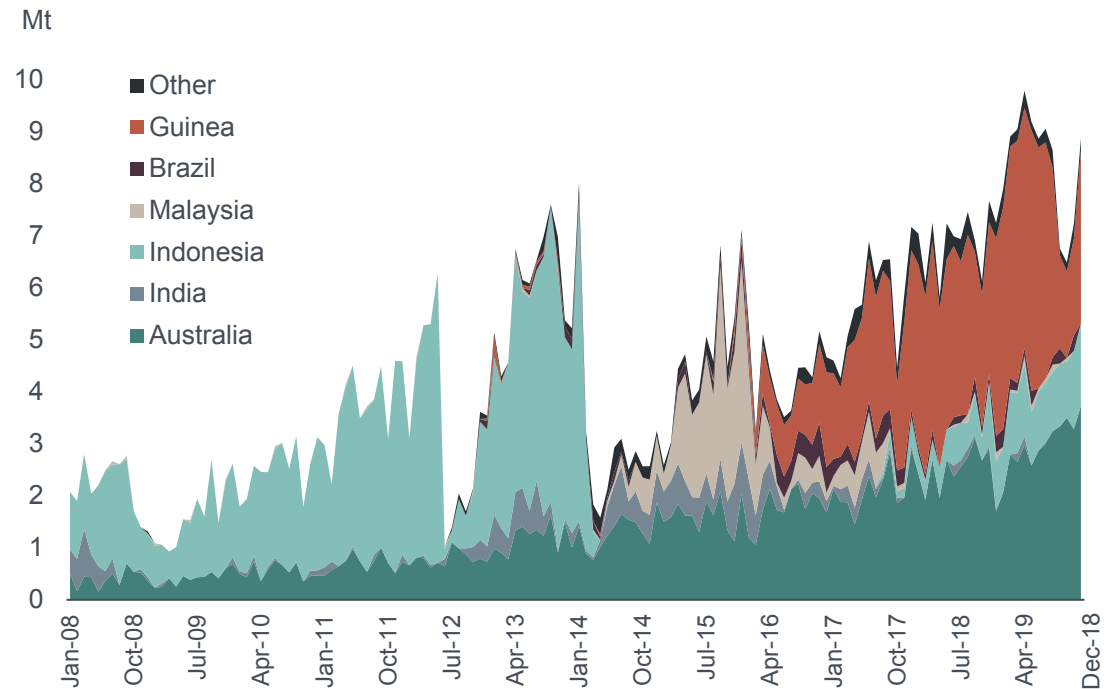
Guinea bauxite increasingly satisfying Chinese demand

Growing need for bauxite imports amid domestic depletion



- Increasing Chinese bauxite prices triggering more bauxite imports
  - Chinese quality deteriorating
  - Unlicensed mines closures

Monthly Chinese bauxite imports by origin



- Guinea bauxite production increasing dramatically
  - Includes non-Chinese players
  - Atlantic-sourced seaborne bauxite continues to grow, adding freight exposure



# Business overview

Investor presentation, February 2020



Hydro – Group



## Profitability

ROACE > 10%



## Sustainability

CO<sub>2</sub> - 30%

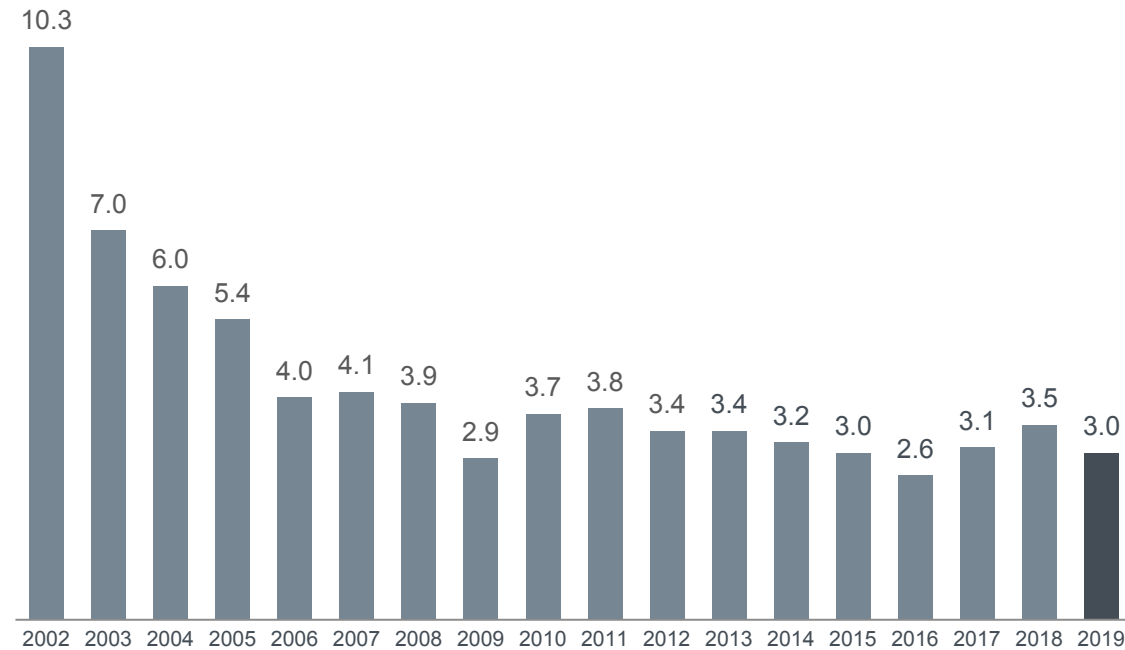


# Safe and responsible operations is a top priority

Leadership in HSE, CSR and compliance as a license to operate



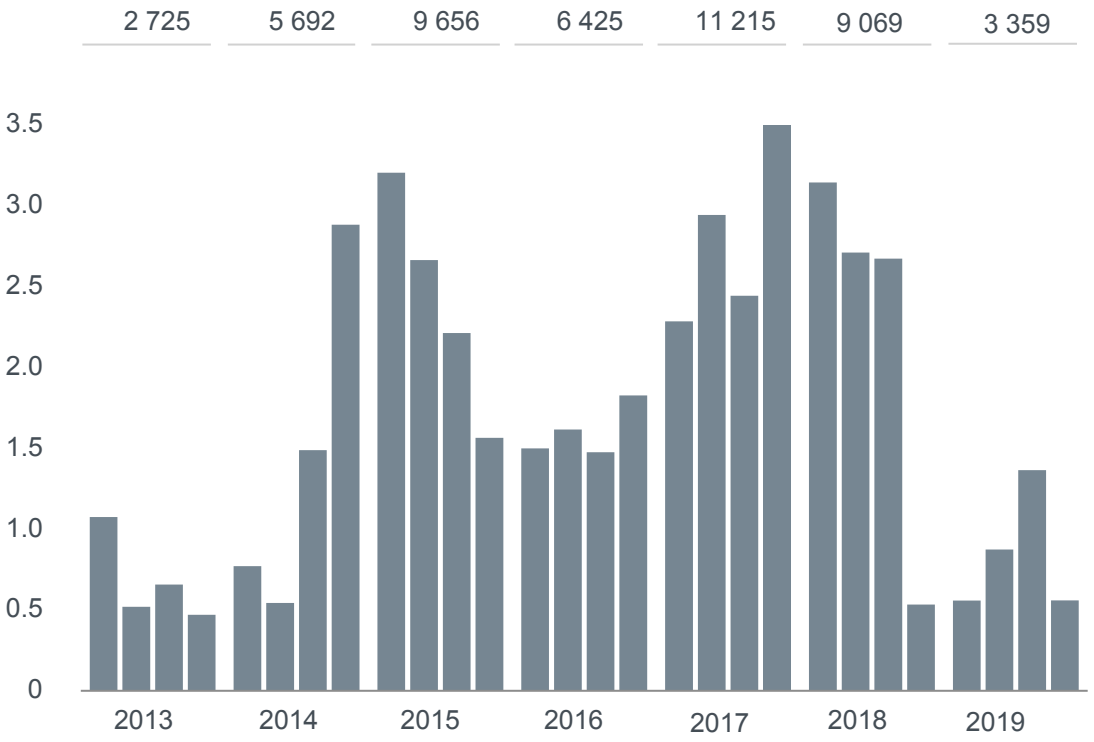
TRI Rate<sup>1)</sup>



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

# Hydro: a resource rich global aluminium company

Hydro underlying EBIT quarterly, NOK billion



Extruded Products classified as discontinued operations, and thereby excluded from revenues and underlying EBIT in 2013. Figures for 2013 are adjusted reflecting IFRS 11  
 1) As per Jan 28, 2020



- Based in Norway, involved in activities in more than 40 countries
- Operating revenues
  - 2019: NOK 150 billion
  - 2018: NOK 159 billion
- ~35 000 employees
- Current market capitalization
  - ~NOK 60 billion/ USD 6.5 billion<sup>1)</sup>

# The aluminium value chain

World class assets, high-end products and leading market positions



# Strong global presence throughout the aluminium value chain

Built on market understanding, customer closeness and competence

## The complete aluminium company

- High-quality bauxite and alumina production in Brazil
- Primary production in Norway, Germany, Qatar, Slovakia, Brazil, Canada, Australia
- 10 TWh captive hydropower production
- European #2 in rolled products
- World leader in aluminium extruded profiles
- Remelting in the US, European recycling network
- Unparalleled technology and R&D organization



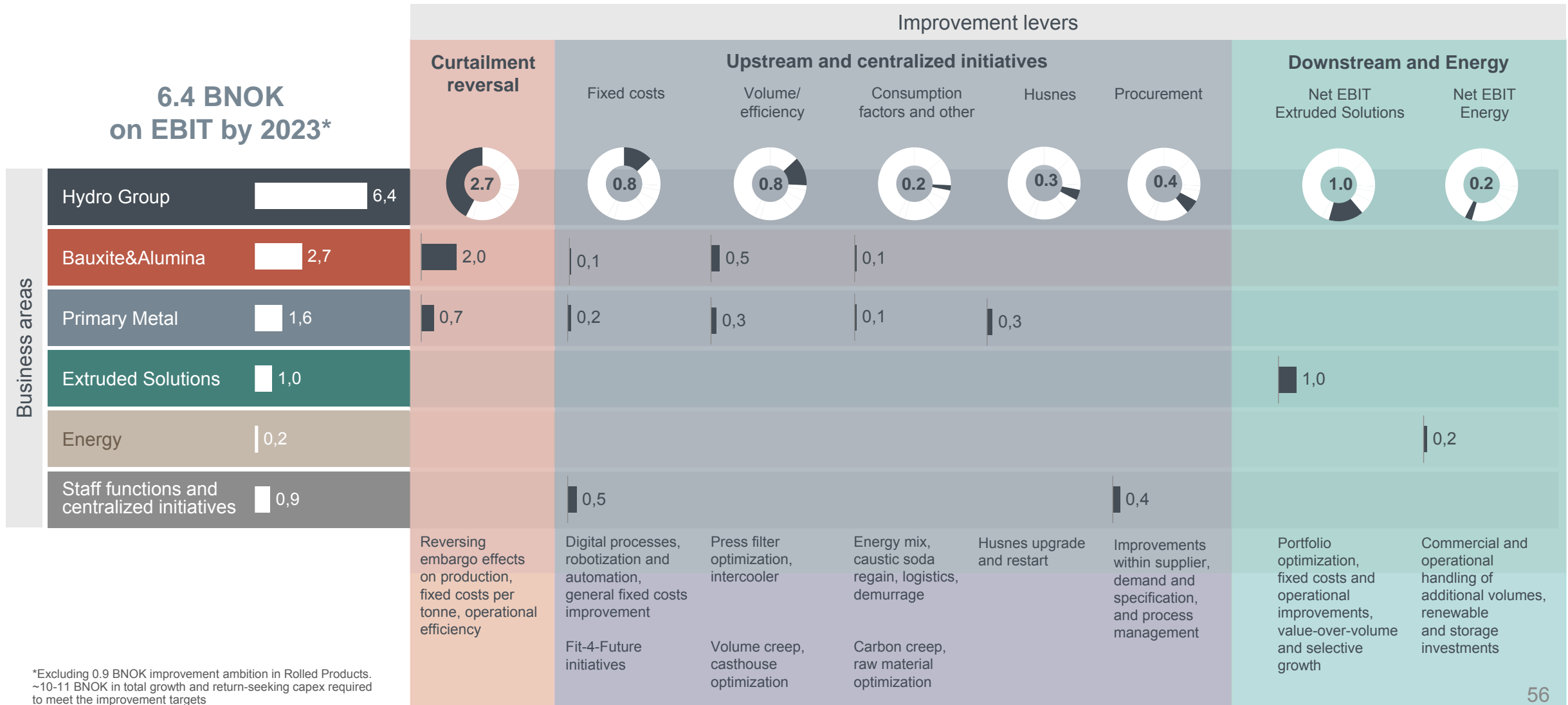
1) Outside China  
 2) Extrusion ingot, sheet ingot, primary foundry alloys and wire rod  
 3) Primary Foundry Alloys



# Revitalizing the improvement drive



Targeted improvements to deliver ambitious potential



\*Excluding 0.9 BNOK improvement ambition in Rolled Products. ~10-11 BNOK in total growth and return-seeking capex required to meet the improvement targets



# Differentiated capital allocation

Different strategic modes for the business areas

Safe, compliant and efficient operations  
– The Hydro Way



Business area	 Bauxite & Alumina	 Primary / Metal Markets	 Energy	 Rolled Products	 Extruded Solutions
Strategic mode	Sustain and improve*		Selective growth	Strategic review	Selective growth
Impact on capital allocation	Sustaining capex and cost efficiency (Creep and recycling with high profitability)		Selected growth investments	Sustaining CAPEX and cost efficiency	Selected growth investments both organic and M&A

\*Creep and recycling with high profitability

# Driving sustainability: Hydro has a strong starting point

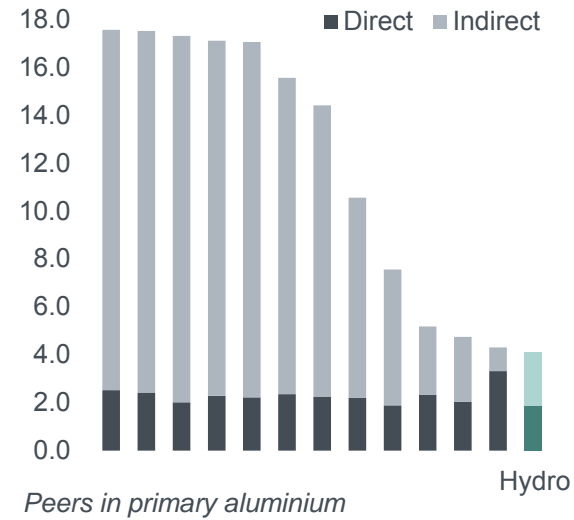


## The Hydro Way – a more viable society



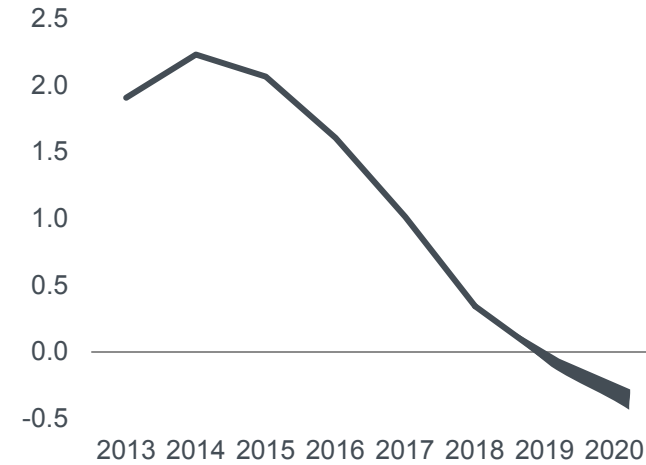
## Lowest CO<sub>2</sub> emissions

Emissions from electrolysis,  
in tonne CO<sub>2</sub>/t Al, 2019



## Net carbon-neutral from a life-cycle perspective by 2020

Net emissions (life-cycle)  
Million mt



# Sustainability: basis for our future positioning



Social responsibility



Environment



Climate



Sustainability in the marketplace: greener products portfolio

# Tackling the industry's key environmental challenges across the value chain

- Restoring **biodiversity** at our bauxite mine
- Exploring more sustainable **tailings** management practices
- Turning **bauxite residue** into a resource
- Recovering our historical **bauxite residue** storage areas
- Improving the **recycling** of our key waste streams
- Strengthening our resilience to **water** related risks
- Reducing our key **emissions** to air



## Targets and ambitions

*1 to 1 rehabilitation of available areas*

*Utilise 10% of bauxite residue generated (from 2030)*

*50% reduction in key non-GHG air emissions by 2030\**

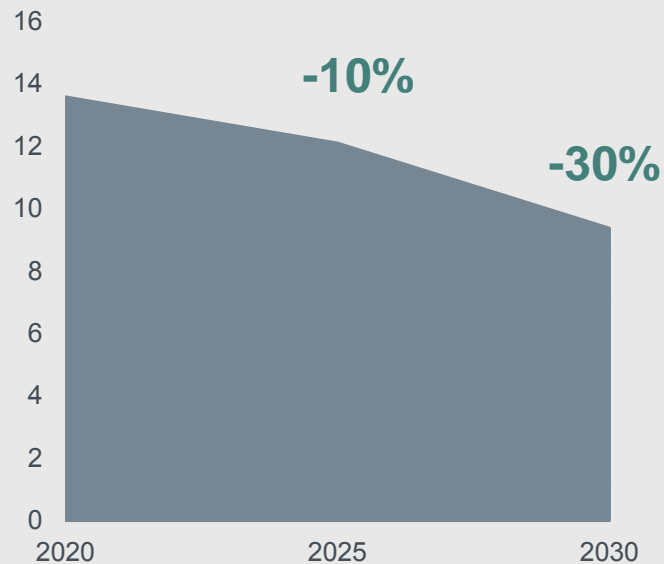
\* SO<sub>x</sub>, NO<sub>x</sub> and PM (2017 baseline)

# New climate strategy: Cut CO<sub>2</sub> emissions by 30% by 2030

Innovation and technology development key enablers toward CO<sub>2</sub>-free processes

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

Total own emissions in million mt CO<sub>2</sub>E



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



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

Exploring different paths

- Carbon Capture
- Biomass anodes
- Carbon-free process

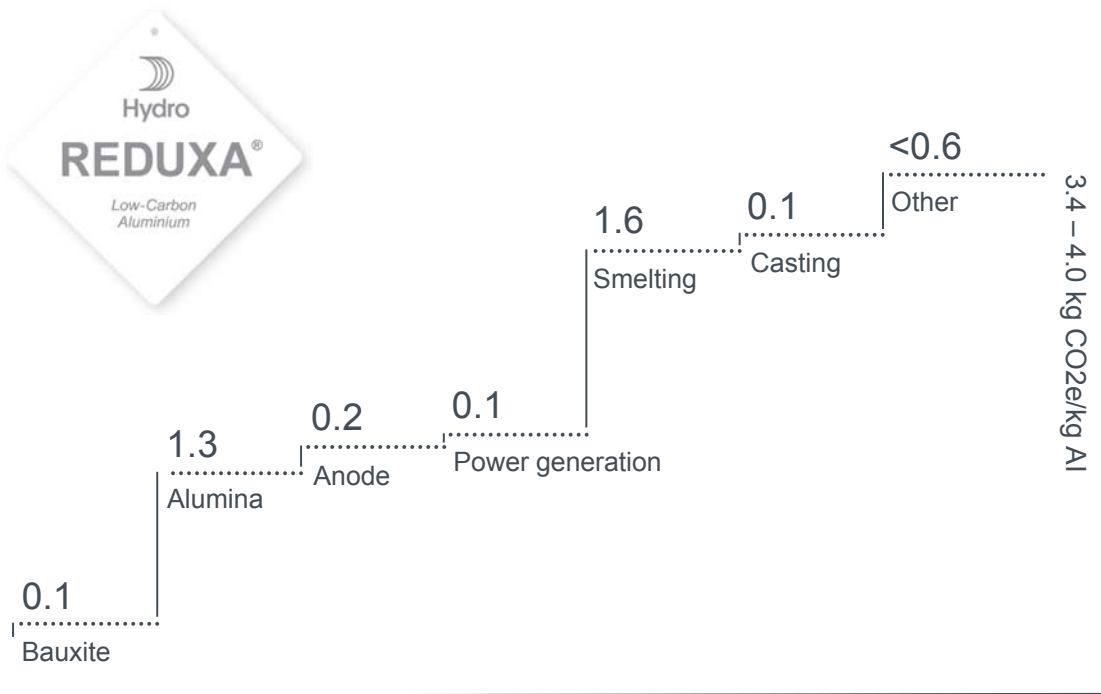


# Greener products: From REDUXA 4.0 to 2.0



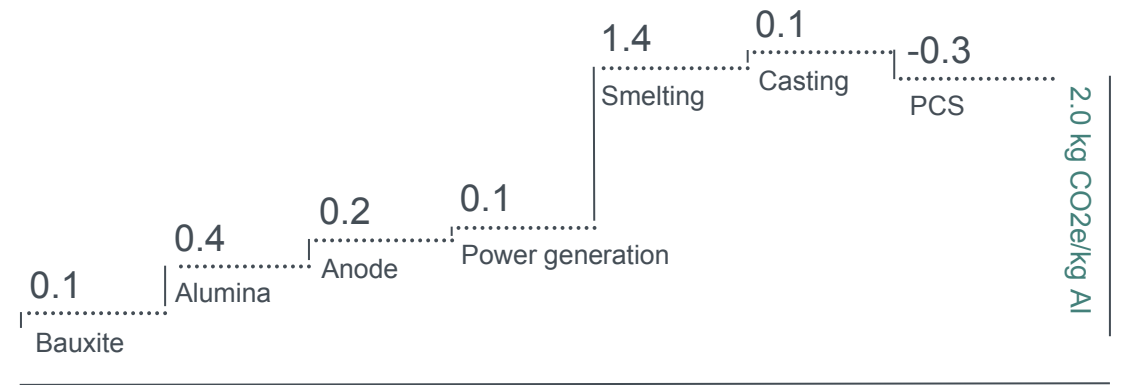
New energy mix in Alunorte important enabler to reach 2.0

## From REDUXA 4.0



Typical production values

## Towards REDUXA 2.0 by 2030



Potential production values

# Sustainability translated into profitability



## Alunorte fuel switch project



## Karmøy technology pilot



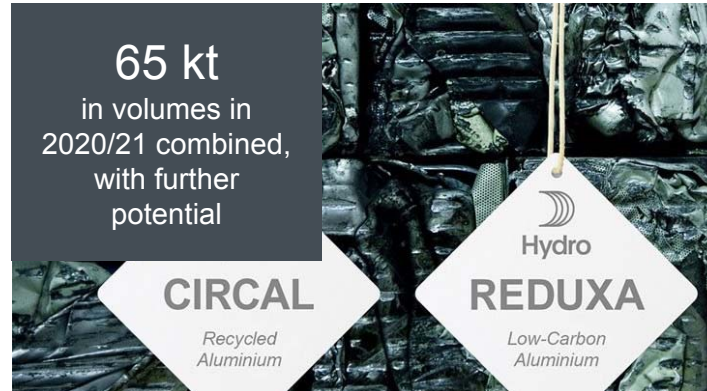
## Recycling in Metal Markets



## Automotive growth



## Greener brands



## Battery solutions - Corvus



1) Based on EBITDA/t margins in the Rolled Products portfolio

# Strategic objectives

Driving long-term shareholder value



- More stable earnings profile
- Less exposed to China
- More downstream customer base
- 10% return target over the cycle



- Sustainable value chain with lower footprint will reduce risk
- Differentiate through sustainable products, developing greener products for the future
- 30% reduction in CO<sub>2</sub> emissions

Strategic priorities • Portfolio management • Capital allocation



# Bauxite & Alumina



# Bauxite and alumina cluster in Para, Brazil

## MRN bauxite mine



- Top 3 bauxite mine in the world
- 5% ownership
- Volume off-take agreement for Vale's 40% stake
- 2019 production 12.2 mill tonnes

## Paragominas bauxite mine



- 100% ownership
- Nameplate capacity of 9.9 million tonnes
- 2017 production 11.4 million tonnes
- 2018 production 6.2 million tonnes\*
- 2019 production: 7.4 million tonnes\*
- Long-life resource

## Alunorte alumina refinery



- 92% ownership
- World's largest alumina refinery outside China
- Nameplate capacity of 6.3 million tonnes
- 2017 production 6.4 million tonnes
- 2018 production 3.7 million tonnes\*
- 2019 production 4.5 million tonnes\*
- Bauxite supplied from Paragominas and MRN
- World-class conversion cost position
- Utilizing state-of-the-art press filter technology to process bauxite residue
- Enhancing plant robustness to prepare for extreme weather events

**Bauxite licenses**

**Refining and mining competencies**

**External supply contracts**

**Sales contract portfolio**

\* Alunorte and Paragominas produced at 50% capacity from March 2018 to May 2019 due to a 50% production embargo on the Alunorte refinery. The production embargo was lifted in May 2019.

