Primary Metal

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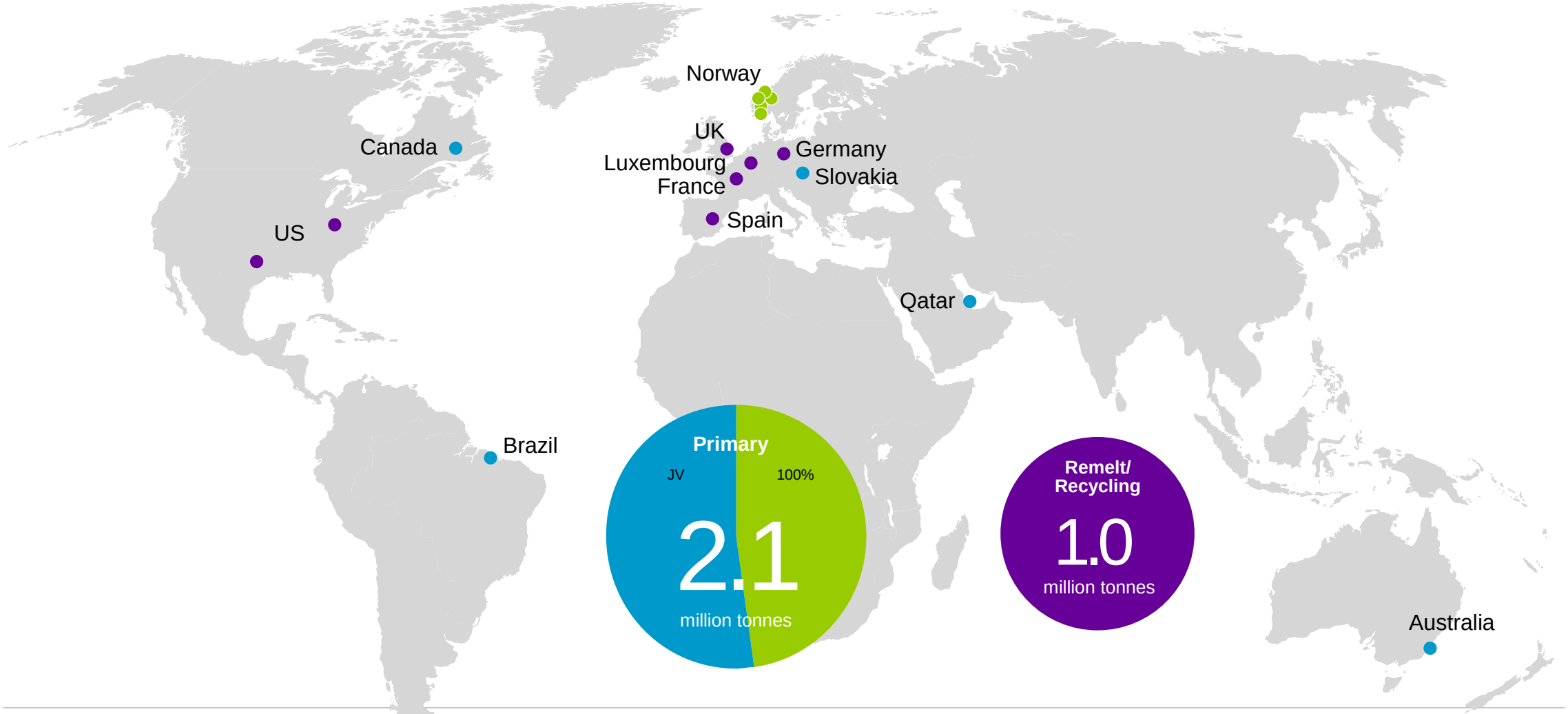
Hans Erik Vatne