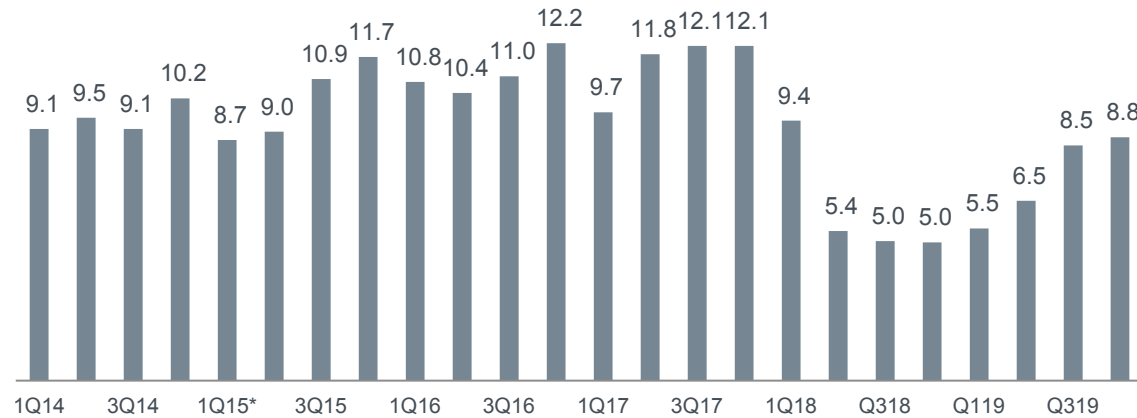


# Ramping-up production following lifting of the embargoes



## Bauxite production in Paragominas

Annualized million tonnes

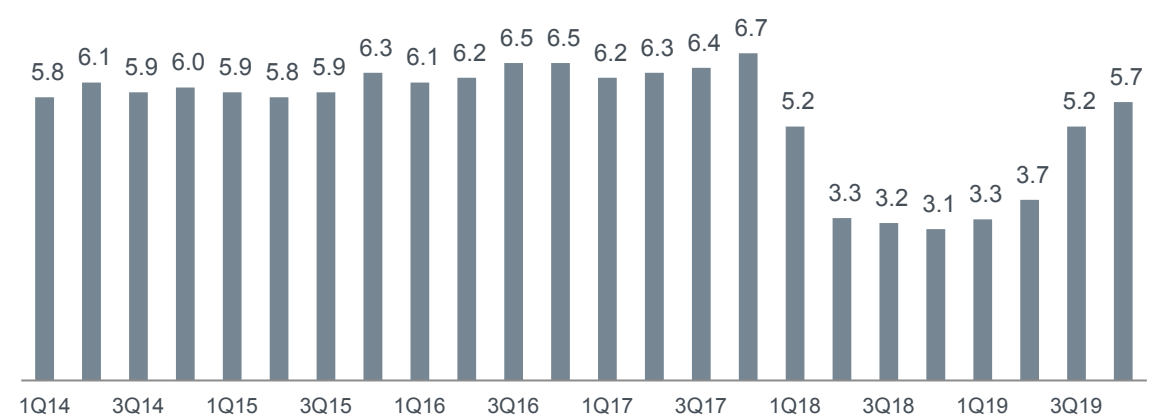


### Paragominas bauxite mine

- Production affected by Alunorte embargo from March 2018 – May 2019, currently ramping-up

## Alumina production at Alunorte

Annualized million tonnes



### Alunorte alumina refinery

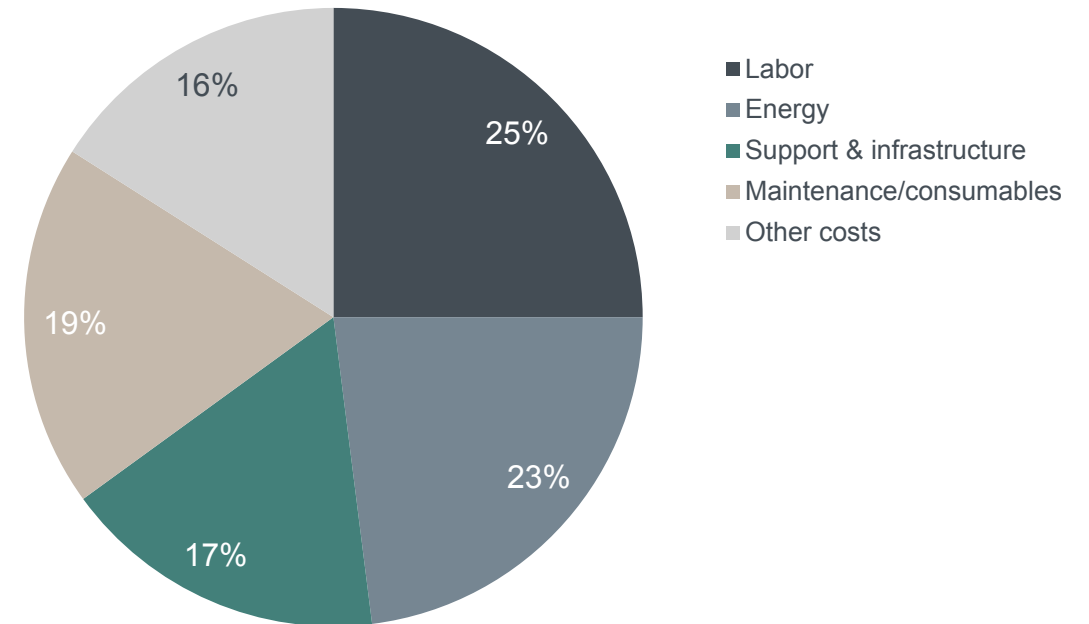
- Production affected by 50% Alunorte embargo from March 2018 – May 2019, currently ramping-up

\* Extended maintenance period in March / April 2015 resulted in lower bauxite production

# Bauxite operational mining costs in Paragominas

- Energy cost - Power and fuel
- Large fixed cost base
- Labor cost
  - Influenced by Brazilian wage level
  - Productivity improvements
- Maintenance and consumables
  - Mainly influenced by Brazilian inflation

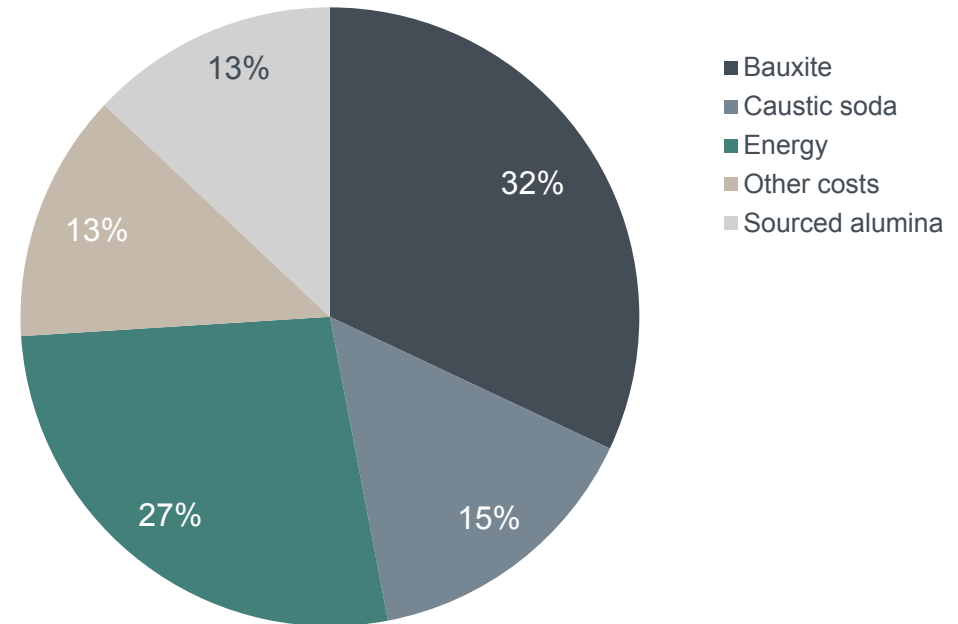
Indicative Paragominas bauxite mining costs



# Favorable integrated alumina cost position

- Implied alumina cost 2019 - USD 275 per mt<sup>1)</sup>
  - Alunorte, Paragominas and external alumina sourcing for resale
  - Affected by 50% production curtailment and additional external sourcing
- Bauxite
  - Internal bauxite from Paragominas at cost, sourced bauxite from MRN
  - External bauxite sales
- Energy
  - First-quartile energy consumption – 8 GJ/mt
  - Energy mix of heavy fuel oil, coal and electric power
- Caustic soda
  - Competitive caustic soda consumption due to bauxite quality
  - Competitive caustic soda sourcing contracts
- Other costs
  - Maintenance, labor and services

Indicative implied alumina cost composition



1) Realized alumina price minus Underlying EBITDA for B&A, per mt alumina sales

# Strong commercial organization maximizing the value of B&A assets



## External alumina sourcing

- 2.0-2.5 million mt of external alumina sourced annually
- Long term off-take agreement with Rio Tinto
  - ~900 000 mt annually from Yarwun refinery
- Short- and medium term contracts
  - To balance and optimize position geographically
  - Various pricing mechanisms
    - Older contracts linked to LME
    - New medium to long term contracts mostly index
    - Fixed USD per mt for spot contracts on index

## Long positions in bauxite and alumina

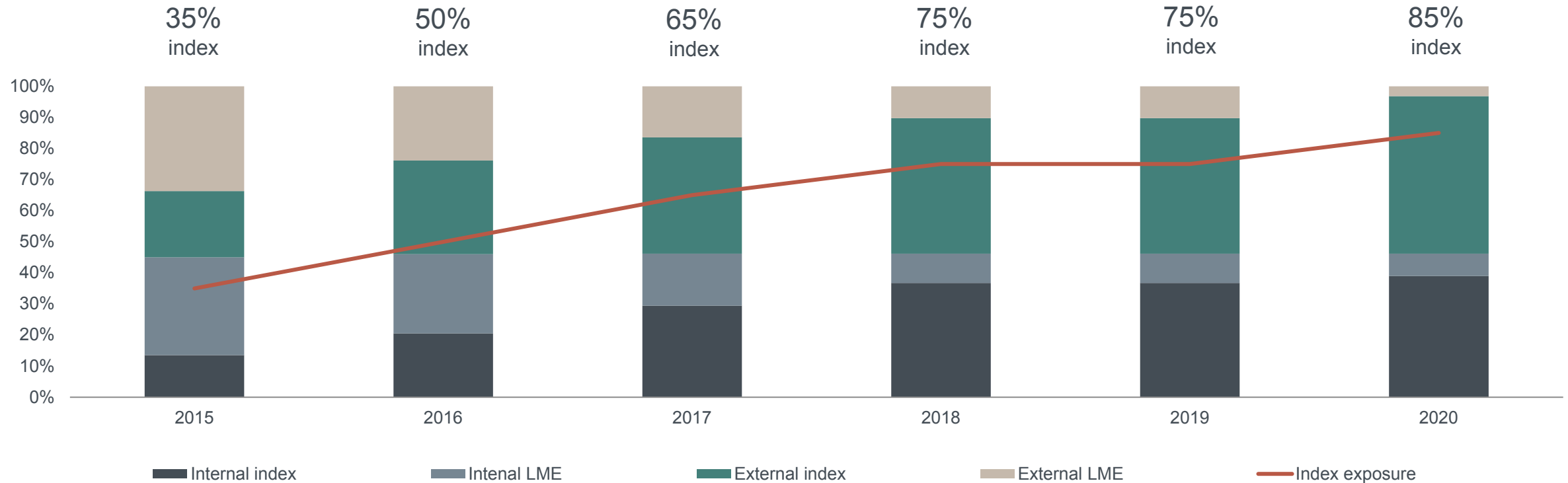
- Pricing should reflect bauxite and alumina market fundamentals
- Selling surplus MRN bauxite externally
  - Premium for high bauxite product quality
  - Majority sold to customers in the Atlantic basin
  - Mostly term contracts based on % of PAX and/or fixed USD/mt element
- Selling 3.0-4.0 million mt/yr of alumina externally
  - Index pricing and short to medium-term contracts
  - New contracts: 100% sold on index, except Hydrate and short-term contracts, normal terms 2-7 years
  - Legacy LME-linked contracts: priced at ~14% of LME 3M

# Shift of alumina sales to index-based pricing continues at full speed



Index pricing the new norm for the industry

Sales exposure to index and short term pricing<sup>1)</sup>



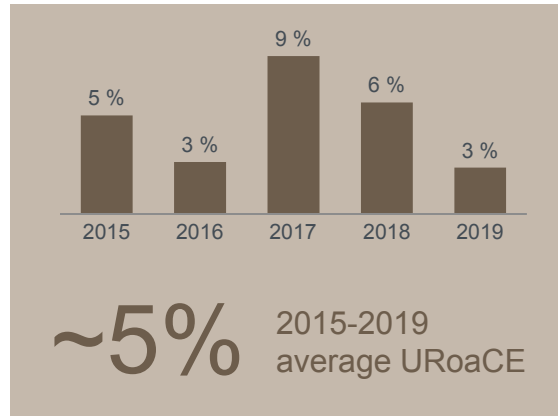
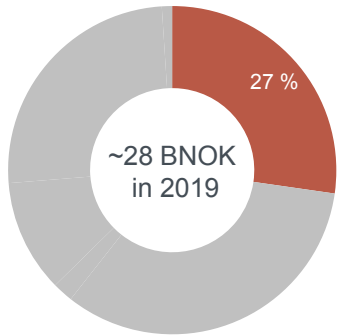
1) Rounded figures. Indicating volumes available for index pricing. Includes minority sales priced at % of LME with floor. Based on annual sourced volumes of around 2.5 mill t, assuming normal production at Alunorte.



# 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



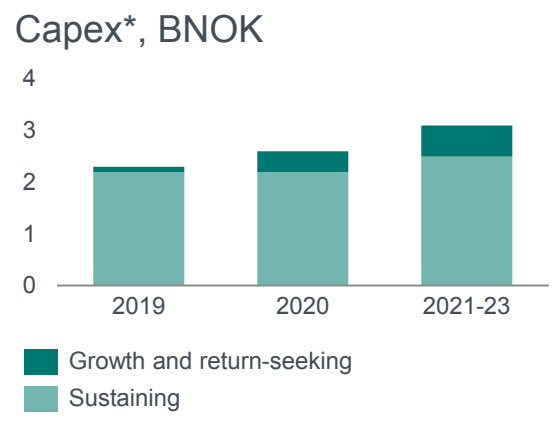
URoCE > CoC

10-11%  
Nominal long-term cost of capital

**2.7 BNOK**  
on EBIT by 2023 in improvement potential

**Key initiatives to reduce NOC**

- Reduction in commercial stocks
- Reduction in caustic soda price and alumina inventories
- Reduction in Paragominas inventories



\*Last updated on Investor Day 2019





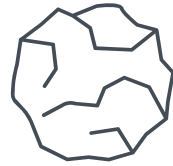
Energy



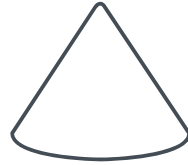
# Energy is a key differentiator in the aluminium industry



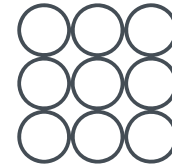
Center of energy excellence in Hydro



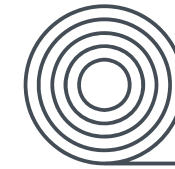
Bauxite



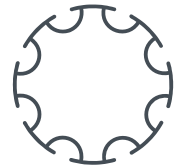
Alumina



Primary



Rolling



Extrusion

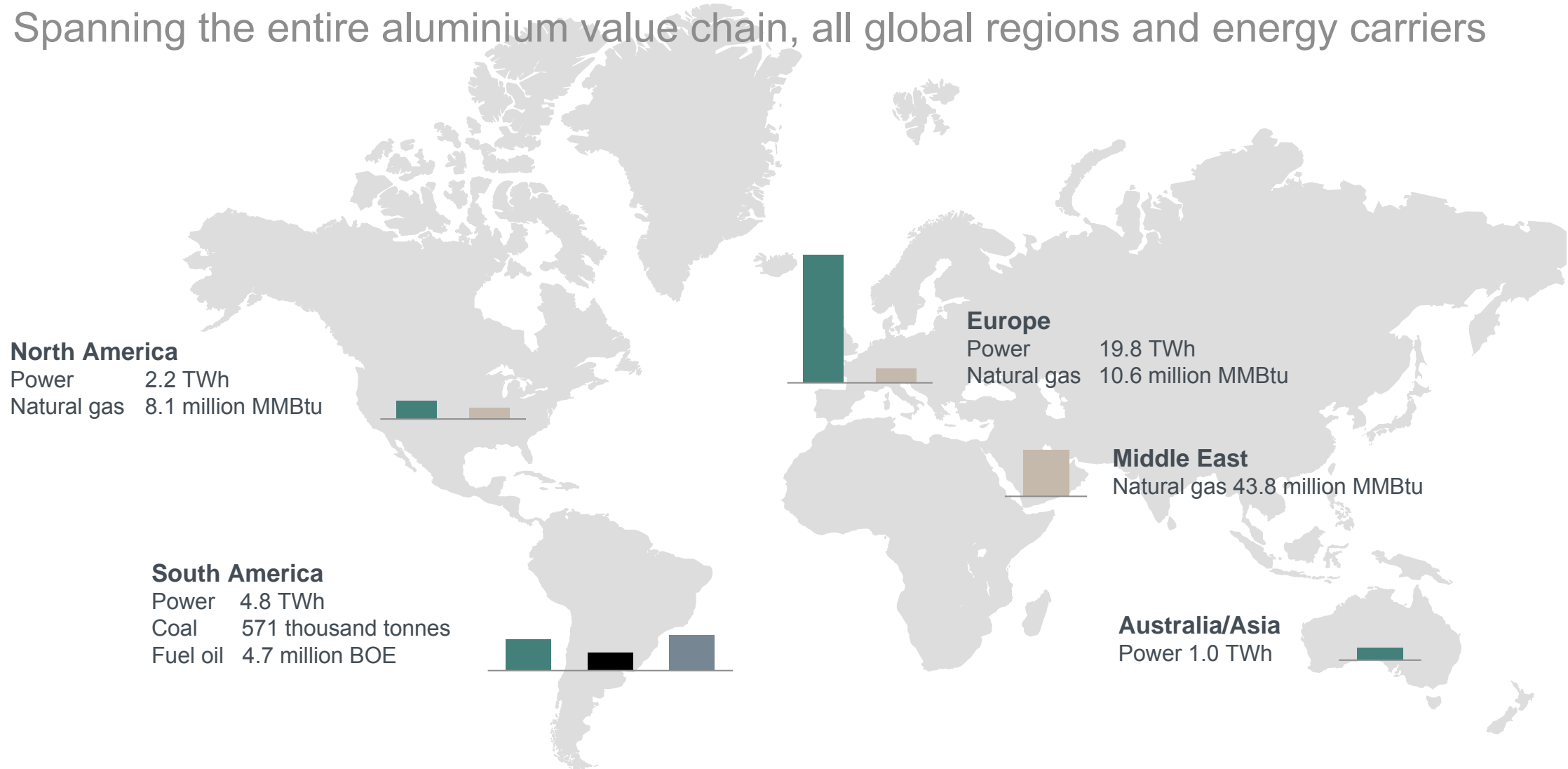
Energy cost*	~25%	~35%	~35%	~10%	~8%
	~50%				
Energy business area's contribution to Hydro	<ul style="list-style-type: none"> <li>• Power sourcing</li> </ul>	<ul style="list-style-type: none"> <li>• Power sourcing</li> <li>• Fuel switch project (LNG)</li> <li>• Energy mix long term, renewables, storage</li> </ul>	<ul style="list-style-type: none"> <li>• Power sourcing and production</li> <li>• Gas sourcing</li> </ul>	<ul style="list-style-type: none"> <li>• Power sourcing</li> <li>• Gas sourcing</li> </ul>	<ul style="list-style-type: none"> <li>• Power sourcing</li> <li>• Gas sourcing</li> </ul>

Market understanding. Framework advocacy. «Greener» support & energy efficiency support. Security of supply

\*Share of Business Operating Cash Cost

# Hydro's global primary energy demand

Spanning the entire aluminium value chain, all global regions and energy carriers



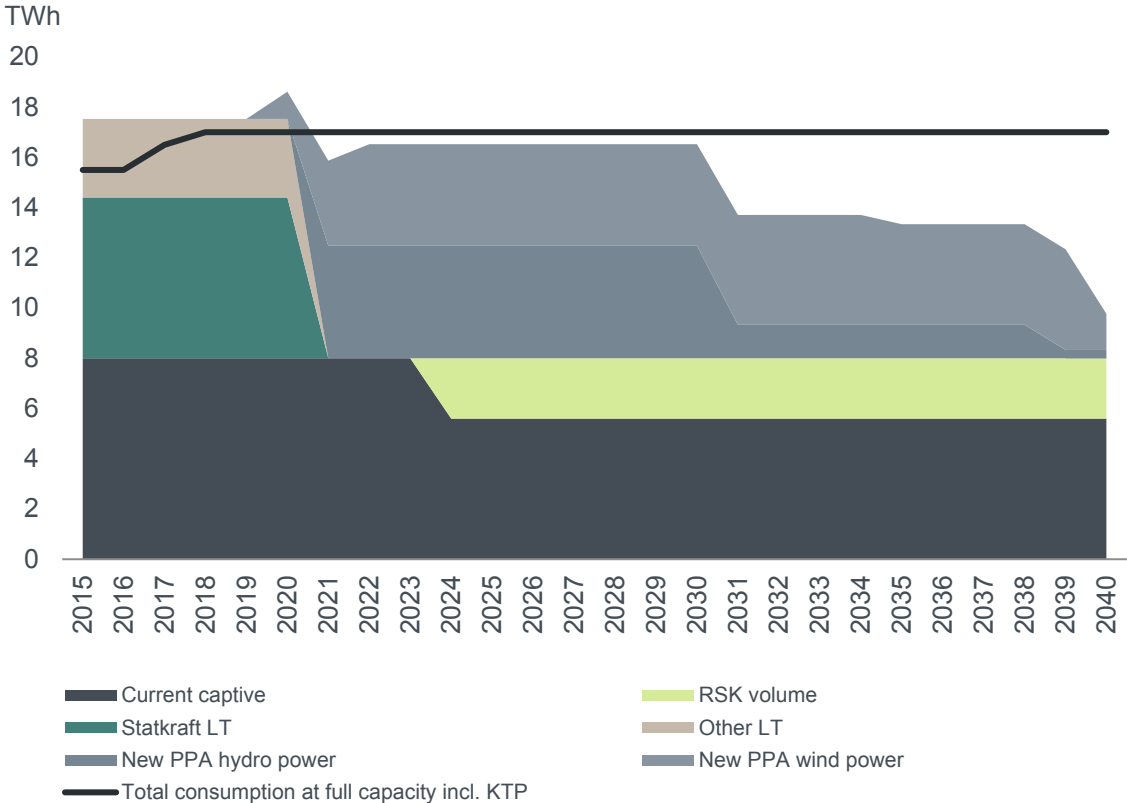
Values are listed in its conventional trading unit. MMBtu= Million British thermal units, ton=metric ton thermal coal, BOE= Barrel of Oil Equivalent.  
Bar charts are represented in the equivalent primary energy size for each category. Primary energy follows IEA's definition.  
Based on equity-adjusted 2018 values for Norsk Hydro's bauxite mines, alumina refineries, smelters, remelters, rolling mills and 2018 estimate for extrusion plants.

# Securing long-term competitive power sourcing for smelters

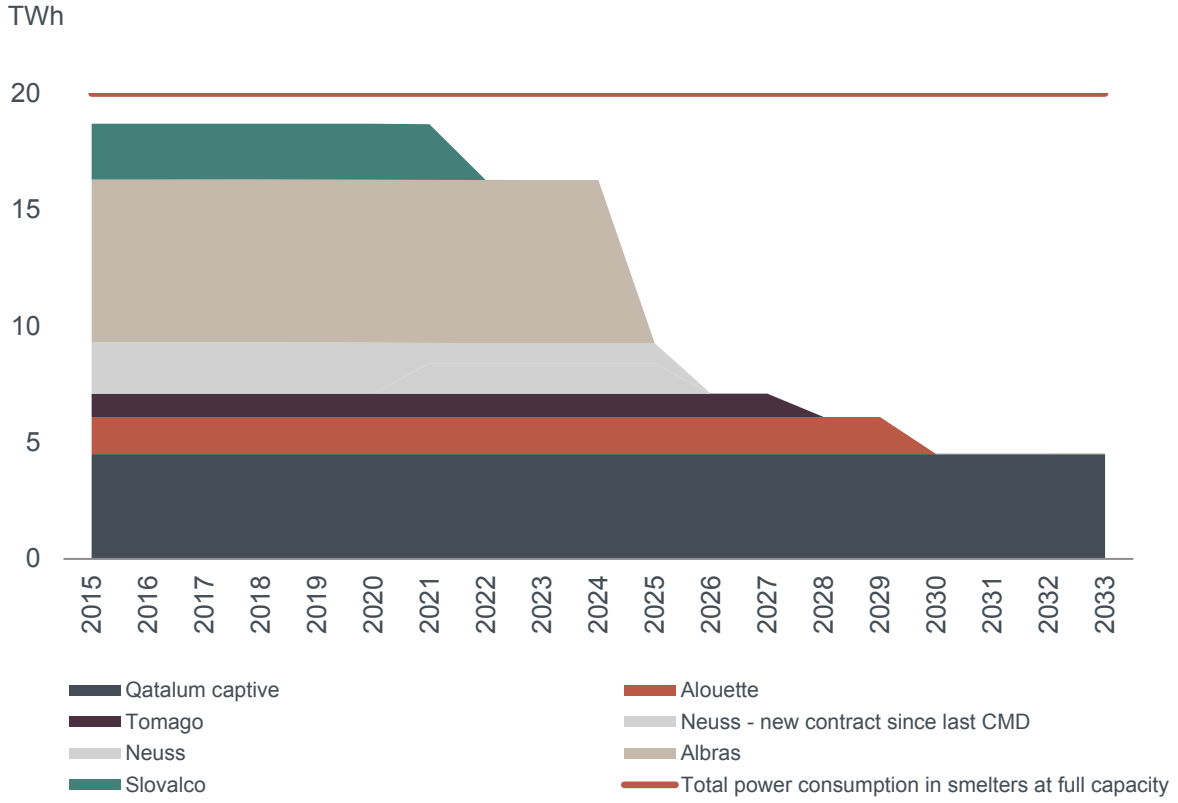


Unique combination of hydro- and windpower

Sourcing platform for fully-owned smelters, Norway<sup>1)</sup>



Sourcing platform for JVs and Neuss smelter<sup>1)</sup>



1) Net 8 TWh captive assumed available for smelters  
 2) Albras and Slovalco on 100% basis



# 10 TWh normal annual power production

## Development in power assets last five years

- 2012: Holsbru and Vasstøl power plants in operation
- 2013: Vigeland acquisition completed, exemption from concession requirement granted
- 2016: Midtlæger and Mannsberg power plants in operation
- Turbine runner projects improving plant efficiency
- Focus: maintain cost control in operations and projects

## New growth projects

- Mature new equity growth options

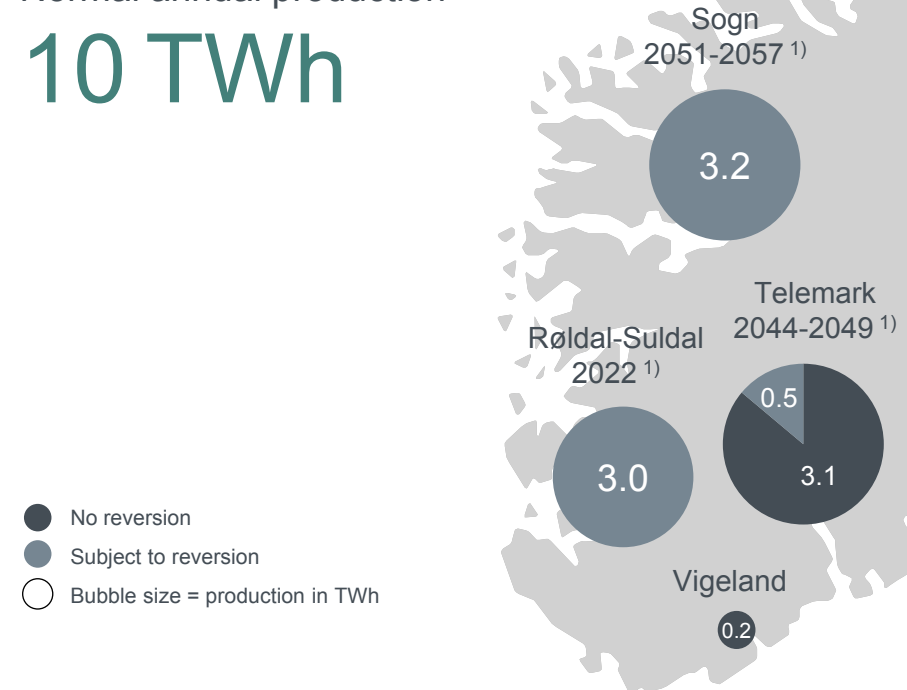
## Framework conditions

- Reversion regime secures full value of energy assets:
  - Prevents further licensing to non-public entities, but allows for everlasting minority private ownership of up to 1/3
  - Law proposal from government on industrial ownership approved by Parliament in June 2016
  - Broad optionality to maintain asset value within the reversion regime

## Power production capacity (TWh), per region and reversion year

Normal annual production

10 TWh

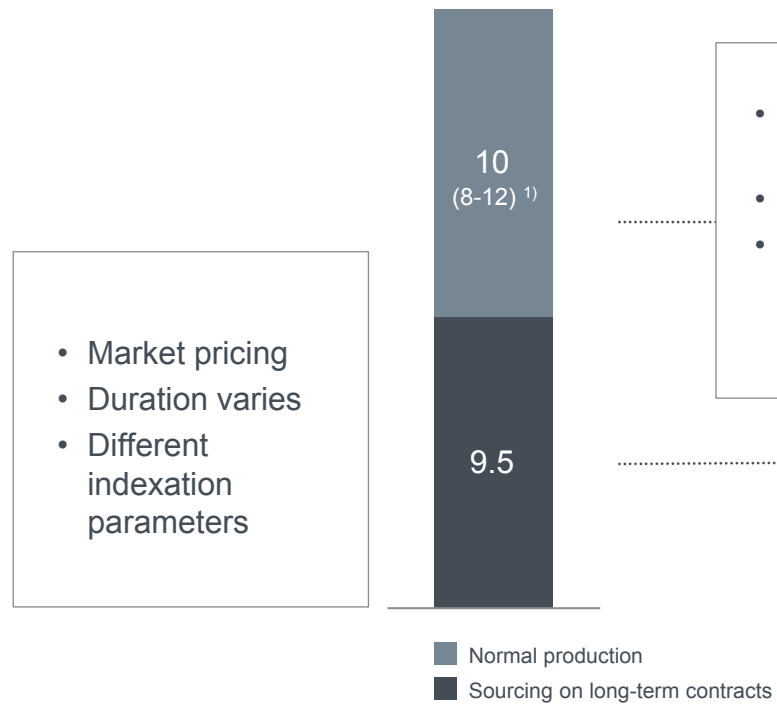


1) Reversion year

# Market pricing principle applied to internal contracts

Based on external price references

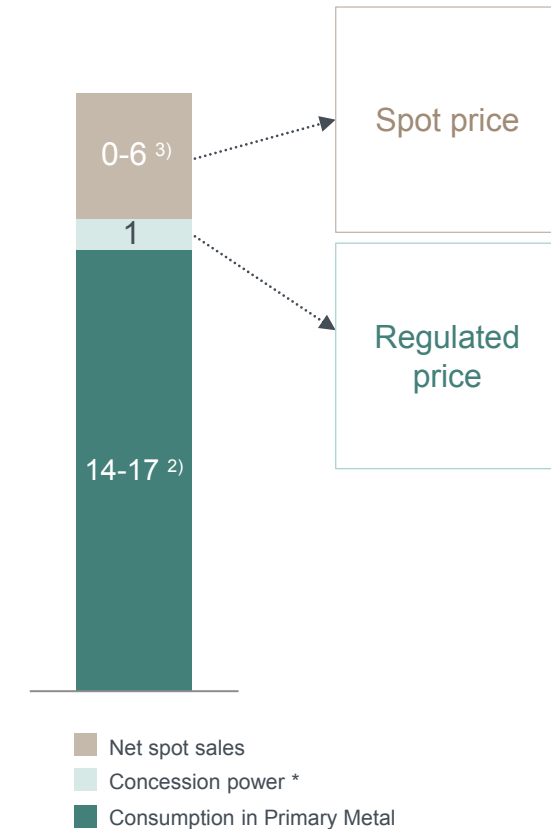
Sourcing side  
TWh



Revenue side  
TWh

- Long-term contract
- Market pricing
- Fixed annual pricing adjustments

Back-to-back



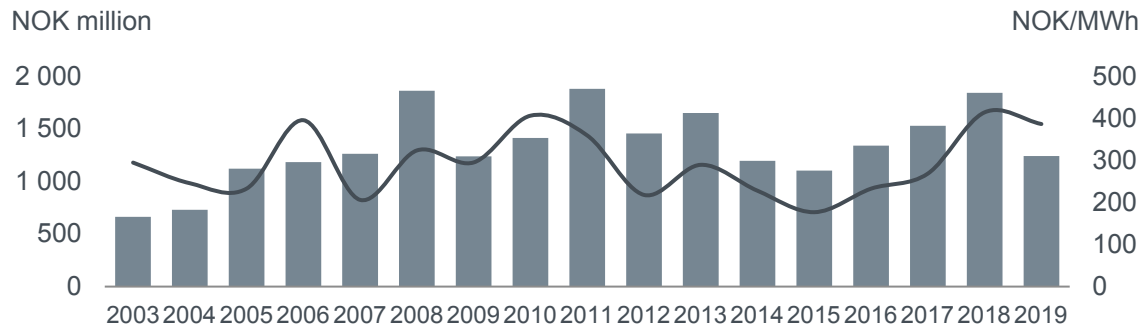
Norway up to 2020

1) Depending on the precipitation level, hydropower production may vary from 8 TWh in a dry year to 12 TWh in a wet year  
 2) Consumption in PM at current production levels and at full installed capacity (incl. Karmøy pilot plant)  
 3) Net spot sales vary depending on the power production level and internal consumption in PM  
 \* Includes legacy external contracts

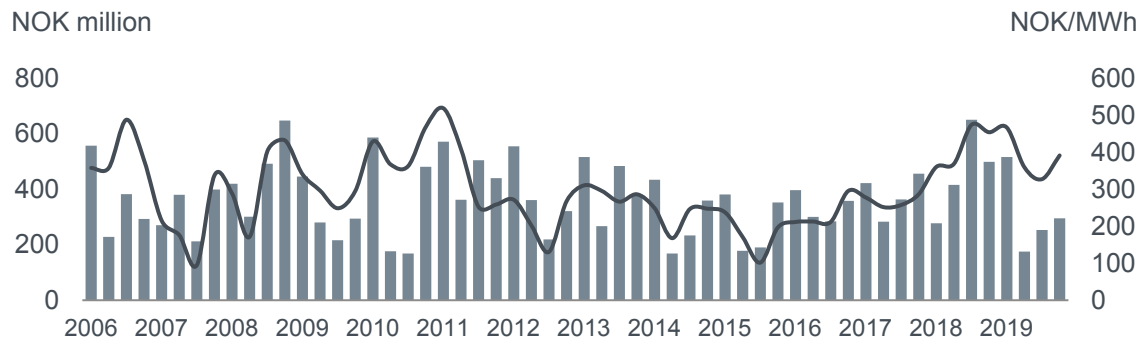
# Energy earnings drivers



Underlying EBIT<sup>1)</sup> and spot price



Underlying EBIT and spot price



■ Underlying EBIT — Spot price

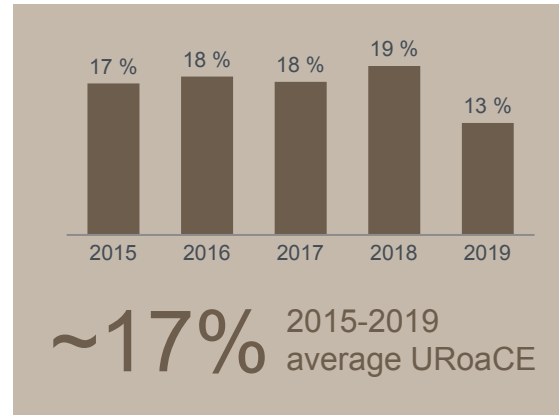
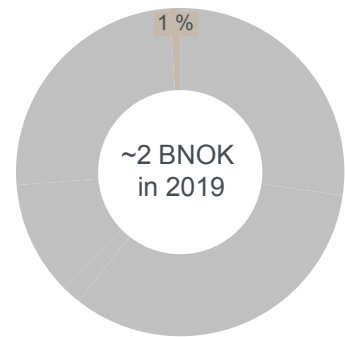
- Production and market prices strongly linked to hydrological conditions
- Fairly stable annual EBIT contribution
- Seasonal market variations in demand and supply
- Occasional delink between area prices
- Power portfolio optimized versus market
- Stable and competitive cost base:
  - Mainly fixed costs
  - Volume-related transmission costs
- Expiry of legacy supply contract entered in 2008 will have positive effect of ~NOK 400 million from 2021
- New 8 TWh internal contract for power sales to Primary Metal in Norway effective from 2021-30
  - Positive EBIT effect to Energy approximately NOK 300 million
  - Net power sourcing cost, internal and external, for Primary Metal largely unchanged

1) Underlying EBIT 2003–2006 based on USGAAP

# Capital return dashboard for Energy

Returns significantly above the cost of capital reflecting the depreciated asset base

## Capital employed in Energy



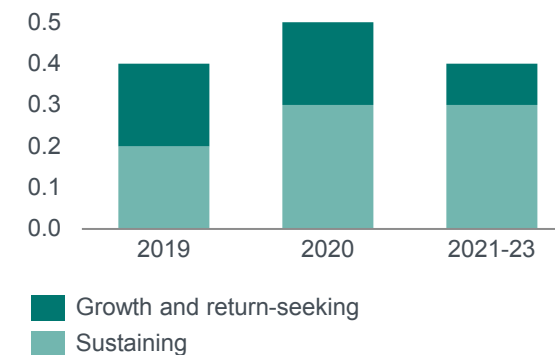
URoaCE > CoC

6-7%  
Nominal long-term cost of capital

**0.2 BNOK**  
on EBIT by 2023 in improvement potential

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

## Capex\*, BNOK





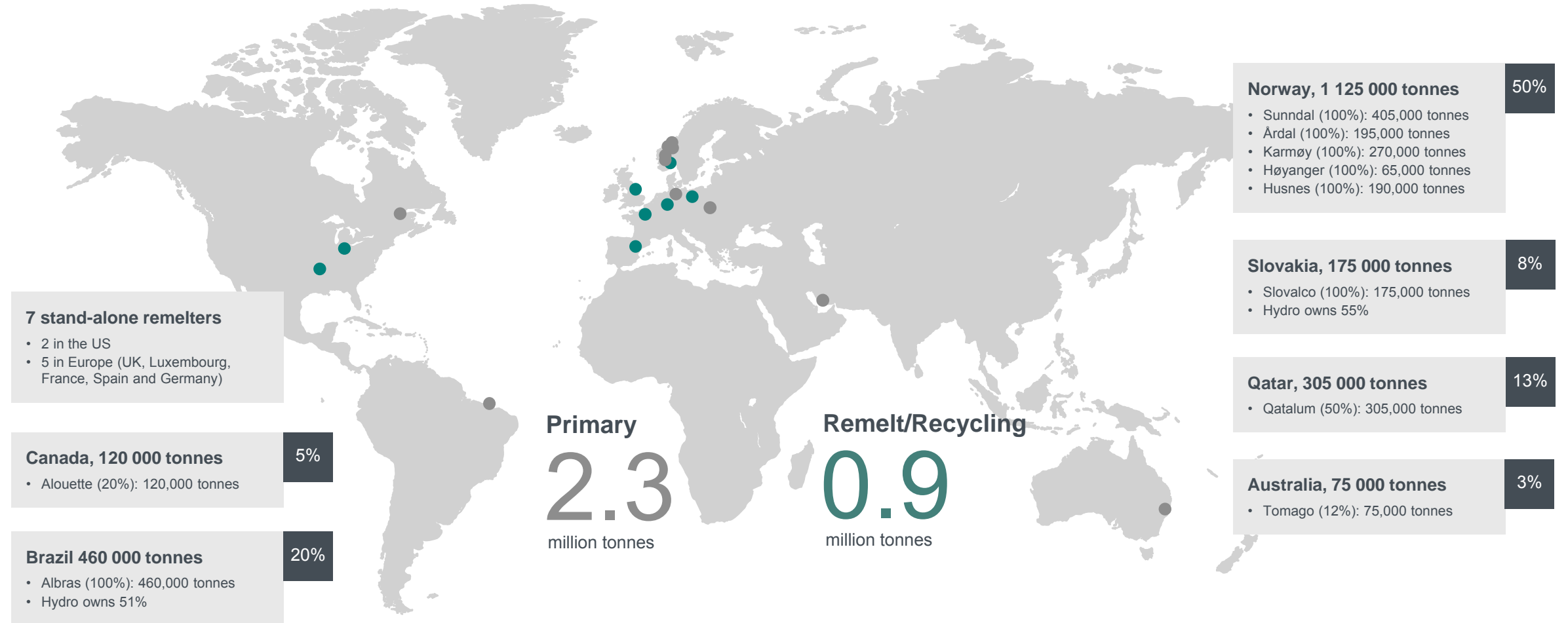
Primary Metal



# World-wide primary aluminium production network



## Primary Metal and Metal Markets



2.3 million mt is consolidated capacity. Slovalco and Albras are fully consolidated, Tomago and Alouette are proportionally consolidated and Qatalum is equity accounted. Neuss, which is a part of Rolled Products, is not included. 0.9 million mt includes stand-alone remelters, recycling facilities and additional casthouse capacity at primary plants.