Capital Markets Day 2015

Primary Metal and Metal Markets production portfolio

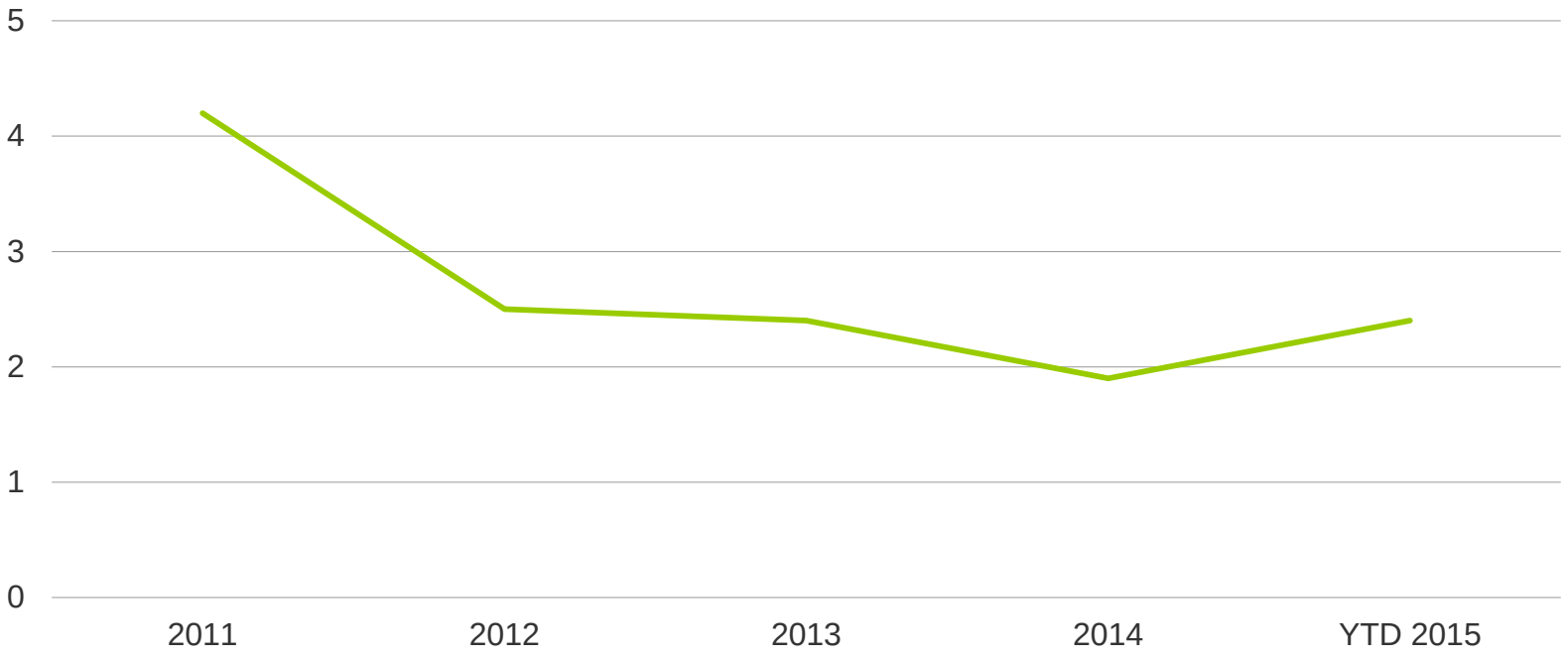


2.1 million mt is consolidated capacity. Slovalco and Albras are fully consolidated, Tomago and Alouette are proportionally consolidated and Qatalum is equity accounted. 90.000 mt of capacity is currently mothballed in Hydro Husnes. Neuss, which is a part of Rolled Products, is not included. 1.0 million mt includes stand-alone remelters, recycling facilities and additional casthouse capacity at primary plants.

Striving for an injury-free environment

Among the best in the industry

Total recordable injuries (TRI) per million hours worked



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Primary Metal strategic priorities

World-leading aluminium producer

Better

- Strive for an injury-free environment
- Deliver on improvement programs
- Secure competitive power sourcing
- Develop products and services towards advanced customers to improve margins

Bigger

- Realize 200,000 mt creep
- Extend technology lead with the Karmøy technology pilot
- Further mature growth options

Greener

- Grow recycling business to improve margins and environmental footprint
- Reduce energy consumption and emissions in all processes
- Develop products and solutions to help customers reduce energy consumption and emissions

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Primary Metal: Extending the technology lead and driving improvements

ENOVA support for Karmøy technology pilot approved by ESA

Record quarterly result in Q1

Hydro Karmøy invests to high-grade product portfolio

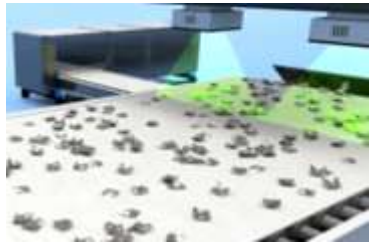
Alouette agreed on terms for new power contract

NOK 1.0 bn 2016-2019 improvement ambition

CMD 2014 — Feb — Apr — Mar-Jun — Aug — Sep — Dec — CMD 2015

Investment decision on technology pilot made

Invested in world's most advanced sorting technology



~1.05 TWh new power contracts secured from 2021-30 in Norway

Clervaux remelter investment - improved recycling capabilities

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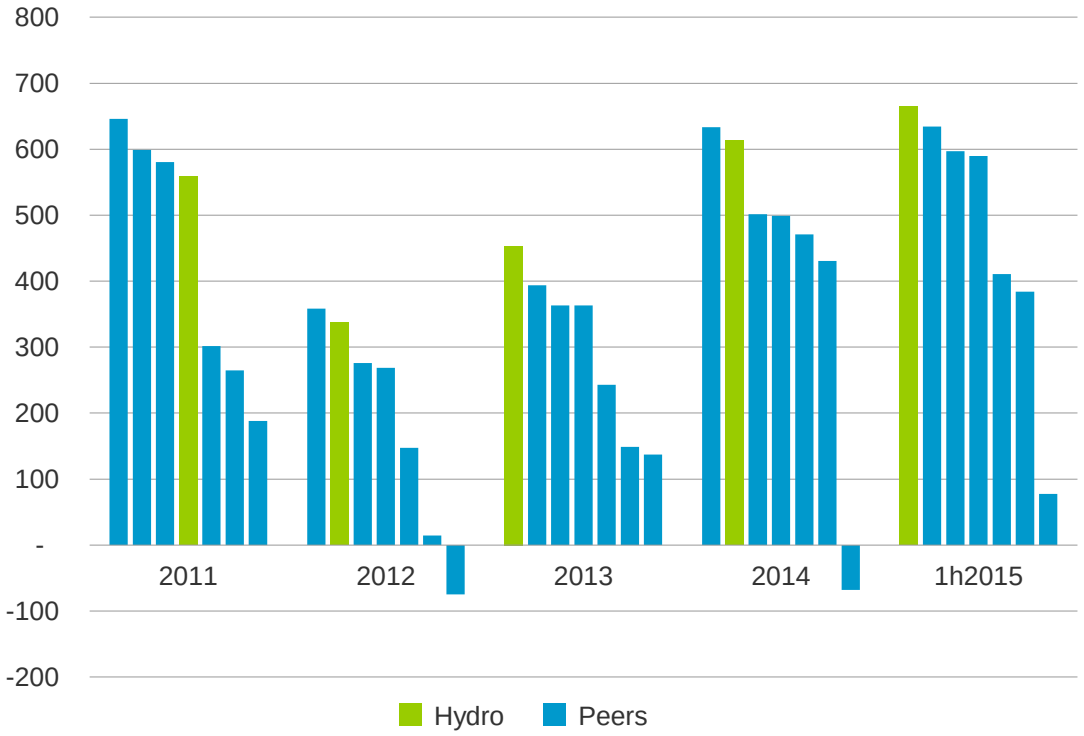
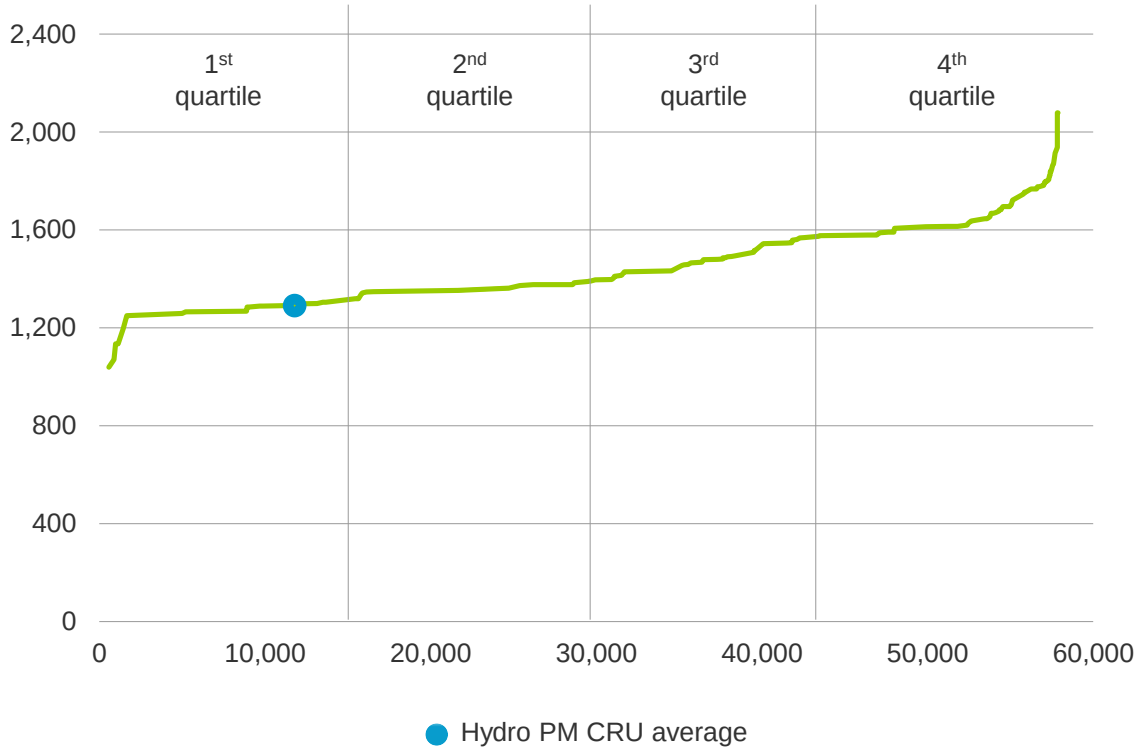
Strengthened relative position