# Unlocking new improvements through Industry 4.0 initiatives

40 ongoing projects



Robotics & Automation projects



Trusted Data Layer Casthouse



Soft Sensor incl. Trusted Data Layer



Mobile Maintenance Worker



Trusted Data Layer Carbon + Analytics workbench improvements



Bring Your Own Device

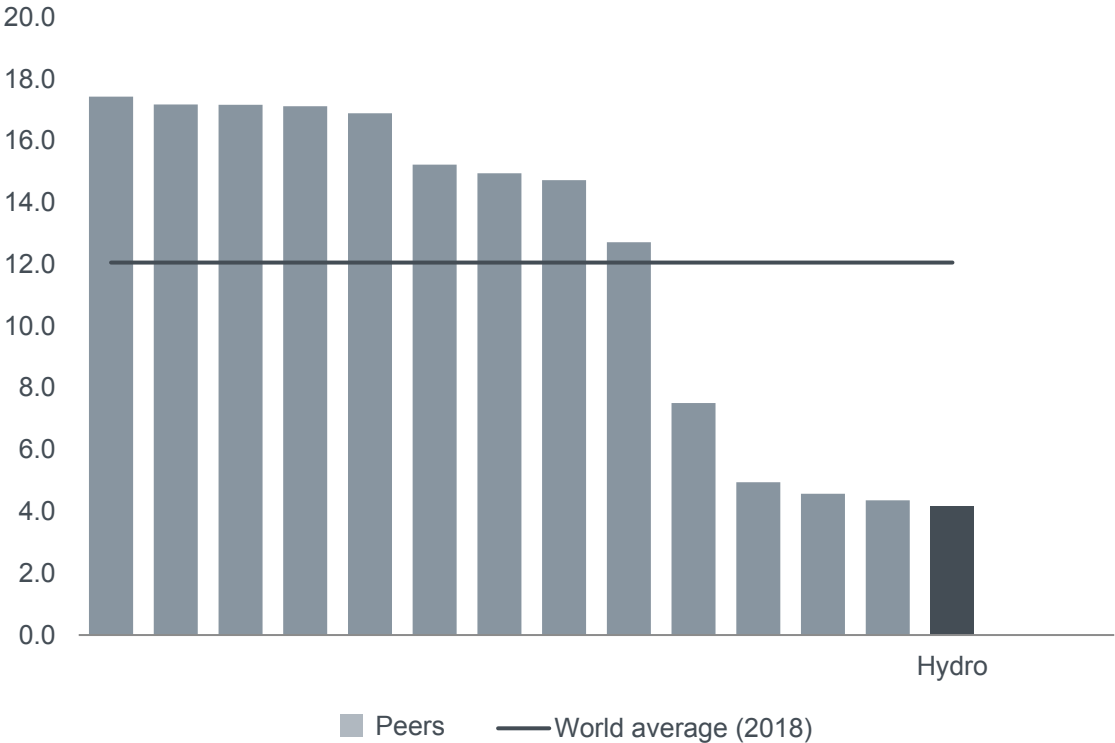
Digital Foundation including Cyber Security

Organization Foundation including Primary Metal Digital Academy

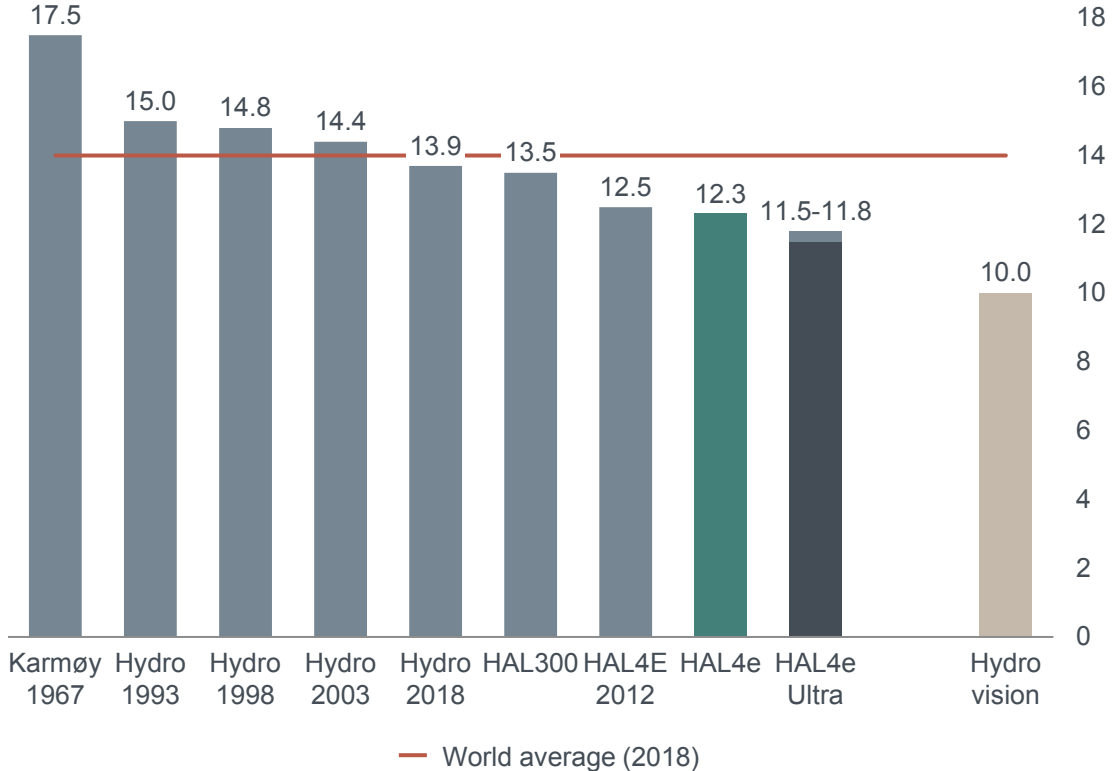
# Low carbon footprint due to renewable energy base and industry lowest energy consumption



Total emissions, in tonne CO2/t al



Energy consumption in Hydro smelters<sup>1)</sup>, kwh/kg al

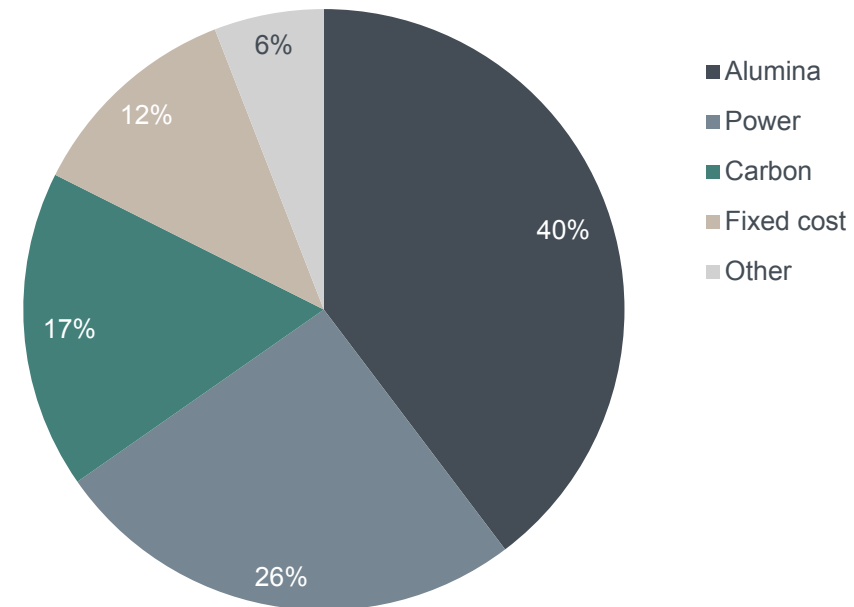


Source: CRU and Hydro analysis  
 1) Hydro's consolidated share

# Competitive primary aluminium cash cost

- Primary aluminium cash cost 2019
  - All-in implied primary aluminium cash cost<sup>1)</sup> USD 2 000 per mt
  - LME implied primary aluminium cash cost<sup>2)</sup> USD 1 675 per mt
- Alumina
  - Alumina prices for 2019 still affected by Alunorte curtailment
  - Alumina from both internal and external sources
  - Purchases based on alumina index ~75%<sup>4)</sup>
  - Purchased based on LME link ~25%
- Power
  - Long-term contracts
  - 2/3 of power need from renewable power
  - Contracts with a mix of indexations; inflation, LME, coal, fixed
- Carbon
  - 2-3 year contracts for petroleum coke and pitch, quarterly pricing
- Fixed costs
  - Maintenance, labor, services and other
- Other
  - Other direct costs and relining

Liquid aluminium cash cost 2019<sup>3)</sup>



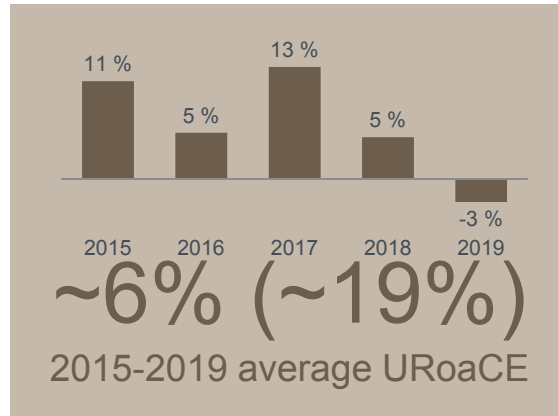
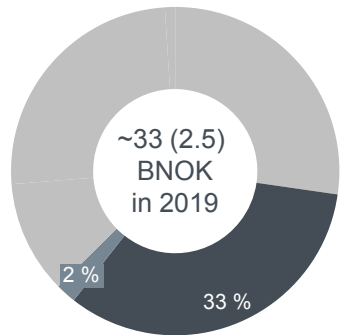
1) Realized LME aluminium price plus premiums minus underlying EBITDA margin, including Qatalum, per mt primary aluminium sold  
2) Realized LME aluminium price minus underlying EBITDA margin, including Qatalum, per mt primary aluminium produced  
3) Pie chart based on cost of producing liquid aluminium, not directly comparable to the LME or All-in implied primary aluminium cash cost  
4) More alumina purchases on indexes due to Alunorte curtailment

# 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)



URoACE > CoC

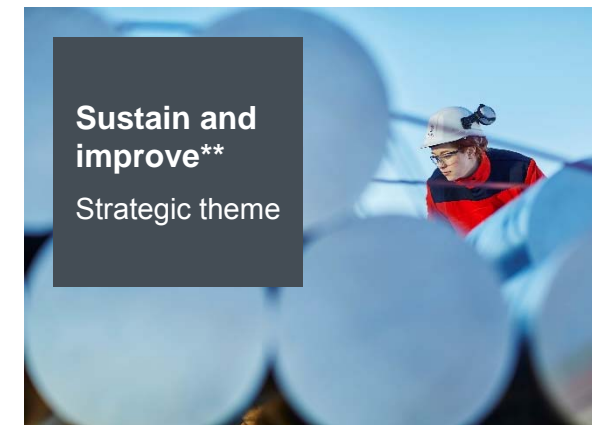
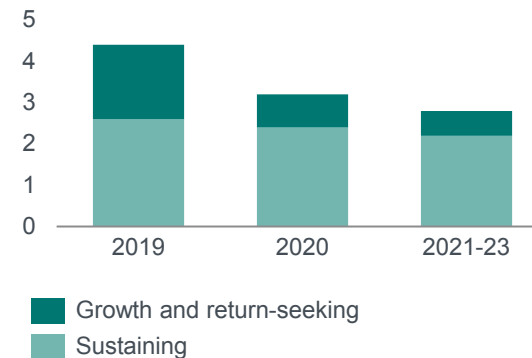
10%-11%  
(7-8%)  
Nominal long-term cost of capital

**1.6 BNOK**  
on EBIT by 2023 in improvement potential

Key initiatives to reduce NOC

- Reduction in alumina and ingot inventories (safety stocks)

Capex\*, BNOK



\*\*Last updated on Investor Day 2019  
\*\* Creep and recycling with high profitability





# Metal Markets

# Strong position in value-added casthouse products



- Capitalizing on value-added casthouse products portfolio
- Extensive multi-sourcing system including fully- and part-owned primary casthouses and stand-alone remelters
- Flexible sourcing system enabling rapid and cost effective volume adjustments
- Value creation from margin management based on commercial expertise and risk management competence
- Strong market positions in Europe, US and Asia

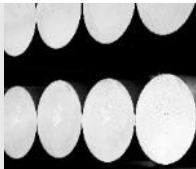






**Casthouse production**

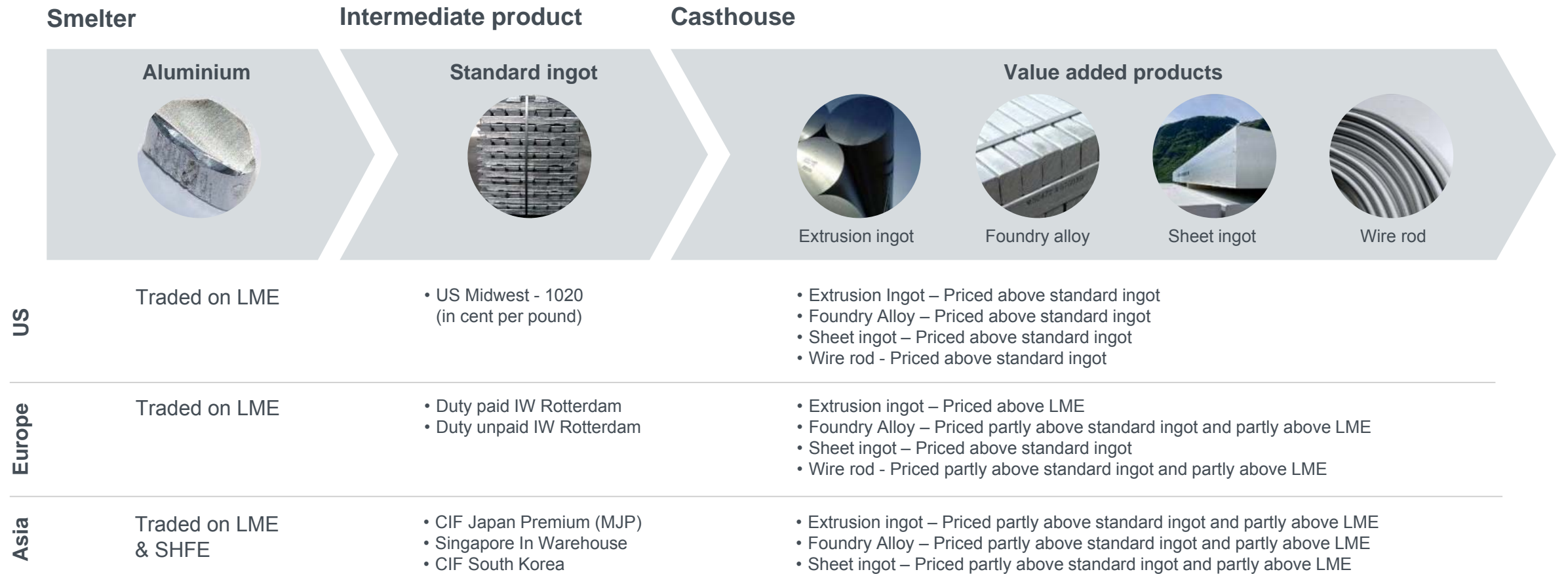
Primary production

Remelting & recycling

Commercial agreements

<b>Extrusion ingot</b> 1.5 million mt		<b>Leading global position</b> Unique primary and recycling capacity network
<b>Foundry alloys</b> 0.5 million mt		<b>Leading global position</b> Strong capabilities in all automotive segments
<b>Sheet ingot</b> 0.3 million mt		<b>Leading European position</b> Well positioned to capture automotive growth
<b>Wire rod</b> 0.1 million mt		<b>Leading European position</b> Market attractively supported by copper substitution
<b>Standard ingot</b> 0.4 million mt		<b>Leading global position</b> Global flow optimization through key positions

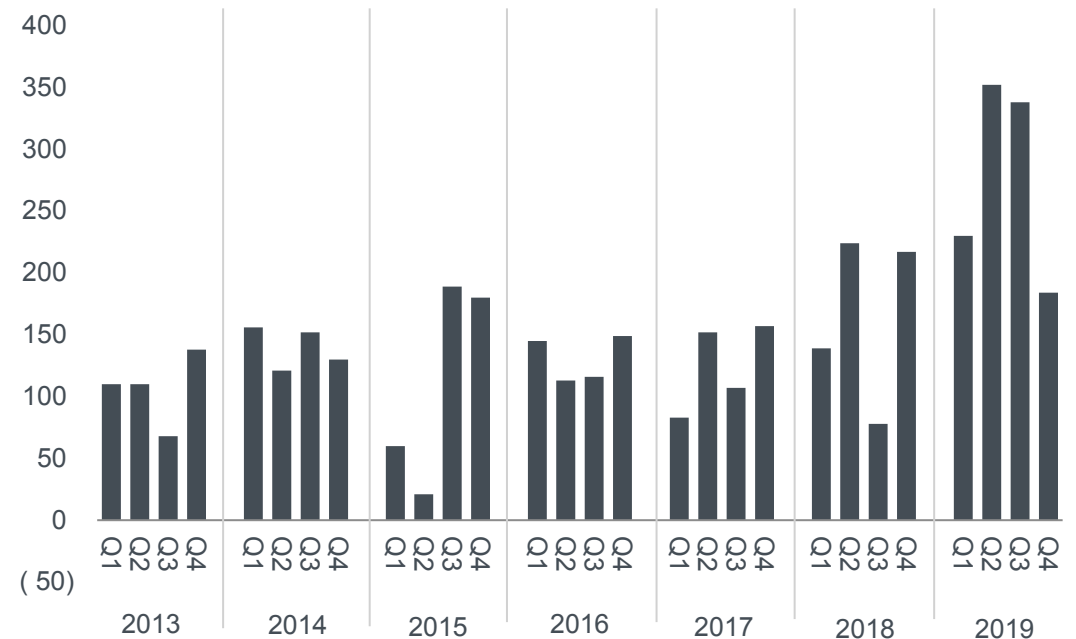
# Pricing of value-added products



# Metal Markets earnings drivers

- Remelters
  - Revenue impact – volume and product premiums above LME
  - Cost impact
    - Scrap and standard ingot premiums above LME
    - Raw material mix
    - Freight cost – proximity to market
    - Energy consumption and prices
- Other main businesses
  - Physical and LME trading
  - Third-party products
- Results influenced by currency fluctuations and inventory valuation effects
- Underlying EBIT ex. currency and inventory valuation effects at around 500 MNOK per year

Underlying EBIT excluding currency effects and inventory valuation effect, NOK million<sup>1)</sup>



1) Underlying EBIT ex. currency and ingot inventory valuation effect have been restated for 2013 and 2014



# Rolled Products



# Rolled Products - strong European production base and global sales force

- ~1 million tonnes of flat rolled products per year
- Unique integrated aluminium cluster
  - Neuss
  - Alunorf
  - Grevenbroich
- Casthouse network and integrated recycling capacity
- Strong customer satisfaction on quality
- However, unsatisfactory returns over latest years – performance turn-around required



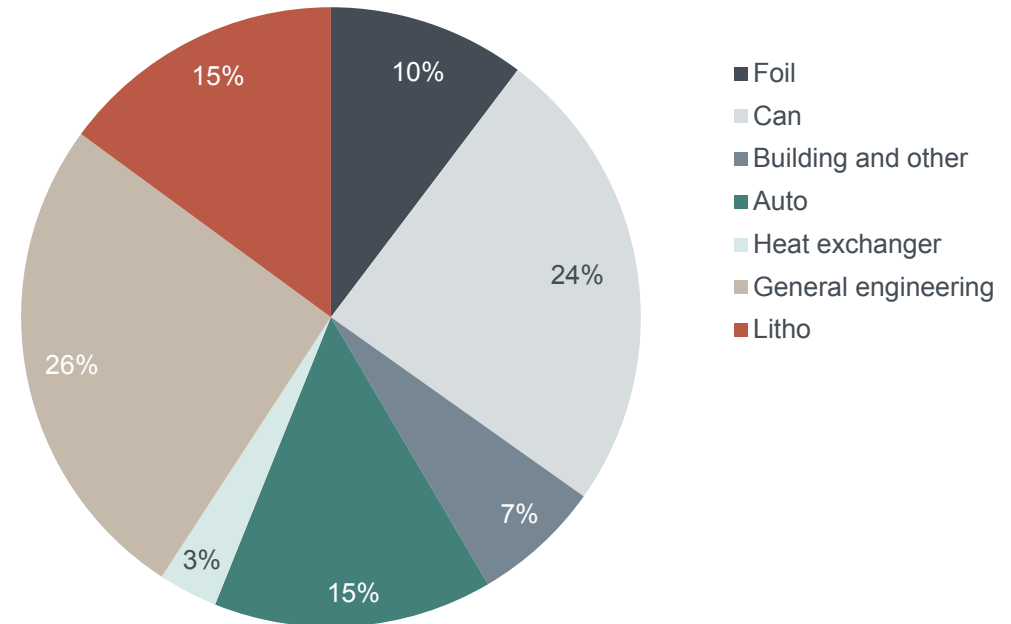
● Rolling mill ● Sales Office ● Smelter ● R&D centre

# Major flat rolled products producer in Europe






- World leader in high-end products foil and litho
  - Alunorf (JV 50%) – world's largest rolling mill
  - Grevenbroich plant – world's largest multi-product finishing mill
- High-grading product portfolio
  - Margin management and cash generation
  - Portfolio adjustment towards higher margins
- Capitalize on automotive market growth
  - Investment in new automotive body-in-white capacity
  - Ramp-up ongoing
- Strengthen recycling position through used beverage can recycling plant