Improvement programs and currency tailwinds are main contributors

Underlying EBITDA per mt in USD for respective aluminium divisions[1][2]



2015 CRU global business operating cost curve[3], in USD per mt



1) All figures based on public accounting data, not verified by Hydro. Data not adjusted for different accounting principles and non-specified underlying items. Hydro makes no representation as to the accuracy or completeness of such information. The analyses are based on assumptions subject to uncertainty and therefore intended only for general comparisons across companies and should not be used to support any individual investment decision. All results are provided for informational purposes only. Hydro figures includes Primary Metal, Metal Markets and attributable share of EBITDA and production in Qatalum.
2) Companies included in the graph: Hydro, Rio Tinto Alcan, South 32 (BHP), Rusal, Chalco, Alba, Alcoa
3) Assumptions: LME 1 699 USD, USD/NOK 7.96, USD/BRL 3.85, USD/EUR 0.91.

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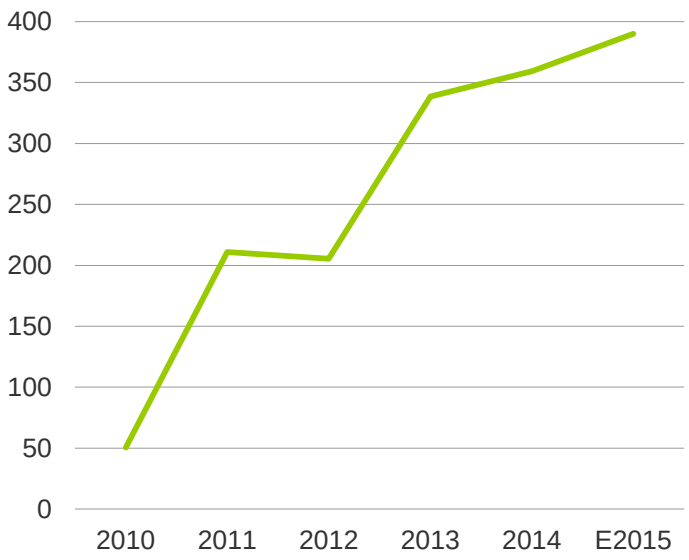
Improvement culture is a part of Hydro’s DNA