External sales in tonnages 2018

Total 951 kT



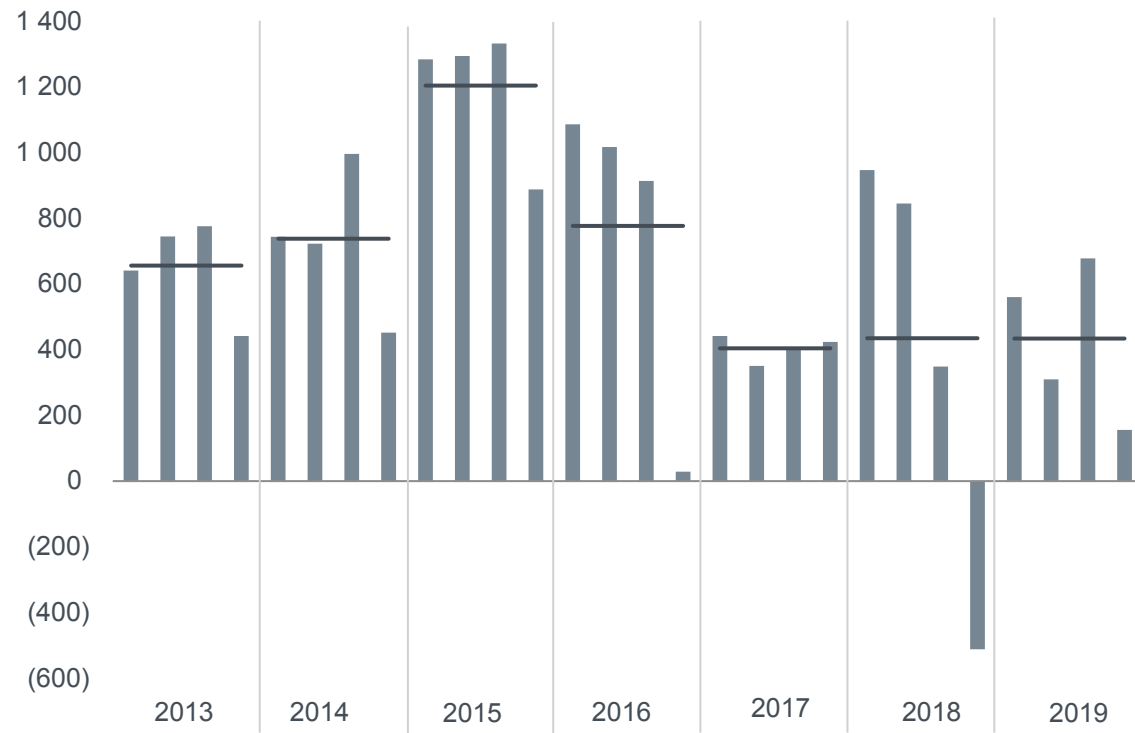
# Several attractive segments within rolling industry – Hydro targets to shift portfolio towards auto and can

	Cans	Automotive	General Engineering	Lithographic sheet	Packaging foil
					
	Aluminium <b>can body stock &amp; can ends</b> for production of alum. beverage cans	Rolled aluminium for <b>chassis, body and component</b> applications	Solutions for <b>buildings</b> and for <b>general engineering applications</b>	Lithographic <b>strip for offset printing plates</b> used for printed media	Broad variety of products from <b>aluminium foil to solid containers</b>
Exposure 2018	24%	15%	36%	15%	10%
Indicative segment attractiveness*	● High	● High	● Low to High	● Medium	● Low
Recycling friendliness	● High	● Medium	● Medium	● Low	● Low
Targeted exposure 2023	29%	21%	31%	11%	7%

\*Based on expected growth, competitive landscape, returns and margins

# Rolled Products earnings drivers

Underlying EBIT per tonne, NOK

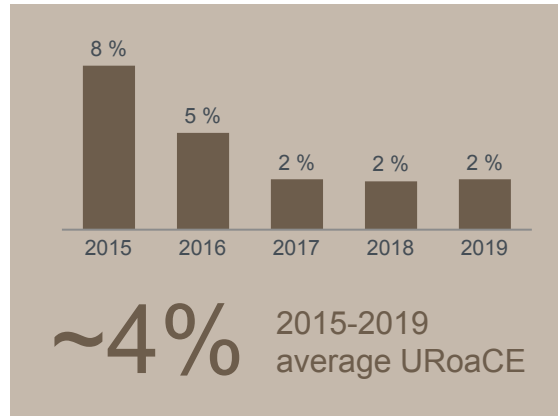
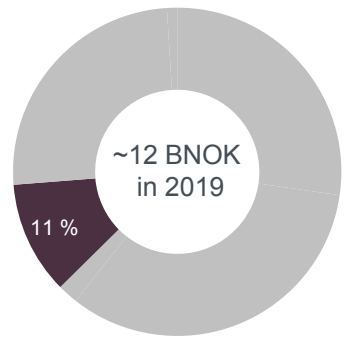


- Contract structure
  - Margin business based on conversion price
    - LME element passed on to customers
  - Range from spot contracts to multi-year contracts
- High share of fixed costs - volume sensitive
- Annual seasonality driven by maintenance and customer activity
  - Q4 typically the weakest quarter of the year
- Preferred supplier market position in high-end products

# Capital return dashboard for Rolled Products

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

Capital employed in RP

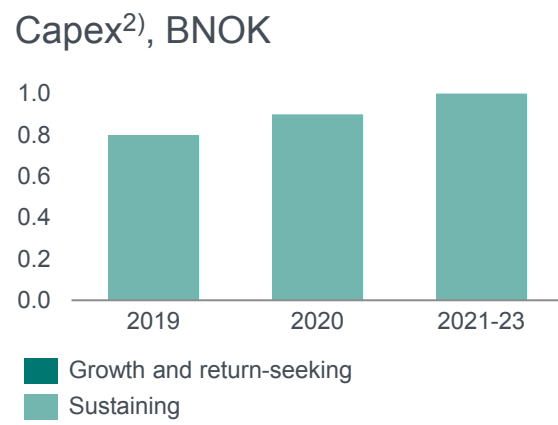


URoaCE > CoC

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

**0.9 BNOK**  
on EBIT by 2023 in improvement potential

**0.9 BNOK**  
in NOC release from 2018 to 2021  
*Optimize material flow from raw materials to finished goods*



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. Last updated on Investor Day 2019





Extruded Solutions

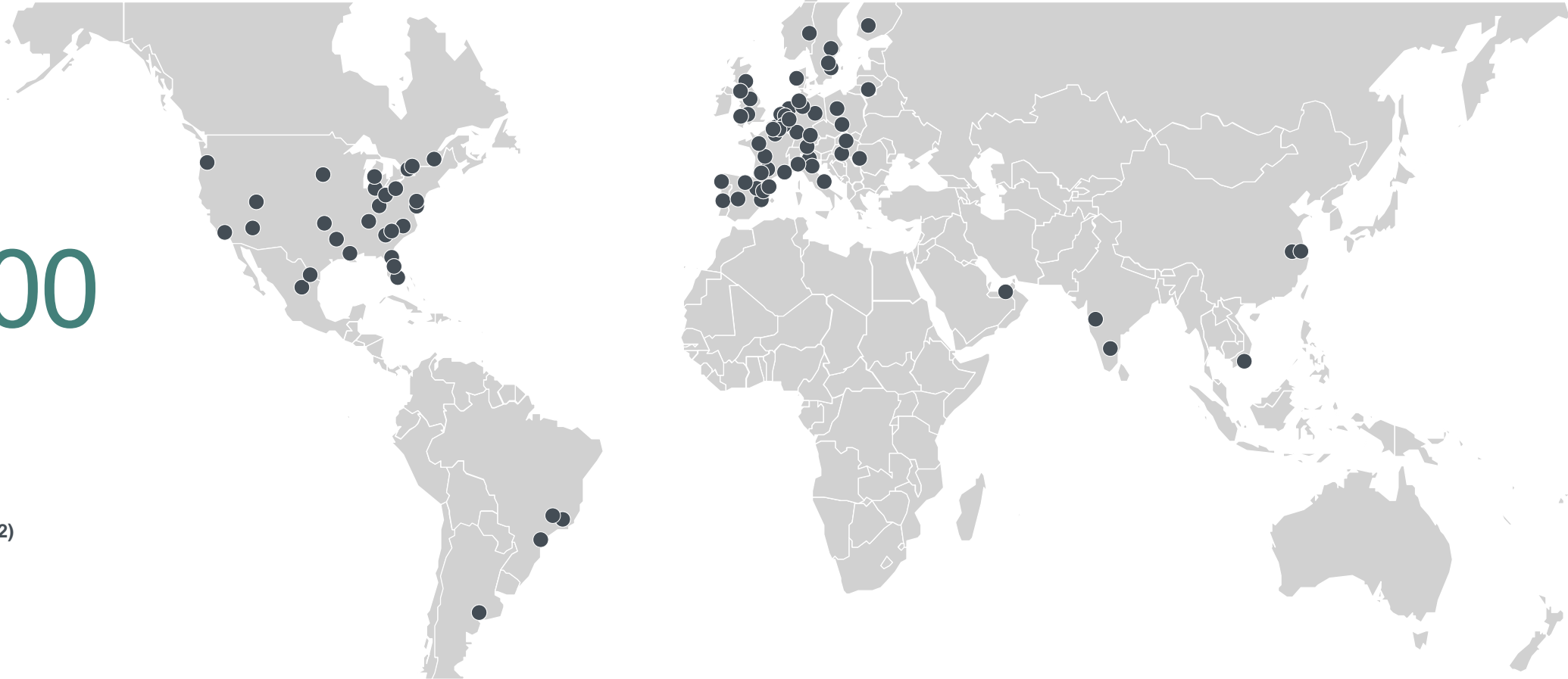
# Extruded Solutions – #1 in the global aluminium extrusion industry



Present in  
**~40**  
countries

**21 700**  
people <sup>1)</sup>

**1.3**  
Million mt sales<sup>2)</sup>



1) Permanent employees as of end-2019  
2) 2019

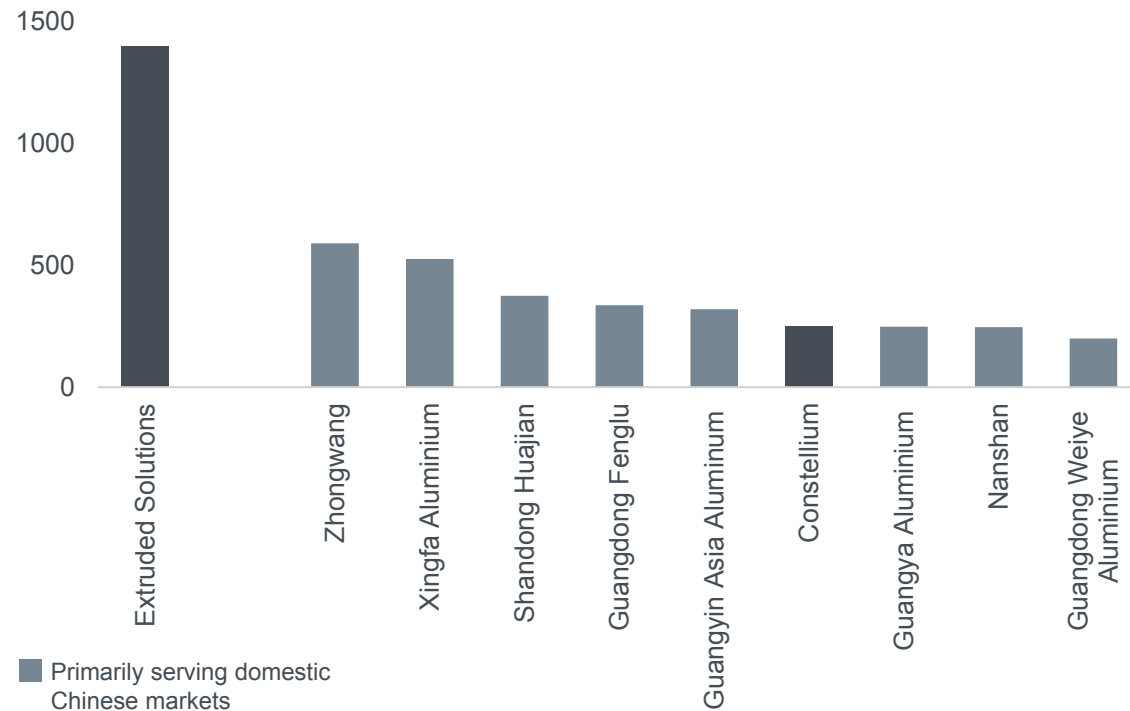
# The global extrusion champion – worldwide reach, local presence



Clear leader in a fragmented industry where closeness to customers and markets are key success factors

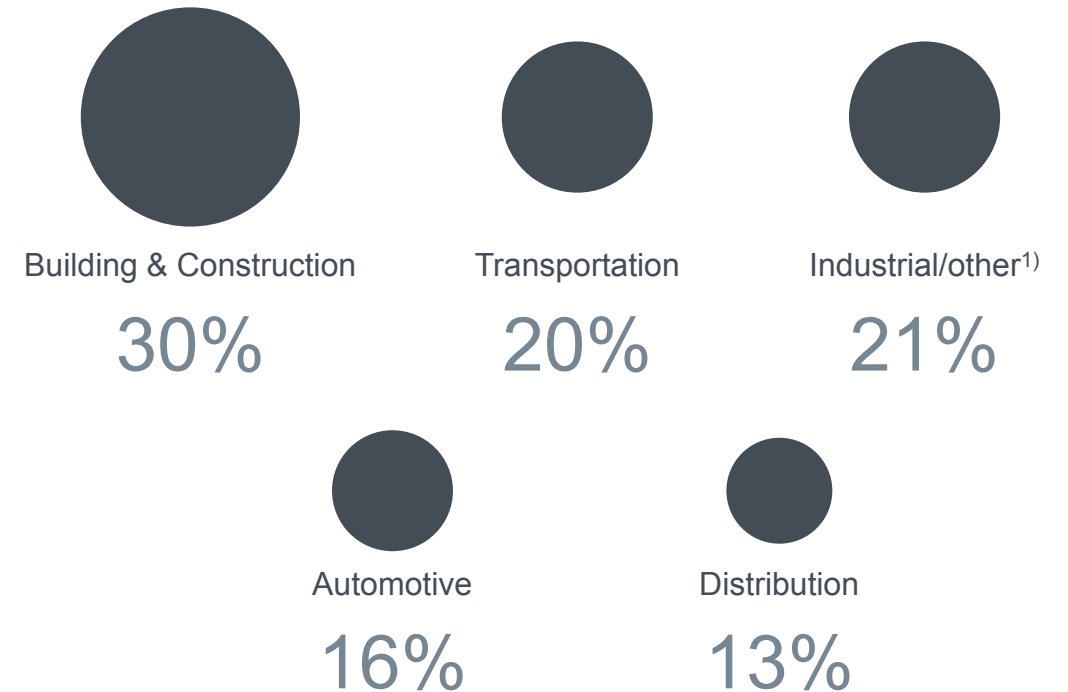
## Unrivalled position as #1 extrusions provider globally

Extrusion sales volume (2018), in thousand mt



## Customers in diversified end-markets

(Share of Extruded Solutions sales volumes in 2018)



Source: CRU  
\* Including HVAC&R, Heating, ventilation, air conditioning and refrigeration



# Organized in four business units to maximize synergies across units

22,700 highly competent people across the world, total turnover of BNOK 62

## Extrusion Europe



- Market leader focusing on value-added products
- 20% market share
- 40 locations, 9,700 people

Revenue  
**BNOK 23.4**

EBIT  
**BNOK 0.3**

## Extrusion North America



- Uniquely positioned as the only coast-to-coast supplier
- 24% market share
- 23 locations, 6,400 people

Revenue  
**BNOK 25.0**

EBIT  
**BNOK 1.4**

## Precision Tubing



- Technology leader in selected market niches
- 35% market share globally
- 17 locations, 3,500 people

Revenue  
**BNOK 6.5**

EBIT  
**BNOK 0.2**

## Building Systems



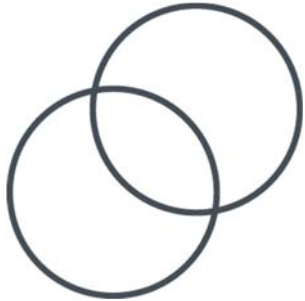
- Leading European player with multi-brand portfolio
- 20% market share in Europe
- Presence in 29 countries, 2,900 people

Revenue  
**BNOK 8.6**

EBIT  
**BNOK 0.3**

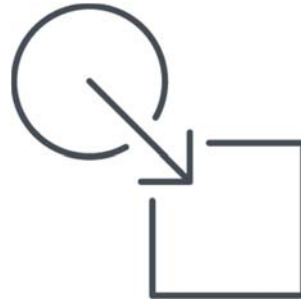
# Successful value-over-volume strategy

Targeting the high-tech, high-competence segments of extrusion



**Simplify and collaborate**

Simplification drive to increase focus, reduce complexity and cost



**Deliver value-added to our customers at a reasonable cost**

Higher share of value-added solutions to customers through commercial excellence and innovation



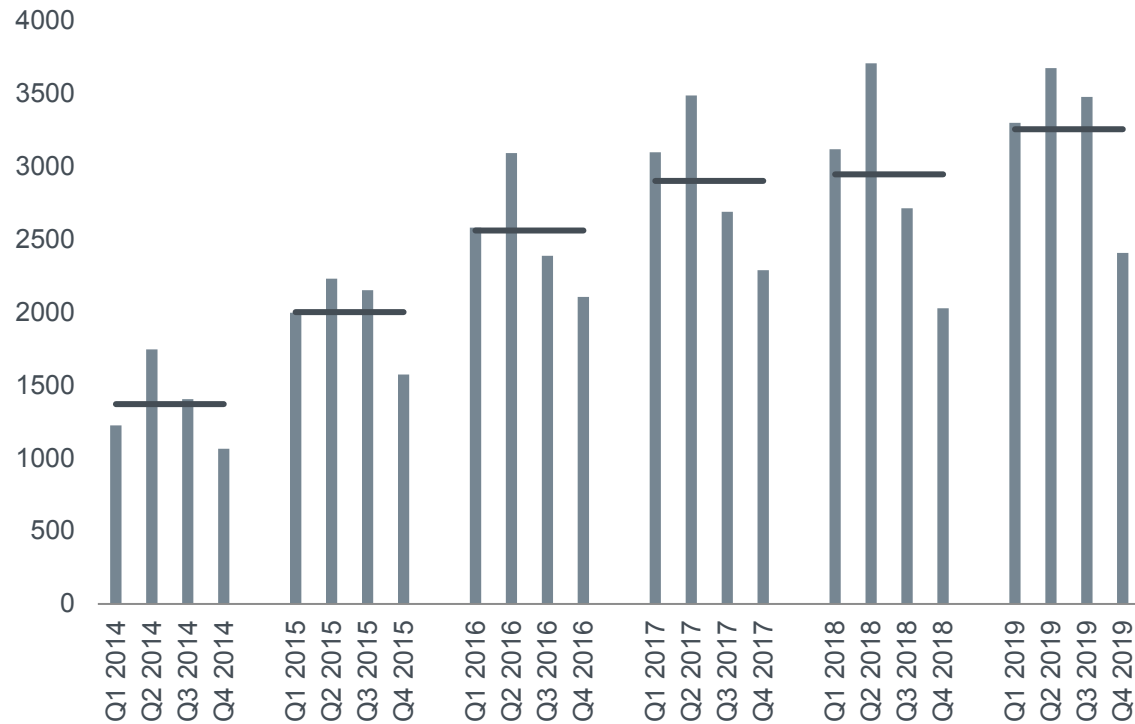
**Grow to lift margins and profitability**

Lifting margins and creating more customer value through selective growth



# Extruded Solutions earnings drivers

Underlying EBITDA per tonne<sup>1)</sup>, NOK



- Contract structure
  - Margin business based on conversion price
    - LME element passed on to customers
  - Mostly short-term contract, typically ranging from spot to 12 months, few longer term contracts with floating price or hedging in place
- High share of variable costs – high level of flexibility
- Annual seasonality driven by maintenance and customer activity
  - Stronger Q1 and Q2, weaker Q3 and Q4
- Strong focus on increasing value add to customers
- Preferred supplier market position in high-end products

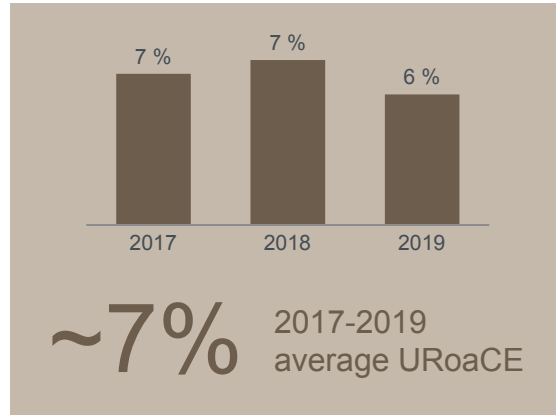
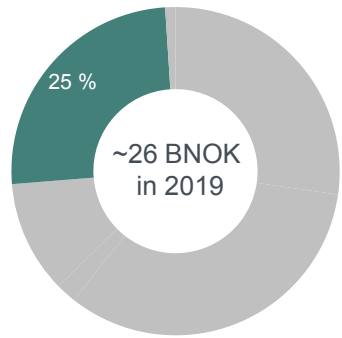
1) Pro-forma figures

# Capital return dashboard for Extruded Solutions



Returns in line with the cost of capital reflecting leading market positions and value-over-volume strategy