New NOK 1 billion technology driven improvement ambition

Fully-owned smelters improvements continue beyond USD 300

Improvements 2009-2015, corresponding to NOK ~2.0 billion

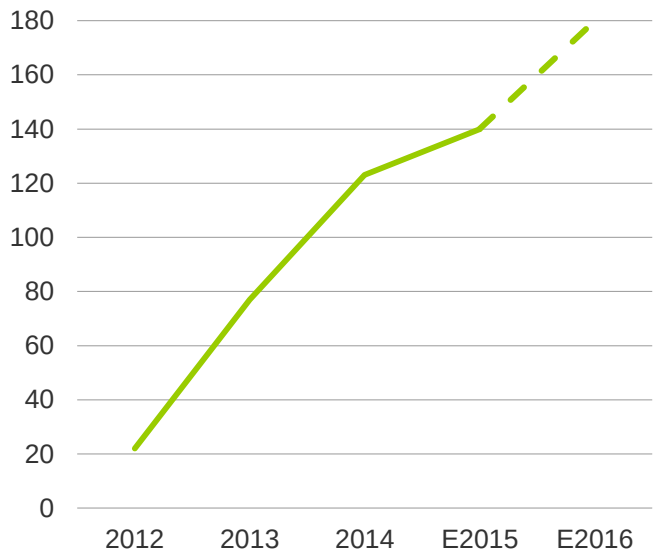
In USD per mt in real terms



Joint venture improvement program on track

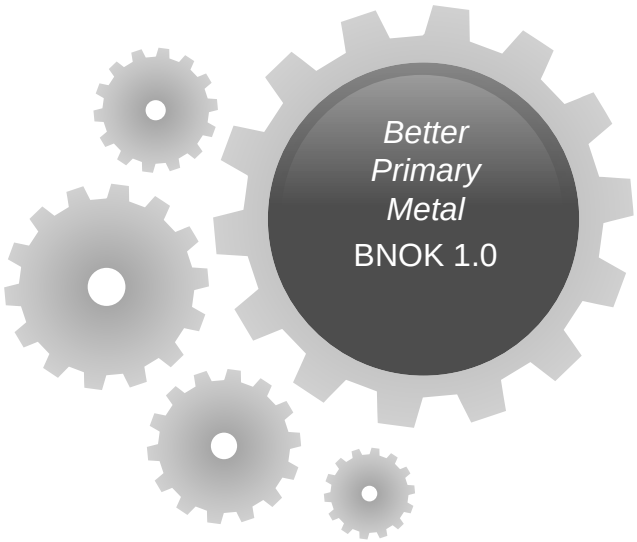
USD 180 per mt improvements 2011- 2016, corresponding to NOK ~1.2 billion

In USD per mt in real terms



New BNOK 1.0 improvement ambition

Includes remainder of USD 180 program, To be delivered from 2016 to 2019



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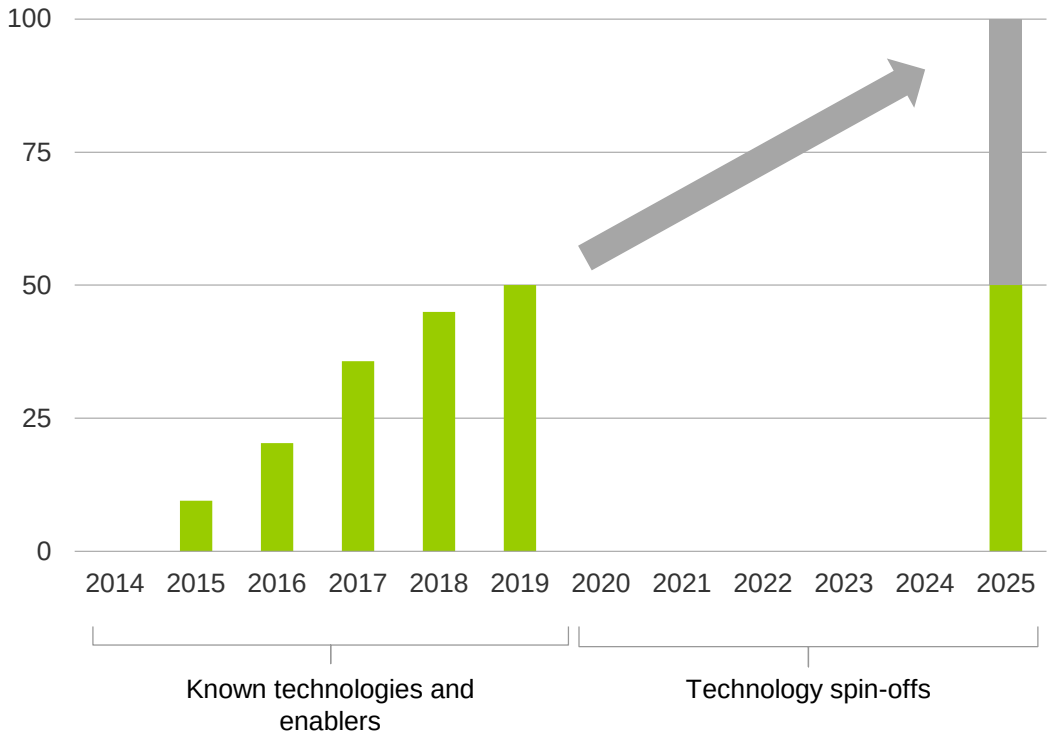
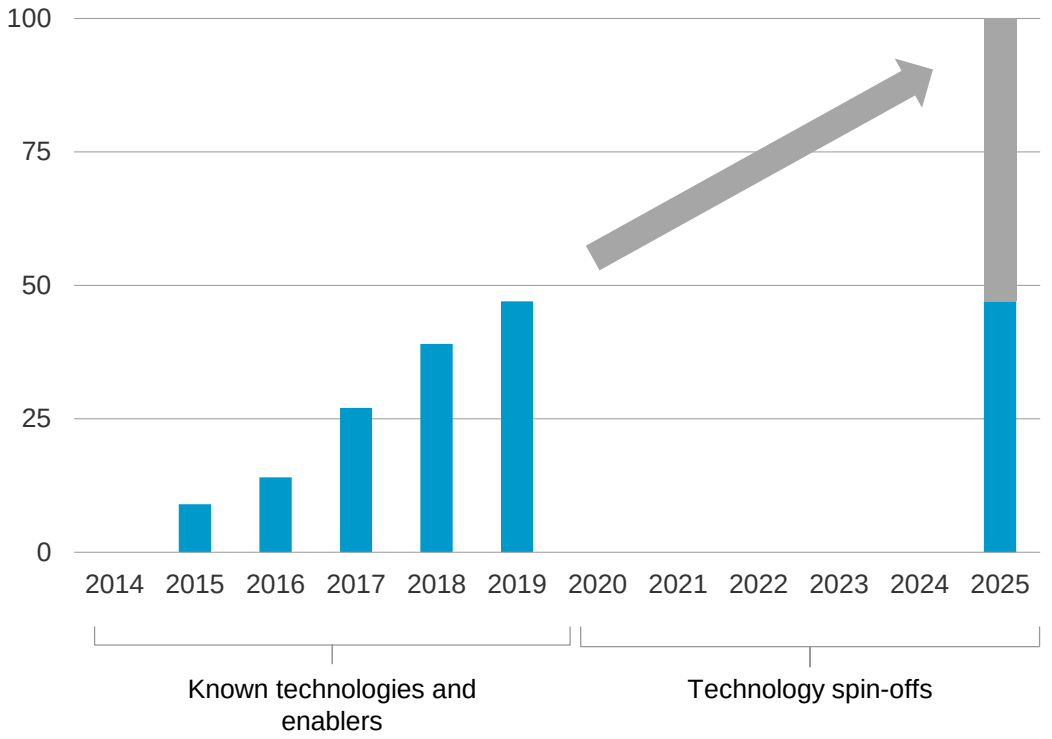
Improvement culture and technology go «hand in hand»

Technology-driven capacity increases of ~200 000 mt over the next decade

Production fully-owned[1] smelter portfolio 2014-2025, in mt

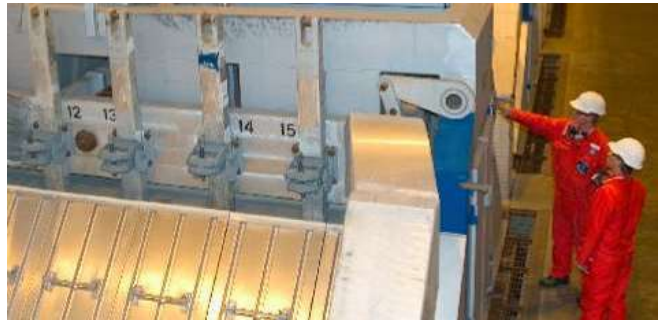


Production joint venture[2] portfolio 2014-2025, in mt



1) Årdal, Høyanger, Husnes, Sunndal and Karmøy
2) Volume as consolidated in Hydro from Alouette, Tomago, Albras, Slovalco and Qatalum

Continuous technology development



HAL 300

- Operating for several years in Sunndal and Qatalum
  - 13.5 kWh/kg
  - 314 kA
  - 1.5 kg CO_2/kg Al

HAL4*e*

- To be used in Karmøy technology pilot
- Benchmark on energy-efficiency and environment
- Hal4e
  - 12.3 kWh/kg / 450 kA / <1.5 kg CO_2/kg Al
- Hal4e Ultra
  - 11.5-8 kWh/kg / 415 kA / <1.5 kg CO_2/kg Al

R&D vision

- 10 kWh/kg
- Carbon capture-ready cell
- Higher degree of automation and autonomous control system