Capital employed in ES



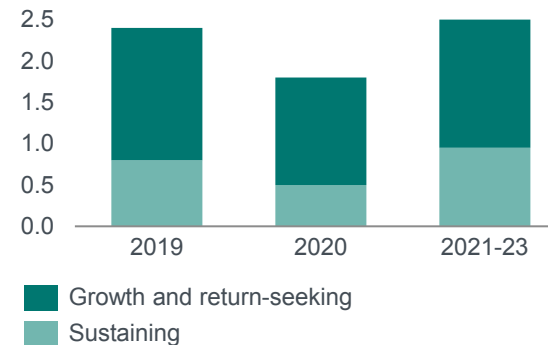
URoCE > CoC

7-8%  
Nominal long-term cost of capital

**1.0 BNOK**  
on EBIT by 2023 in improvement potential

Key initiatives to reduce NOC  
Reduction in safety billett stocks

Capex\*, BNOK



\*Last updated on Investor Day 2019



# Additional information

Investor presentation, February 2020

# Driving long-term shareholder value

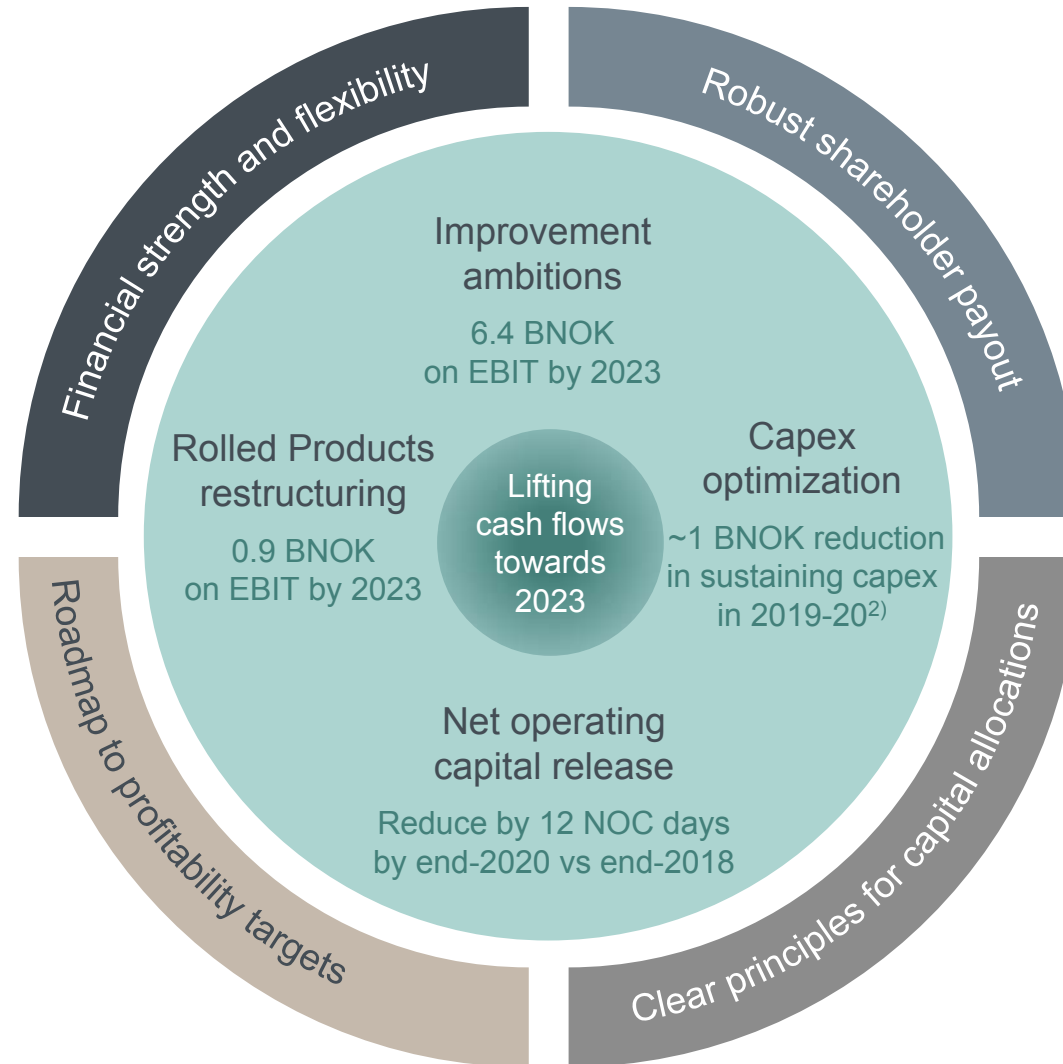
## Financial ambitions and targets

### Financial strength and flexibility

- Maintain investment grade credit rating
  - Currently BBB (S&P), Baa2 (Moody's<sup>1)</sup>)
- Balance sheet ratio targets over the cycle:
  - Funds from operations to adjusted net debt > 40%
  - Adjusted net debt to equity < 55%
- 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

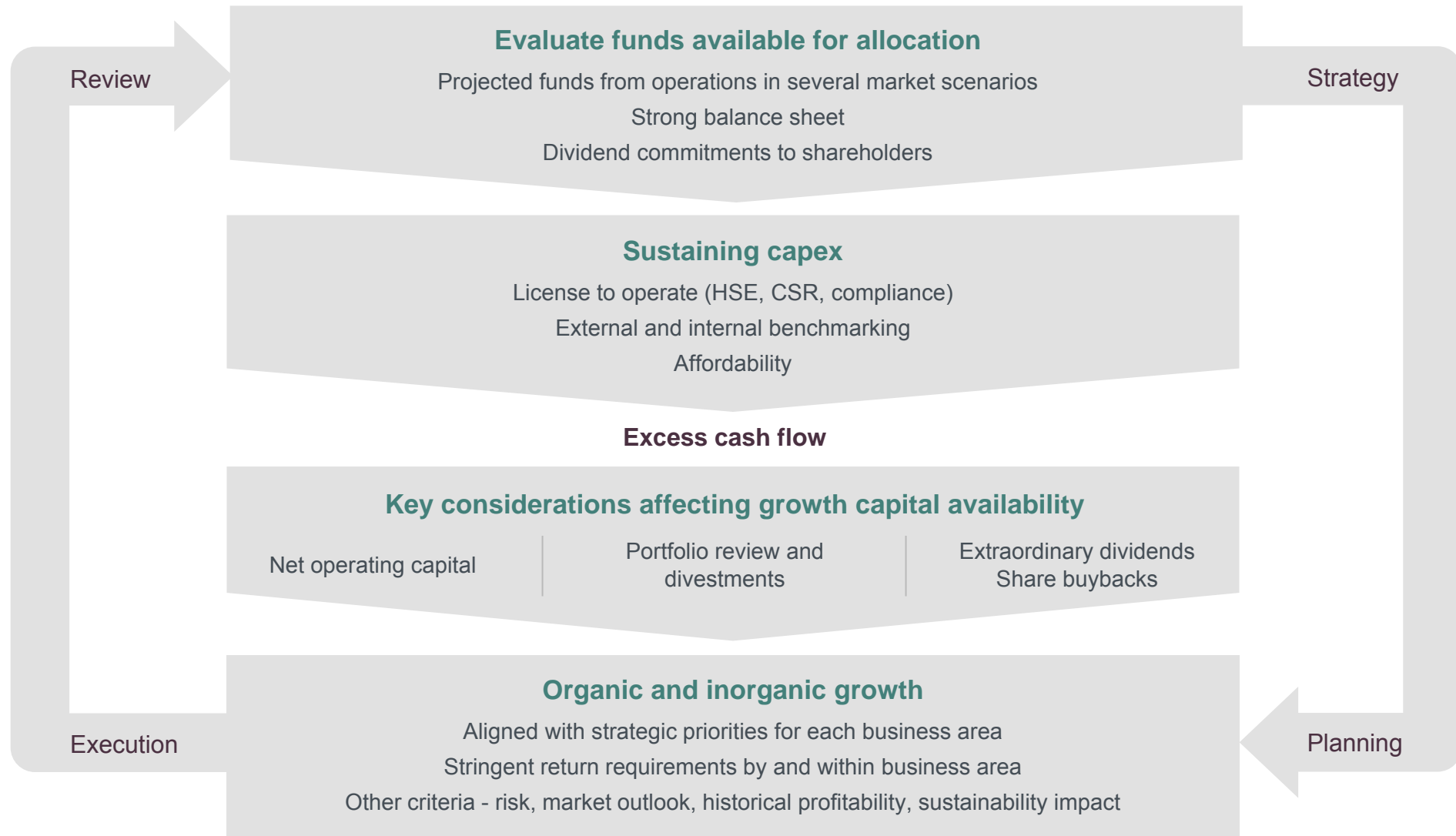
- 40% payout ratio of Net Income over the cycle
- Dividend floor of 1.25 NOK/share
- Supplementary share buybacks or extraordinary dividends

### 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) Moody's revised Hydro's credit rating outlook from stable to negative on March 28, 2019  
 2) Compared to CMD 2018

# Clear principles for capital allocation





# Shareholder and financial policy

- Aiming for competitive shareholder returns and dividend yield compared to alternative investments in peers
- Dividend policy
  - Average ordinary payout ratio: 40% of reported net income over the cycle
  - 1.25 NOK/share to be considered as a floor, as of Q4 2016
  - Share buybacks and extraordinary dividends as supplement in periods with strong financials and outlook
  - 2019 dividend 1.25 NOK/share <sup>1)</sup>
  - Five-year average ordinary pay-out ratio 2015-2019 of ~68% <sup>1)</sup>
- Maintain investment-grade credit rating
  - Currently: BBB stable (S&P) & Baa2 negative <sup>2)</sup>(Moody's)
  - Competitive access to capital is important for Hydro's business model (counterparty risk and partnerships)
- Financial ratios over the business cycle
  - Funds from operations to adjusted net debt > 40%
  - Adjusted net debt to equity < 55%
- Strong liquidity
  - NOK 12.3 billion in cash and cash equivalents, end-Q4 2019
  - USD 1.6 billion in multi-currency revolving credit facility maturing in 2025

1) Pending approval from the AGM on May 11, 2020

2) Moody's revised Hydro's credit rating outlook from stable to negative on March 28, 2019

# Hedging policy



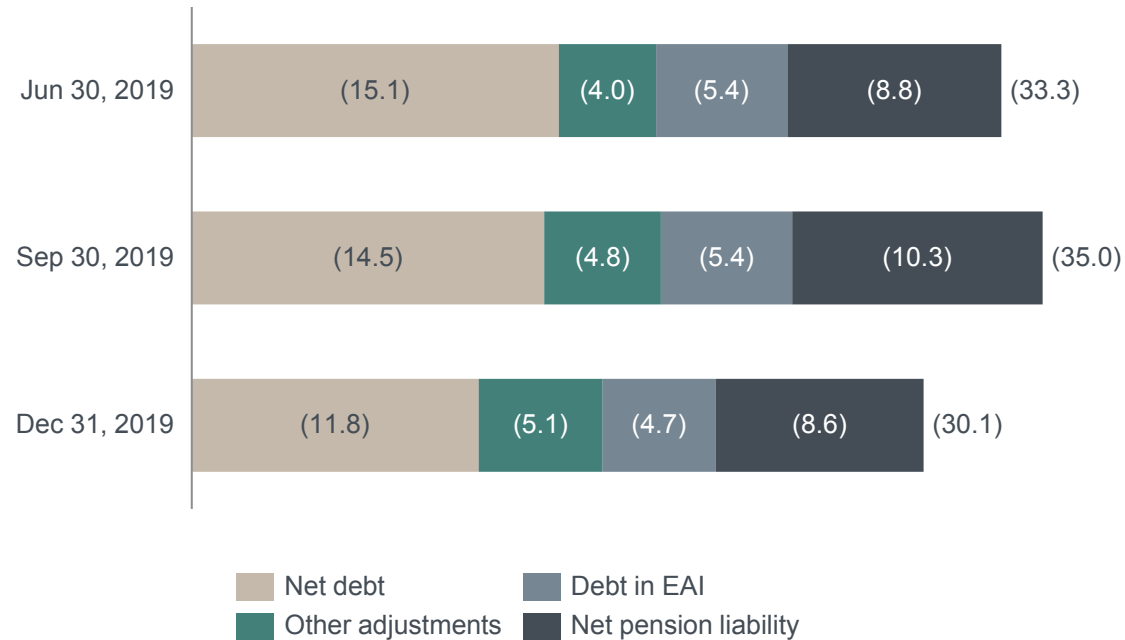
- Hedging strategy
  - Fluctuating with the market: primarily exposed to LME and USD
  - Volatility mitigated by strong balance sheet
  - Strengthening relative position to ensure competitiveness
- Diversified business
  - Upstream cyclicalities balanced with more stable earnings downstream
  - Exposed to different markets and cycles
- Bauxite & Alumina
  - Currency exposure, mainly USD and BRL
  - Exposed to LME and Platts alumina index prices
- Primary Metal
  - Operational LME hedging - one-month forward sales
  - Currency exposure, mainly USD, NOK and BRL
- Metal Markets, Rolled Products
  - Operational LME and currency hedging to secure margin
- Flexibility to hedge LME or currency in certain cases

# Maintaining a solid balance sheet and investment-grade credit rating

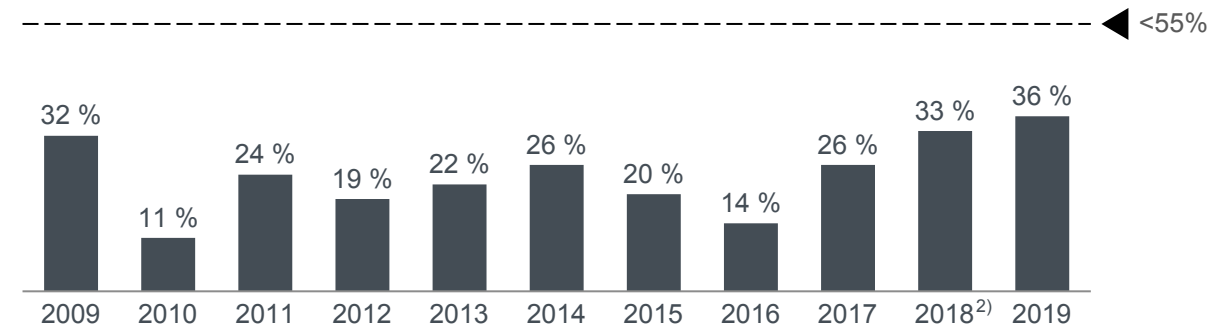


## Adjusted net debt

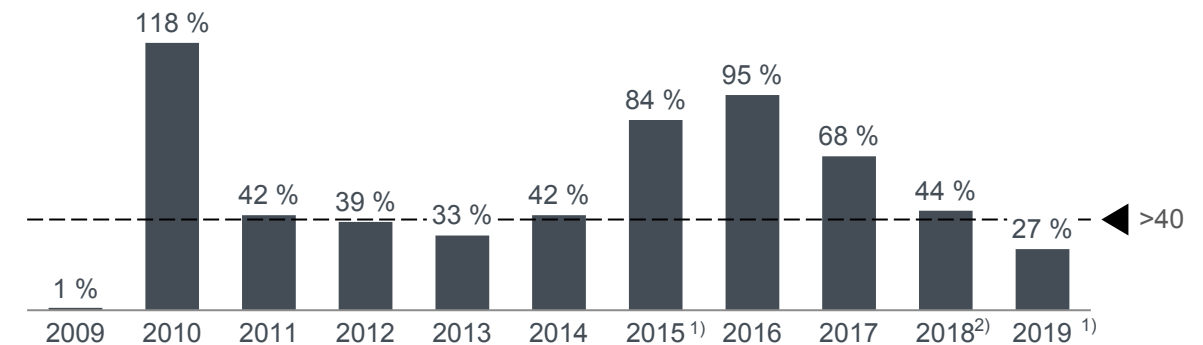
BNOK



## Adjusted net debt / Equity



## Funds from operations / Adjusted net debt



1) 2015 and 2019 FFO/aND ratio has been restated due to changes in definition.

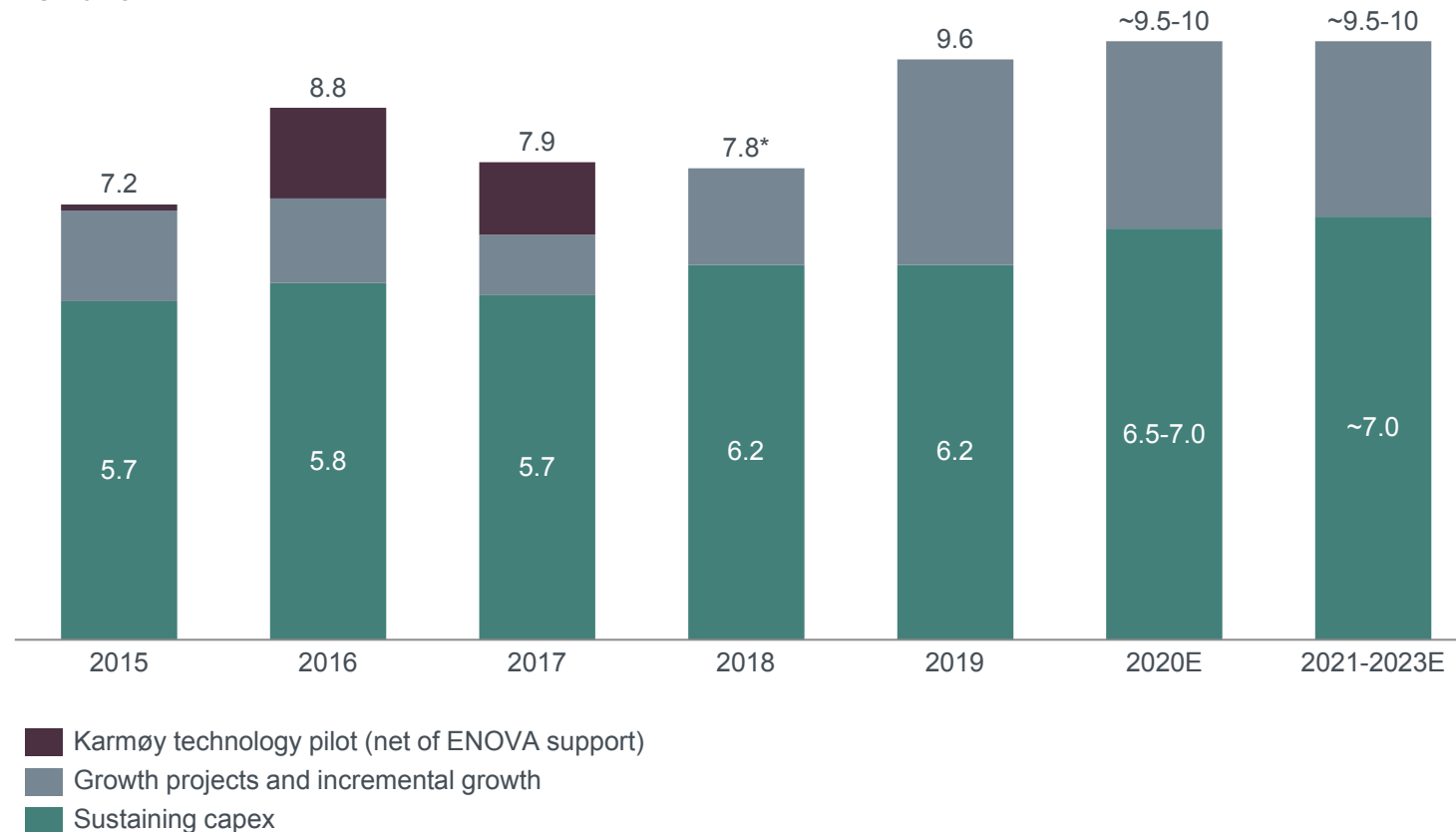
2) 2018 ratios restated for the IFRS16 Leases effect

Extruded Solutions reflected as 50% equity accounted investment Q1-Q3 2017 and fully consolidated in Q4 2017

# Project pipeline to be based on updated capital allocation framework and strategic priorities

Majority of sustaining capex allocated upstream

NOK billion



## Main sustaining projects

- Alunorte robustness
- Pipeline replacement in B&A
- Smelter relining and asset integrity in PM
- Paragominas new mine area (from 2022)

## Main growth and return-seeking projects

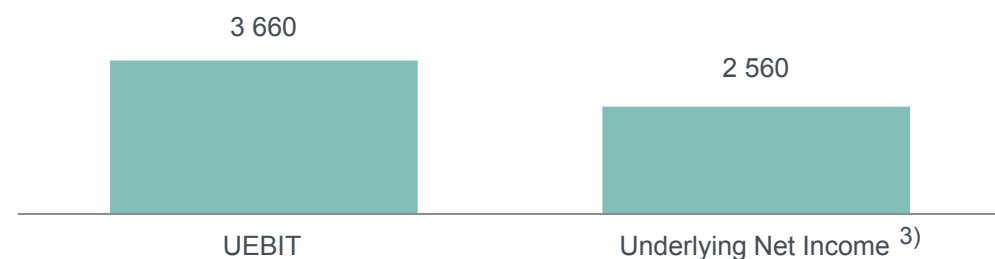
- Husnes restart and upgrade
- Automation, process control and efficiency in PM
- Selected customer-driven growth in ES
- Energy wind and battery storage
- Fuel switch project in B&A

\*Excluding the Pis/Cofins adjustments in Brazil in 2018. Including the adjustment, 2018 capex amounted to BNOK 7.0  
 Capex including Extruded Solutions  
 Growth and return-seeking capex guidance only includes capex necessary for delivering on targeted improvement ambitions

# Significant exposure to commodity and currency fluctuations

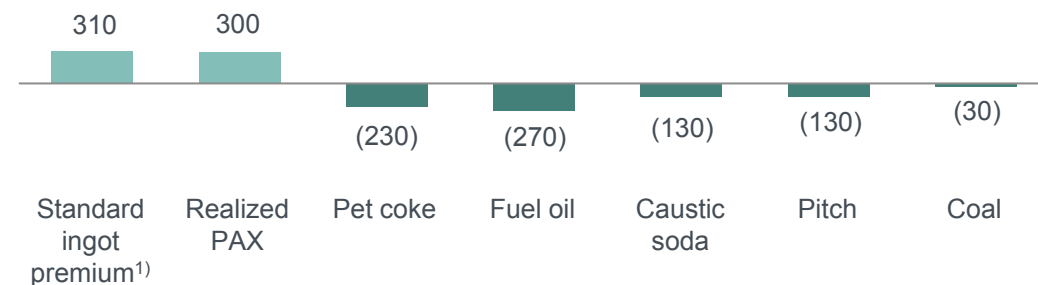
## Aluminium price sensitivity +10%

NOK million



## Other commodity prices, sensitivity +10% <sup>1)</sup>

NOK million



1) Europe duty paid

## Currency sensitivities +10%

Sustainable effect:

NOK million	USD	BRL	EUR
UEBIT	3 280	(1 100)	(220)

One-off reevaluation effect:

Financial items	(60)	830	(3 570)
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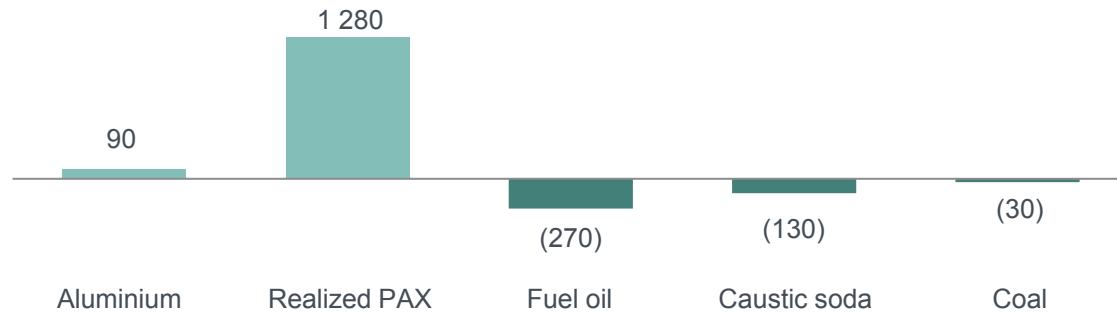
- Annual sensitivities based on normal annual business volumes (incl. 100% production at Alunorte, Paragominas and Albras) and Q419 realized prices as a starting point LME USD 1 750 per mt, standard ingot premium 140 USD/mt, PAX 285 USD/mt, fuel oil USD 510 per mt, petroleum coke USD 255 per mt, pitch 650 USD/t, caustic soda USD 270 per mt, coal USD 50 per mt, USD/NOK 9.07, BRL/NOK 2.21, EUR/NOK 10.09
- 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
- 2020 Platts alumina index (PAX) exposure used
- U NI sensitivity calculated as U EBIT sensitivity after 30% tax

# Bauxite & Alumina sensitivities



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

NOK million



## Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBIT	860	(710)	-

## 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 sensitivities based on normal annual business volumes (incl. 100% production at Alunorte, Paragominas and Albras) and Q419 realized prices as a starting point LME USD 1 750 per mt, standard ingot premium 140 USD/mt, PAX 285 USD/mt, fuel oil USD 510 per mt, petroleum coke USD 255 per mt, pitch 650 USD/t, caustic soda USD 270 per mt, coal USD 50 per mt, USD/NOK 9.07, BRL/NOK 2.21, EUR/NOK 10.09  
BRL sensitivity calculated on a long-term basis with fuel oil assumed in USD. In the short-term, fuel oil is BRL-denominated. 2020 Platts alumina index (PAX) exposure used

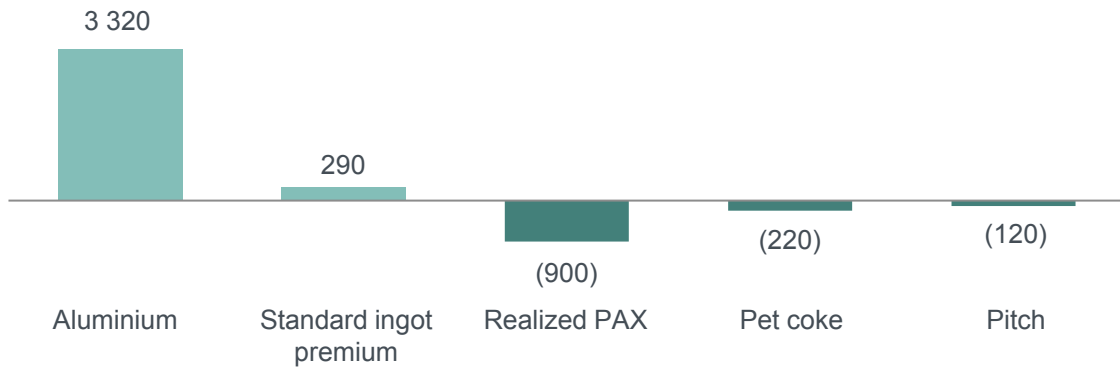


# Primary Metal sensitivities



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

NOK million



## Currency sensitivities +10%

NOK million	USD	BRL	EUR
UEBIT	2 100	(390)	(290)

## 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

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

# Items excluded from underlying results - 2019



NOK million (+=loss/)=gain)		Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2019
Alunorte agreements - provision	Bauxite & Alumina	35	14	30	-	80
Impairment charges	Bauxite & Alumina	-	-	-	145	145
<b>Total impact</b>	<b>Bauxite &amp; Alumina</b>	<b>35</b>	<b>14</b>	<b>30</b>	<b>145</b>	<b>225</b>
Unrealized derivative effects on LME related contracts	Primary Metal	122	(15)	(27)	10	90
Unrealized effects on power contracts	Primary Metal	27	(35)	(42)	33	(17)
Impairment charges	Primary Metal	-	-	-	506	506
<b>Total impact</b>	<b>Primary Metal</b>	<b>149</b>	<b>(50)</b>	<b>(69)</b>	<b>549</b>	<b>579</b>
Unrealized derivative effects on LME related contracts	Metal Markets	222	(62)	(19)	94	235
<b>Total impact</b>	<b>Metal Markets</b>	<b>222</b>	<b>(62)</b>	<b>(19)</b>	<b>94</b>	<b>235</b>
Unrealized derivative effects on LME related contracts	Rolled Products	(77)	60	(24)	(41)	(82)
Metal effect	Rolled Products	267	3	123	(23)	370
Significant rationalization charges and closure costs	Rolled Products	-	-	1 145	(57)	1 088
Other effects	Rolled Products	-	-	(99)	-	(99)
<b>Total impact</b>	<b>Rolled Products</b>	<b>191</b>	<b>63</b>	<b>1 145</b>	<b>(120)</b>	<b>1 277</b>
Unrealized derivative effects on LME related contracts	Extruded Solutions	(77)	27	(44)	(70)	(163)
Impairment charges	Extruded Solutions	-	28	95	132	255
Significant rationalization charges and closure costs	Extruded Solutions	-	200	61	135	396
Pension	Extruded Solutions	-	-	(62)	-	(62)
Transaction related effects	Extruded Solutions	-	35	-	(14)	21
Other effects	Extruded Solutions	26	-	59	125	209
<b>Total impact</b>	<b>Extruded Solutions</b>	<b>(51)</b>	<b>289</b>	<b>109</b>	<b>308</b>	<b>656</b>
Unrealized derivative effects on power contracts	Energy	6	2	1	(15)	(6)
Other effects	Energy	-	-	(42)	-	(42)
<b>Total impact</b>	<b>Energy</b>	<b>6</b>	<b>2</b>	<b>(41)</b>	<b>(15)</b>	<b>(48)</b>
Unrealized derivative effects on power contracts	Other and eliminations	(21)	(39)	(5)	(10)	(75)
Unrealized derivative effects on LME related contracts	Other and eliminations	10	1	(7)	7	11
<b>Total impact</b>	<b>Other and eliminations</b>	<b>(11)</b>	<b>(39)</b>	<b>(12)</b>	<b>(2)</b>	<b>(64)</b>
<b>Items excluded from underlying EBIT</b>	<b>Hydro</b>	<b>539</b>	<b>219</b>	<b>1 144</b>	<b>959</b>	<b>2 860</b>
Net foreign exchange (gain)/loss	Hydro	(208)	451	1 403	(442)	1 204
<b>Items excluded from underlying income (loss) before tax</b>	<b>Hydro</b>	<b>331</b>	<b>670</b>	<b>2 547</b>	<b>517</b>	<b>4 064</b>
Calculated income tax effect	Hydro	(83)	(198)	(550)	(154)	(986)
<b>Items excluded from underlying net income (loss)</b>	<b>Hydro</b>	<b>248</b>	<b>472</b>	<b>1 996</b>	<b>362</b>	<b>3 078</b>

# Items excluded from underlying results - 2018



NOK million (+=loss/)=gain)		Q1 2018	Q2 2018	Q3 2018	Q4 2018	Year 2018
Alunorte agreements - provision	Bauxite & Alumina	-	-	519	-	519
<b>Total impact</b>	<b>Bauxite &amp; Alumina</b>	<b>-</b>	<b>-</b>	<b>519</b>	<b>-</b>	<b>519</b>
Unrealized derivative effects on LME related contracts	Primary Metal	(114)	(41)	101	(89)	(143)
Unrealized effects on power contracts	Primary Metal	20	20	(194)	(64)	(218)
<b>Total impact</b>	<b>Primary Metal</b>	<b>(94)</b>	<b>(21)</b>	<b>(93)</b>	<b>(153)</b>	<b>(361)</b>
Unrealized derivative effects on LME related contracts	Metal Markets	(128)	(32)	104	(144)	(200)
<b>Total impact</b>	<b>Metal Markets</b>	<b>(128)</b>	<b>(32)</b>	<b>104</b>	<b>(144)</b>	<b>(200)</b>
Unrealized derivative effects on LME related contracts	Rolled Products	108	(82)	11	74	111
Metal effect	Rolled Products	47	(60)	(153)	93	(73)
Significant rationalization charges and closure costs	Rolled Products	-	-	-	39	39
<b>Total impact</b>	<b>Rolled Products</b>	<b>154</b>	<b>(142)</b>	<b>(141)</b>	<b>206</b>	<b>77</b>
Unrealized derivative effects on LME related contracts	Extruded Solutions	47	(151)	211	192	299
Significant rationalization charges and closure costs	Extruded Solutions	-	-	-	40	40
Pension	Extruded Solutions	-	-	-	40	40
Other effects	Extruded Solutions	-	-	-	237	237
<b>Total impact</b>	<b>Extruded Solutions</b>	<b>47</b>	<b>(151)</b>	<b>211</b>	<b>509</b>	<b>616</b>
Unrealized derivative effects on power contracts	Energy	-	-	-	(7)	(7)
<b>Total impact</b>	<b>Energy</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(7)</b>	<b>(7)</b>
Unrealized derivative effects on power contracts	Other and eliminations	(107)	72	11	(11)	(36)
Unrealized derivative effects on LME related contracts	Other and eliminations	(26)	1	8	(11)	(27)
Other effects	Other and eliminations	-	-	-	(34)	(34)
<b>Total impact</b>	<b>Other and eliminations</b>	<b>(134)</b>	<b>73</b>	<b>19</b>	<b>(56)</b>	<b>(97)</b>
<b>Items excluded from underlying EBIT</b>	<b>Hydro</b>	<b>(155)</b>	<b>(274)</b>	<b>620</b>	<b>356</b>	<b>547</b>
Net foreign exchange (gain)/loss	Hydro	333	306	257	408	1 303
<b>Items excluded from underlying income (loss) before tax</b>	<b>Hydro</b>	<b>178</b>	<b>32</b>	<b>877</b>	<b>764</b>	<b>1 851</b>
Calculated income tax effect	Hydro	(54)	(8)	(105)	(188)	(355)
<b>Items excluded from underlying net income (loss)</b>	<b>Hydro</b>	<b>125</b>	<b>24</b>	<b>772</b>	<b>575</b>	<b>1 495</b>

# Operating segment information



## Underlying EBIT

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	756	662	413	1 872	741	364	685	493	153	415	481	(75)	3 704	2 282	974
Primary Metal	900	1 486	1 298	1 377	823	755	861	(677)	(771)	(604)	(39)	155	5 061	1 762	(1 259)
Metal Markets	24	244	91	185	178	237	(3)	275	190	299	362	132	544	686	983
Rolled Products	106	84	95	95	232	212	82	(113)	138	75	166	34	380	413	413
Extruded Solutions	281	329	209	284	734	957	497	202	593	772	559	85	1 103	2 390	2 009
Energy	423	284	368	457	278	417	652	500	517	176	254	296	1 531	1 846	1 243
Other and Eliminations	(207)	(159)	(28)	(715)	161	(229)	(97)	(145)	(261)	(258)	(417)	(67)	(1 108)	(310)	(1 003)
<b>Total</b>	<b>2 284</b>	<b>2 930</b>	<b>2 446</b>	<b>3 555</b>	<b>3 147</b>	<b>2 713</b>	<b>2 676</b>	<b>534</b>	<b>559</b>	<b>875</b>	<b>1 366</b>	<b>560</b>	<b>11 215</b>	<b>9 069</b>	<b>3 359</b>

## Underlying EBITDA

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	1 334	1 248	1 057	2 551	1 370	937	1 193	877	758	1 004	1 071	504	6 190	4 377	3 337
Primary Metal	1 392	1 991	1 795	1 900	1 349	1 309	1 424	(176)	(180)	(27)	550	812	7 078	3 906	1 155
Metal Markets	47	268	114	209	201	262	22	301	219	328	395	167	638	786	1 110
Rolled Products	307	297	312	325	456	438	314	133	384	326	430	308	1 240	1 340	1 448
Extruded Solutions	281	329	209	728	1 155	1 383	931	645	1 099	1 279	1 099	655	1 547	4 114	4 132
Energy	476	337	424	519	339	479	716	566	583	242	319	365	1 757	2 100	1 509
Other and Eliminations	(200)	(151)	(21)	(708)	169	(223)	(90)	(135)	(231)	(224)	(385)	(19)	(1 081)	(280)	(859)
<b>Total</b>	<b>3 637</b>	<b>4 319</b>	<b>3 889</b>	<b>5 524</b>	<b>5 038</b>	<b>4 586</b>	<b>4 510</b>	<b>2 210</b>	<b>2 633</b>	<b>2 928</b>	<b>3 479</b>	<b>2 792</b>	<b>17 369</b>	<b>16 344</b>	<b>11 832</b>

# Operating segment information



## EBIT

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	756	662	413	1 872	741	364	166	493	118	401	450	(221)	3 704	1 763	749
Primary Metal	797	1 538	1 282	1 112	917	776	954	(524)	(919)	(554)	30	(394)	4 729	2 123	(1 838)
Metal Markets	(13)	282	59	158	305	270	(107)	419	(31)	361	381	38	485	886	748
Rolled Products	450	84	(22)	-	78	353	223	(319)	(53)	12	(978)	155	512	336	(865)
Extruded Solutions	313	273	215	1 722	687	1 109	286	(307)	644	483	449	(223)	2 522	1 774	1 353
Energy	423	284	368	457	278	417	652	507	510	174	295	312	1 531	1 853	1 291
Other and Eliminations	(316)	(176)	7	(810)	295	(303)	(117)	(89)	(249)	(220)	(405)	(65)	(1 295)	(214)	(939)
<b>Total</b>	<b>2 410</b>	<b>2 946</b>	<b>2 323</b>	<b>4 511</b>	<b>3 301</b>	<b>2 986</b>	<b>2 057</b>	<b>178</b>	<b>20</b>	<b>656</b>	<b>222</b>	<b>(399)</b>	<b>12 189</b>	<b>8 522</b>	<b>499</b>

## EBITDA

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	1 334	1 248	1 057	2 551	1 370	937	674	877	724	989	1 040	504	6 190	3 858	3 258
Primary Metal	1 289	2 043	1 779	1 635	1 443	1 330	1 517	(23)	(328)	23	619	769	6 747	4 267	1 081
Metal Markets	9	306	82	182	329	295	(82)	445	(2)	390	414	73	579	986	875
Rolled Products	651	296	196	230	302	580	455	(73)	194	263	(715)	429	1 372	1 263	170
Extruded Solutions	313	273	215	2 166	1 108	1 534	720	136	1 150	1 017	1 085	479	2 966	3 498	3 731
Energy	476	337	424	519	339	479	716	573	576	240	361	380	1 757	2 107	1 558
Other and Eliminations	(310)	(168)	13	(803)	302	(296)	(110)	(80)	(219)	(186)	(373)	(17)	(1 268)	(183)	(795)
<b>Total</b>	<b>3 762</b>	<b>4 335</b>	<b>3 766</b>	<b>6 481</b>	<b>5 193</b>	<b>4 860</b>	<b>3 890</b>	<b>1 854</b>	<b>2 094</b>	<b>2 737</b>	<b>2 430</b>	<b>2 617</b>	<b>18 344</b>	<b>15 796</b>	<b>9 878</b>



# Operating segment information



## Total revenue

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	5 911	5 858	5 612	8 040	6 309	6 877	6 749	8 613	4 866	5 745	6 211	5 983	25 421	28 548	22 805
Primary Metal	8 641	9 575	8 958	9 291	10 170	10 083	9 984	9 196	9 023	8 937	8 718	8 497	36 466	39 434	35 175
Metal Markets	12 149	13 604	11 862	12 991	13 898	14 205	13 230	12 903	12 959	13 301	12 326	11 866	50 606	54 237	50 452
Rolled Products	6 277	6 569	6 435	6 434	6 797	7 145	6 791	6 223	6 844	6 623	6 672	6 192	25 715	26 955	26 331
Extruded Solutions				14 153	15 911	16 980	15 976	15 218	16 013	17 270	15 233	13 835	14 153	64 085	62 351
Energy	1 955	1 750	1 831	2 169	1 762	2 163	2 488	2 267	2 261	1 815	1 990	2 155	7 705	8 681	8 221
Other and Eliminations	(11 906)	(12 765)	(11 900)	(14 276)	(14 877)	(16 198)	(15 452)	(16 034)	(14 382)	(14 515)	(13 633)	(13 039)	(50 847)	(62 562)	(55 569)
<b>Total</b>	<b>23 026</b>	<b>24 591</b>	<b>22 799</b>	<b>38 803</b>	<b>39 971</b>	<b>41 254</b>	<b>39 766</b>	<b>38 386</b>	<b>37 583</b>	<b>39 176</b>	<b>37 517</b>	<b>35 490</b>	<b>109 220</b>	<b>159 377</b>	<b>149 766</b>

## External revenue

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	3 382	3 417	3 293	5 095	3 509	3 640	3 016	4 232	2 370	2 692	3 684	3 509	15 188	14 396	12 255
Primary Metal	1 700	1 944	1 865	2 068	2 018	1 993	2 312	1 505	1 390	1 457	1 642	1 651	7 578	7 829	6 141
Metal Markets	11 094	12 080	10 675	10 414	10 901	10 905	10 575	10 121	10 139	10 577	9 742	9 706	44 264	42 502	40 164
Rolled Products	6 153	6 629	6 380	6 375	6 870	7 011	6 773	6 287	6 777	6 654	6 639	6 109	25 538	26 940	26 179
Extruded Solutions				14 083	15 932	16 877	15 934	15 280	15 924	17 271	15 214	13 801	14 083	64 023	62 211
Energy	687	514	582	767	738	823	1 151	961	983	519	594	712	2 550	3 673	2 808
Other and Eliminations	9	6	3	-	4	6	5	(1)	-	5	1	2	18	14	8
<b>Total</b>	<b>23 026</b>	<b>24 591</b>	<b>22 799</b>	<b>38 803</b>	<b>39 971</b>	<b>41 254</b>	<b>39 766</b>	<b>38 386</b>	<b>37 583</b>	<b>39 176</b>	<b>37 517</b>	<b>35 490</b>	<b>109 220</b>	<b>159 377</b>	<b>149 766</b>

# Operating segment information



## Internal revenue

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	2 528	2 441	2 320	2 944	2 800	3 237	3 733	4 381	2 496	3 052	2 527	2 474	10 234	14 152	10 550
Primary Metal	6 941	7 631	7 093	7 223	8 152	8 090	7 672	7 691	7 633	7 480	7 075	6 846	28 888	31 605	29 035
Metal Markets	1 054	1 523	1 187	2 577	2 997	3 301	2 656	2 781	2 820	2 724	2 584	2 160	6 341	11 735	10 287
Rolled Products	124	(61)	55	59	(72)	134	18	(64)	66	(31)	33	83	178	15	152
Extruded Solutions				70	(21)	103	42	(62)	89	(1)	18	34	70	61	140
Energy	1 267	1 236	1 249	1 403	1 024	1 340	1 337	1 306	1 278	1 296	1 397	1 444	5 155	5 007	5 414
Other and Eliminations	(11 915)	(12 772)	(11 903)	(14 276)	(14 881)	(16 204)	(15 457)	(16 033)	(14 382)	(14 520)	(13 634)	(13 040)	(50 865)	(62 576)	(55 577)
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Share of profit /(loss) in equity accounted investments

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primary Metal	98	231	159	258	210	280	238	(5)	32	24	150	65	745	722	270
Metal Markets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rolled Products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Extruded Solutions	313	273	215	12	17	11	14	10	12	5	-	-	812	53	18
Energy	-	-	-	(7)	(10)	(11)	(4)	(11)	(9)	(9)	(4)	(7)	(7)	(35)	(29)
Other and Eliminations	(1)	(13)	(3)	(7)	3	5	(20)	35	(32)	27	(23)	10	(24)	24	(18)
<b>Total</b>	<b>409</b>	<b>491</b>	<b>371</b>	<b>256</b>	<b>221</b>	<b>286</b>	<b>229</b>	<b>30</b>	<b>3</b>	<b>47</b>	<b>123</b>	<b>68</b>	<b>1 527</b>	<b>765</b>	<b>241</b>

# Operating segment information

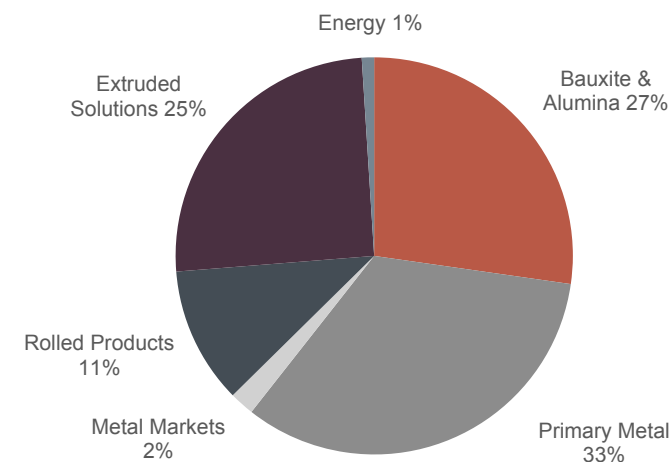


Return on average capital employed <sup>1)</sup> (RoCE)

	Reported RoCE							Underlying RoCE						
	2019	2018	2017	2016	2015	2014	2013	2019	2018	2017	2016	2015	2014	2013
Bauxite & Alumina	1.9%	4.6%	8.5%	2.7 %	5.3 %	(0.1) %	(2.5) %	2.5%	6.0%	8.5%	2.8 %	5.3 %	(0.1) %	(2.2) %
Primary Metal	(3.9%)	5.6%	11.8%	5.2 %	10.7 %	10.4 %	2.3 %	(2.6%)	4.7%	12.6%	5.2 %	11.0 %	10.4 %	3.9 %
Metal Markets	20.7%	25.1%	18.6%	19.6 %	5.4 %	21.9 %	22.3 %	27.3%	19.4%	20.9%	15.9 %	11.4 %	19.4 %	19.9 %
Rolled Products	(5.0%)	1.9%	3.2%	6.2 %	1.1 %	8.6 %	0.7 %	2.4%	2.3%	2.4%	4.6 %	7.8 %	5.3 %	5.2 %
Extruded Solutions <sup>2)</sup>	3.8%	5.3%	13.4%					5.7%	7.2%	6.6%				
Energy	14.7%	19.4%	17.5%	18.1 %	17.2 %	17.4 %	36.1 %	12.8%	19.3%	17.5%	18.1 %	17.3 %	17.4 %	36.1 %
<b>Hydro Group</b>	<b>(0.9%)</b>	6.0%	11.2%	6.5 %	7.5 %	4.9 %	1.1 %	1.3%	6.6%	9.6%	5.1 %	9.2 %	5.2 %	2.3 %

## Capital employed – upstream focus

NOK million	Dec 31, 2019
Bauxite & Alumina	27 794
Primary Metal	33 326
Metal Markets	2 464
Rolled Products	11 742
Extruded Solutions	25 660
Energy	1 495
Other and Eliminations	(6 824)
<b>Total</b>	<b>95 841</b>



Graph excludes BNOK (6.8) in capital employed in Other and Eliminations

1) RoCE at business area level is calculated using 25% tax rate (30% tax rate applied for years prior to 2017). For Energy, 70% tax rate is used for 2018, 65% for 2017, 60% for 2016 and 55% for prior years. 2018 RoCE has been restated due to the change in definition.