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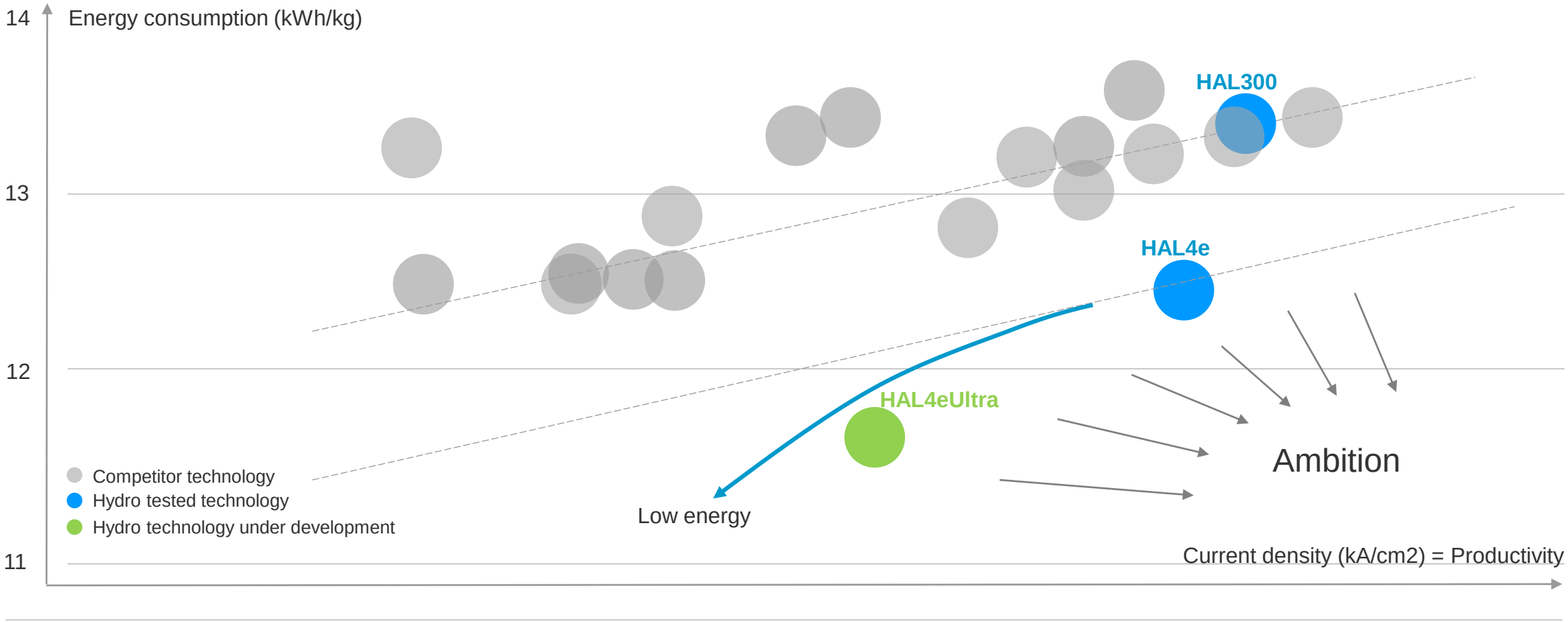
Electrolysis technology – challenging the laws of nature