2) Extruded Solutions reflected as 50% equity accounted investment Q1-Q3 2017 and fully consolidated from Q4 2017

# Operating segment information



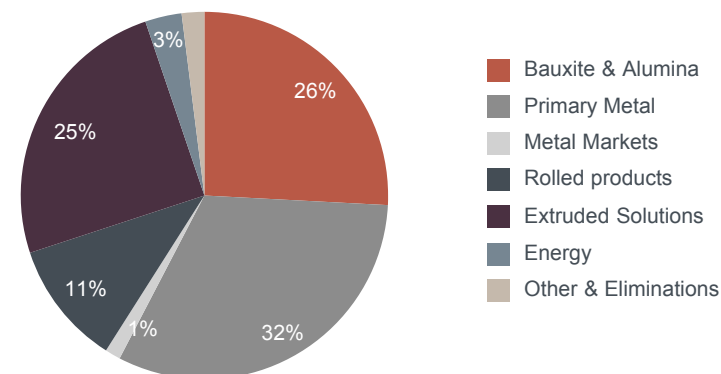
## Depreciation, amortization and impairment

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Bauxite & Alumina	577	586	644	679	630	573	509	384	605	589	590	725	2 486	2 095	2 509
Primary Metal	492	505	504	526	546	575	583	548	619	605	616	1 191	2 026	2 253	3 030
Metal Markets	23	24	24	24	24	25	25	26	29	29	33	37	95	101	129
Rolled Products	201	212	217	230	223	227	231	246	247	251	264	274	860	927	1 036
Extruded Solutions				444	421	425	434	443	506	535	639	704	444	1 723	2 384
Energy	53	54	56	60	58	59	61	63	62	62	62	66	223	239	253
Other and Eliminations	6	7	7	7	7	7	7	10	30	34	32	48	28	30	144
<b>Total</b>	<b>1 352</b>	<b>1 389</b>	<b>1 450</b>	<b>1 970</b>	<b>1 909</b>	<b>1 891</b>	<b>1 851</b>	<b>1 719</b>	<b>2 098</b>	<b>2 105</b>	<b>2 236</b>	<b>3 045</b>	<b>6 162</b>	<b>7 369</b>	<b>9 485</b>

## Indicative depreciation currency exposure by business area

Percent	USD	EUR	BRL	NOK & Other
Bauxite & Alumina			100%	
Primary Metal	20%	5%	20%	55%
Metal Markets	35%	50%		15%
Rolled Products		90%		10%
Extruded Solutions	30%	40%		30%
Energy				100%
Other & Eliminations		35%	5%	60%

## Depreciation by business area 2019, 9.5 BNOK



# Income statements



NOK million	Q4 2019	Q4 2018	Q3 2019	Year 2019	Year 2018
Revenue	35 490	38 386	37 517	149 766	159 377
Share of the profit (loss) in equity accounted investments	68	30	123	241	765
Other income, net	409	264	268	1 000	772
<b>Total revenue and income</b>	<b>35 967</b>	<b>38 680</b>	<b>37 908</b>	<b>151 007</b>	<b>160 913</b>
Raw material and energy expense	22 328	25 164	24 090	97 474	102 523
Employee benefit expense	5 928	5 926	6 728	24 871	23 176
Depreciation and amortization expense	2 258	1 719	2 142	8 572	7 369
Impairment of non-current assets	786	-	95	912	-
Other expenses	5 065	5 694	4 632	18 678	19 324
<b>Earnings before financial items and tax (EBIT)</b>	<b>(399)</b>	<b>178</b>	<b>222</b>	<b>499</b>	<b>8 522</b>
Financial income	140	45	72	365	255
Financial expense	92	(766)	(1 700)	(2 420)	(2 315)
Income (loss) before tax	(168)	(543)	(1 407)	(1 556)	6 462
Income taxes	(497)	(207)	16	(813)	(2 139)
<b>Net income (loss)</b>	<b>(665)</b>	<b>(750)</b>	<b>(1 390)</b>	<b>(2 370)</b>	<b>4 323</b>
Net income (loss) attributable to non-controlling interests	(189)	(57)	(131)	(558)	67
Net income (loss) attributable to Hydro shareholders	(476)	(693)	(1 259)	(1 811)	4 256
<b>Earnings per share attributable to Hydro shareholders</b>	<b>(0.23)</b>	<b>(0.34)</b>	<b>(0.62)</b>	<b>(0.88)</b>	<b>2.08</b>

NOK million	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Net income (loss)	1 838	1 562	2 184	3 600	2 076	2 073	925	(750)	(124)	(190)	(1 390)	(665)	9 184	4 323	(2 370)
<b>Underlying net income (loss)</b>	<b>1 580</b>	<b>2 214</b>	<b>1 785</b>	<b>2 816</b>	<b>2 201</b>	<b>2 096</b>	<b>1 696</b>	<b>(175)</b>	<b>124</b>	<b>281</b>	<b>606</b>	<b>(303)</b>	<b>8 396</b>	<b>5 819</b>	<b>708</b>
Earnings per share	0.86	0.73	1.00	1.71	1.02	1.03	0.37	(0.34)	0	(0.04)	(0.62)	(0.23)	4.30	2.08	(0.88)
<b>Underlying earnings per share</b>	<b>0.75</b>	<b>1.04</b>	<b>0.82</b>	<b>1.33</b>	<b>1.06</b>	<b>1.02</b>	<b>0.74</b>	<b>(0.06)</b>	<b>0.13</b>	<b>0.19</b>	<b>0.33</b>	<b>(0.12)</b>	<b>3.95</b>	<b>2.75</b>	<b>0.52</b>

# Balance sheet



NOK million	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019	Dec 31 2018 <sup>1)</sup>	Sep 30 2018	Jun 30 2018	Mar 31 2018
Cash and cash equivalents	12 286	10 581	10 590	6 099	5 995	6 846	5 682	9 371
Short-term investments	969	929	1 090	1 274	975	1 176	1 136	1 031
Accounts receivable	18 959	23 007	23 186	23 542	20 744	21 727	23 442	22 785
Inventories	20 816	21 679	22 718	25 004	26 483	23 916	22 337	20 626
Other current assets	635	700	471	349	801	738	978	818
Property, plant and equipment	74 243	74 025	73 193	72 882	74 369	66 251	66 683	69 945
Intangible assets	11 501	11 695	11 485	11 133	11 443	10 695	11 660	12 133
Investments accounted for using the equity method	11 501	11 809	10 936	11 349	11 570	11 094	11 140	10 551
Prepaid pension	6 676	5 721	5 986	5 854	5 162	6 857	6 322	5 933
Other non-current assets	6 815	6 877	7 322	7 157	7 385	5 962	5 780	5 588
<b>Total assets</b>	<b>164 401</b>	<b>167 025</b>	<b>166 978</b>	<b>164 644</b>	<b>164 928</b>	<b>155 261</b>	<b>155 159</b>	<b>158 781</b>
Bank-loans and other interest-bearing short-term debt	6 157	6 074	8 177	8 913	9 373	6 607	4 969	5 269
Trade and other payables	18 692	19 716	21 014	22 146	20 381	19 906	21 351	20 621
Other current liabilities	4 842	4 095	3 688	4 674	6 062	5 897	4 976	4 852
Long-term debt	18 858	19 985	18 620	10 559	9 342	7 886	9 377	8 746
Provisions	6 515	6 283	5 577	5 673	5 588	5 358	5 532	5 652
Pension liabilities	17 099	17 879	16 646	15 981	15 648	14 416	14 665	14 911
Deferred tax liabilities	3 132	2 911	3 123	3 052	3 031	3 952	3 456	3 522
Other non-current liabilities	5 025	5 435	4 536	4 252	4 746	3 756	3 673	4 084
Equity attributable to Hydro shareholders	79 932	80 275	81 143	84 692	85 820	83 012	82 676	86 233
Non-controlling interests	4 148	4 371	4 452	4 703	4 936	4 472	4 486	4 891
<b>Total liabilities and equity</b>	<b>164 401</b>	<b>167 025</b>	<b>166 978</b>	<b>164 644</b>	<b>164 928</b>	<b>155 261</b>	<b>155 159</b>	<b>158 781</b>

1) Restated



# Operational data



Bauxite & Alumina	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Alumina production (kmt)	1 523	1 576	1 605	1 693	1 277	829	821	786	805	932	1 320	1 430	6 397	3 712	4 487
Sourced alumina (kmt)	600	645	667	610	900	985	907	1 163	711	704	660	769	2 522	3 954	2 845
Total alumina sales (kmt)	2 129	2 196	2 251	2 344	2 071	1 842	1 711	1 983	1 423	1 668	2 124	2 164	8 920	7 607	7 379
Realized alumina price (USD) <sup>1)</sup>	309	295	297	398	371	430	460	463	373	365	310	281	326	429	326
Implied alumina cost (USD) <sup>2)</sup>	235	228	237	265	287	367	376	409	311	296	253	255	242	358	275
Bauxite production (kmt) <sup>3)</sup>	2 400	2 943	3 043	3 049	2 326	1 348	1 286	1 254	1 361	1 624	2 152	2 222	11 435	6 214	7 360
Sourced bauxite (kmt) <sup>4)</sup>	1 675	1 809	2 013	2 103	1 317	1 250	905	1 730	1 029	1 315	1 563	1 669	7 601	5 202	5 576
Underlying EBITDA margin <sup>11)</sup>	22.6%	21.3%	18.8%	31.7%	21.7%	13.6%	17.7%	10.2%	15.6%	17.5%	17.2%	8.4%	24.3%	15.3%	14.6%

Primary Metal <sup>5)</sup>	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Year 2017	Year 2018	Year 2019
Realized aluminium price LME, USD/mt	1 757	1 902	1 921	2 092	2 140	2 183	2 194	2 041	1 912	1 858	1 784	1 754	1 915	2 140	1 827
Realized aluminium price LME, NOK/mt <sup>7)</sup>	14 798	16 265	15 496	17 066	16 929	17 292	17 905	17 038	16 291	15 959	15 732	15 913	15 888	17 282	15 975
Realized premium above LME, USD/mt <sup>6)</sup>	266	273	261	259	295	364	367	362	344	326	305	257	265	346	308
Realized premium above LME, NOK/mt <sup>6)7)</sup>	2 236	2 330	2 106	2 116	2 335	2 881	2 999	3 025	2 935	2 802	2 688	2 333	2 197	2 791	2 695
Realized NOK/USD exchange rate <sup>7)</sup>	8.42	8.55	8.07	8.16	7.91	7.92	8.16	8.35	8.52	8.59	8.82	9.07	8.30	8.08	8.74
Implied primary cost (USD) <sup>8)</sup>	1 350	1 375	1 425	1 575	1 725	1 775	1 750	2 000	1 850	1 775	1 600	1 525	1 425	1 825	1 675
Implied all-in primary cost (USD) <sup>9)</sup>	1 675	1 700	1 725	1 850	2 075	2 175	2 150	2 350	2 200	2 100	1 900	1 775	1 725	2 175	2 000
Primary aluminium production, kmt	516	523	527	528	514	492	497	490	485	486	522	545	2 094	1 993	2 038
Casthouse production, kmt	521	551	548	550	531	523	507	496	473	477	509	523	2 169	2 058	1 982
Total sales, kmt <sup>10)</sup>	577	579	568	554	578	549	516	503	534	527	537	529	2 278	2 145	2 127
Underlying EBITDA margin <sup>11)</sup>	16.1%	20.8%	20.0%	20.4%	13.3%	13.0%	14.3%	(1.9)%	(2.0)%	(0.3)%	6.3%	9.6%	19.4%	9.9%	3.3%

1) Weighted average of own production and third party contracts, excluding hedge results. The majority of the alumina is sold linked to either the LME prices or alumina index with a one month delay. Sourced alumina volumes have been re-calculated, with Q1 2018 being adjusted accordingly.

2) Implied alumina cost (based on EBITDA and sales volume) replaces previous apparent alumina cash cost

3) Paragominas production, on wet basis

4) 40 percent MRN offtake from Vale and 5 percent Hydro share on wet basis

5) Operating and financial information includes Hydro's proportionate share of production and sales volumes in equity accounted investments. Realized prices, premiums and exchange rates exclude equity accounted investments

6) Average realized premium above LME for casthouse sales from Primary Metal.

7) Including strategic hedges /hedge accounting applied

8) Realized LME price minus Underlying EBITDA margin (incl. Qatalum) per mt primary aluminium produced. Includes net earnings from primary casthouses

9) Realized all-in price minus Underlying EBITDA margin (incl. Qatalum) per mt primary aluminium sold. Includes net earnings from primary casthouses

10) Total sales replaces previous casthouse sales due to change of definition

11) Underlying EBITDA divided by total revenues

# Operational data



<b>Metal Markets</b>	<b>Q1 2017</b>	<b>Q2 2017</b>	<b>Q3 2017</b>	<b>Q4 2017</b>	<b>Q1 2018</b>	<b>Q2 2018</b>	<b>Q3 2018</b>	<b>Q4 2018</b>	<b>Q1 2019</b>	<b>Q2 2019</b>	<b>Q3 2019</b>	<b>Q4 2019</b>	<b>Year 2017</b>	<b>Year 2018</b>	<b>Year 2019</b>
Remelt production (1 000 mt)	143	152	136	137	150	153	126	135	131	139	125	121	568	563	516
Third-party Metal Products sales (1 000 mt)	79	80	74	86	70	77	83	73	70	83	82	82	319	304	317
Metal Products sales excl. ingot trading (1 000 mt) <sup>1)</sup>	735	759	707	720	745	746	685	682	683	707	662	648	2 921	2 859	2 700
Hereof external sales excl. ingot trading (1 000 mt)	672	675	639	589	580	563	543	532	539	556	517	536	2 575	2 217	2 149
External revenue (NOK million)	11 094	12 080	10 675	10 414	10 901	10 905	10 575	10 121	10 139	10 577	9 742	9 706	44 264	42 502	40 164
<b>Rolled Products</b>	<b>Q1 2017</b>	<b>Q2 2017</b>	<b>Q3 2017</b>	<b>Q4 2017</b>	<b>Q1 2018</b>	<b>Q2 2018</b>	<b>Q3 2018</b>	<b>Q4 2018</b>	<b>Q1 2019</b>	<b>Q2 2019</b>	<b>Q3 2019</b>	<b>Q4 2019</b>	<b>Year 2017</b>	<b>Year 2018</b>	<b>Year 2019</b>
Rolled Products external shipments (1 000 mt)	241	239	236	224	245	251	235	220	246	242	245	219	940	951	952
Rolled Products – Underlying EBIT per mt, NOK	442	351	400	424	949	844	349	(512)	560	309	678	156	404	435	434
Underlying EBITDA margin <sup>2)</sup>	4.9%	4.5%	4.8%	5.0%	6.7%	6.1%	4.6%	2.1%	5.6%	4.9%	6.4%	5.0%	4.8 %	5.0%	5.5%
<b>Extruded Solutions<sup>3)</sup></b>	<b>Q1 2017</b>	<b>Q2 2017</b>	<b>Q3 2017</b>	<b>Q4 2017</b>	<b>Q1 2018</b>	<b>Q2 2018</b>	<b>Q3 2018</b>	<b>Q4 2018</b>	<b>Q1 2019</b>	<b>Q2 2019</b>	<b>Q3 2019</b>	<b>Q4 2019</b>	<b>Year 2017</b>	<b>Year 2018</b>	<b>Year 2019</b>
Extruded Solutions external shipments (1 000 mt)	355	359	339	318	362	373	343	318	333	348	316	272	1 372	1 396	1 269
Extruded Solutions – Pro-forma underlying EBIT per mt, NOK	1 973	2 328	1 505	893	2 028	2 566	1 449	635	1 781	2 219	1 769	311	1 699	1 712	1 583
Underlying EBITDA margin <sup>2)</sup>	7.7%	8.2%	6.5%	5.2%	7.3%	8.1%	5.8%	4.2%	6.9%	7.4%	7.2%	4.7%	6.9%	6.4%	6.6%
<b>Energy</b>	<b>Q1 2017</b>	<b>Q2 2017</b>	<b>Q3 2017</b>	<b>Q4 2017</b>	<b>Q1 2018</b>	<b>Q2 2018</b>	<b>Q3 2018</b>	<b>Q4 2018</b>	<b>Q1 2019</b>	<b>Q2 2019</b>	<b>Q3 2019</b>	<b>Q4 2019</b>	<b>Year 2017</b>	<b>Year 2018</b>	<b>Year 2019</b>
Power production, GWh	2 869	2 369	2 509	3 089	2 433	2 550	2 888	2 822	2 553	1 993	2 273	2 332	10 835	10 693	9 150
Net spot sales, GWh	1 409	996	1 168	1 633	763	961	1 315	1 166	770	289	582	520	5 206	4 204	2 161
Nordic spot electricity price, NOK/MWh	280	257	266	294	372	373	484	460	457	346	342	390	274	423	384
Southern Norway spot electricity price (NO2), NOK/MWh	278	252	258	287	361	369	475	455	468	360	328	392	269	415	387
Underlying EBITDA margin <sup>2)</sup>	24.4%	19.3%	23.1%	23.9 %	19.2%	22.2%	28.8%	24.9%	25.8%	13.4%	16.0%	16.9%	22.8%	24.2%	18.4%

1) Includes external and internal sales from primary casthouse operations, remelters and third party Metal sources

2) Underlying EBITDA divided by total revenues

3) FY 2017 and historical operational data based on pro forma figures

# Extruded Solutions, information by business area



Historical Sapa information (100% basis) Q1 2017 – Q3 2017  
Extruded Solutions, fully consolidated in Hydro since Q4 2017 <sup>1)</sup>

Precision Tubing	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019
Volume (kmt)	36	38	36	35	37	41	41	38	157	34	36	34	31	134
Operating revenues (NOKm)	1 651	1 734	1 601	1 645	1 700	1 910	1 873	1 722	7 205	1 623	1 788	1 540	1 532	6 482
Underlying EBITDA (NOKm)	180	193	157	138	168	120	121	98	507	86	146	140	84	456
Underlying EBIT (NOKm)	123	136	67	66	103	55	50	30	237	18	87	74	19	198

Building Systems	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019
Volume (kmt)	20	21	19	19	20	21	18	19	78	18	22	19	20	79
Operating revenues (NOKm)	1 830	2 044	1 765	1 960	2 057	2 124	1 919	2 045	8 145	1 973	2 328	2 104	2 148	8 554
Underlying EBITDA (NOKm)	155	219	118	137	167	198	130	155	650	104	233	189	148	674
Underlying EBIT (NOKm)	119	183	85	85	116	146	70	99	430	22	143	79	47	291

Other and eliminations	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019
Underlying EBITDA (NOKm)	(63)	(43)	(41)	(35)	(45)	(46)	(21)	(118)	(230)	(56)	(96)	24	9	(118)
Underlying EBIT (NOKm)	(69)	(49)	(42)	(45)	(55)	(58)	(35)	(130)	(278)	(58)	(99)	21	3	(132)

Extrusion Europe	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019
Volume (kmt)	154	155	142	134	159	160	138	129	586	139	142	120	106	503
Operating revenues (NOKm)	5 553	5 999	5 460	5 541	6 600	6 664	5 867	5 719	24 850	6 328	6 461	5 579	5 027	23 395
Underlying EBITDA (NOKm)	390	416	290	240	417	504	263	201	1 385	346	348	215	203	1 111
Underlying EBIT (NOKm)	274	292	164	59	246	333	98	27	705	141	144	6	(25)	266

Extrusion North America	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	2019
Volume (kmt)	150	151	148	134	152	157	152	137	598	146	148	142	116	553
Operating revenues (NOKm)	5 514	5 753	5 369	5 211	5 882	6 519	6 541	6 091	25 033	6 306	7 053	6 267	5 335	24 961
Underlying EBITDA (NOKm)	437	466	390	248	448	606	439	310	1 802	619	648	532	211	2 082
Underlying EBIT (NOKm)	330	353	284	119	325	481	314	176	1 295	469	498	378	40	1 385

1) Includes certain effects of the acquisition such as increased depreciation and amortization following fair value adjustments related to long-lived assets. Estimate increased depreciation of around MNOK 300 per annum for Extruded Solutions vs "old Sapa".

Next events

# First quarter results April 29, 2020

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

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