Hydro with benchmark combination of energy consumption and productivity



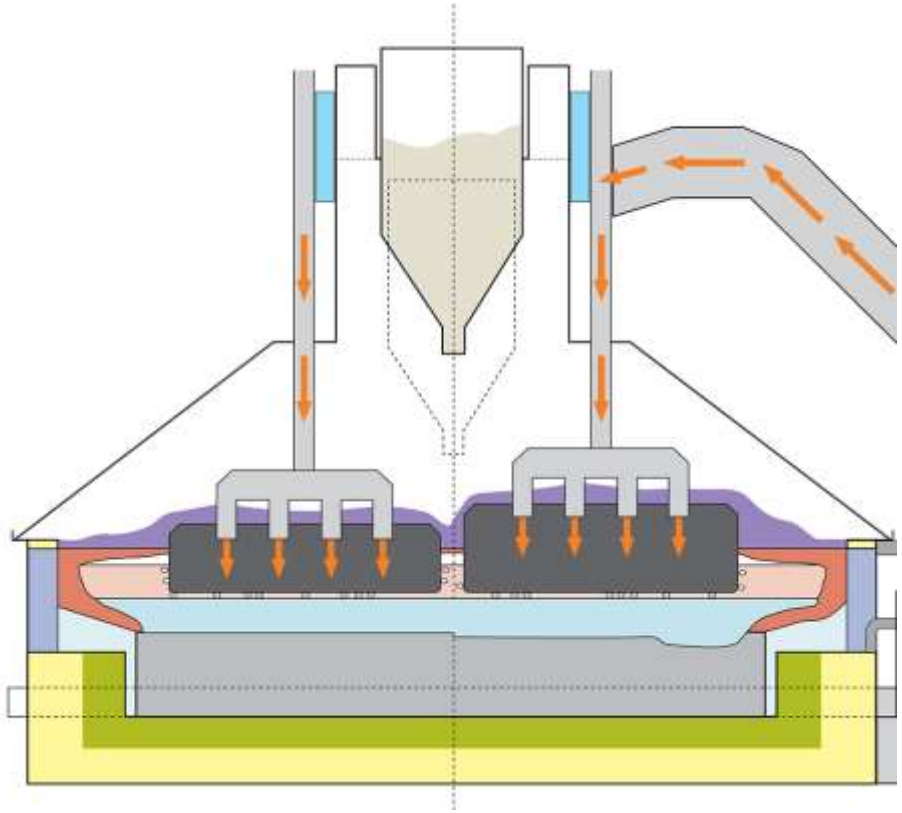
Technology innovations in HAL4e

Key enablers for improved performance

- Milli-Volt chasing: reduce Ohm's resistance
- Anode-cathode distance
- Heat balance
- Control of magnetic fields
- Reduce operational variations with improved control system

Examples of innovations behind HAL4e performance

- Copper inserts
- Anode developments and yoke design
  - Optimized anode yoke design - up to 0.3 kWh reduction in energy consumption per kg aluminium
- Cathode developments
- Process control system
- Heat recovery



$$Al_2O_3 + {}^3/_2\ C + \text{Energy} = 2Al + {}^3/_2\ CO_2$$

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Karmøy technology pilot concept

- Karmøy technology pilot with annual production of 75 000 mt
  - 48 cells HAL4e technology,12 cells HAL4e Ultra
- Pilot also responding to need for improved performance of existing smelters in challenging market conditions
  - New spin-off technology elements and improved process control
  - Pilot will reduce risk and cost of implementation
- Around ~50% of 200 000 mt creep ambitions coming from Pilot – estimated annual EBITDA effect of NOK ~300 million*
- Build-decision dependent on total power solution, market balance and outlook

* Calculation based on actual EBITDA margin in 2014

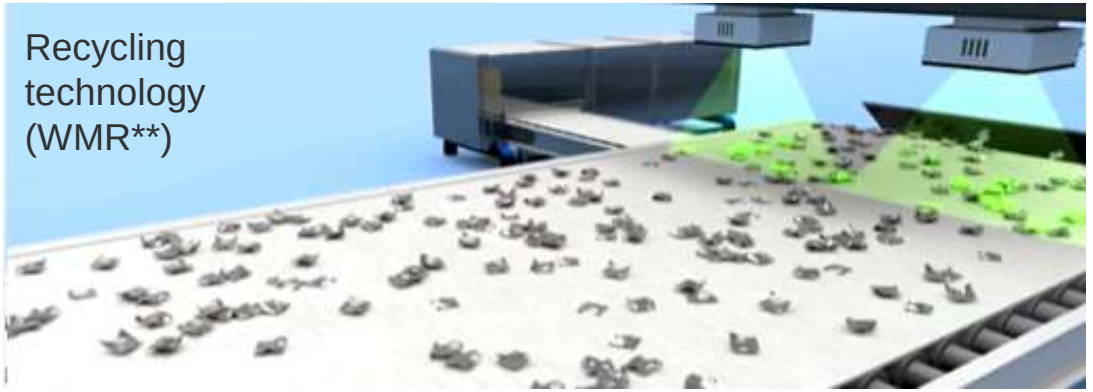
Hydro in the forefront of casthouse and recycling technology

AFM (adjustable flexible mould) – sheet ingot casting technology

- Improved capabilities towards advanced automotive segment
- Automated start up giving improved safety
- Reduced cost (e.g. scrap rate, changeovers*) internally and for customers

Advanced shredding and sorting technology

- Improved capabilities for utilizing post-consumed scrap
- Utilizing X-ray transmission to sort elements
- Core technology protected through patents

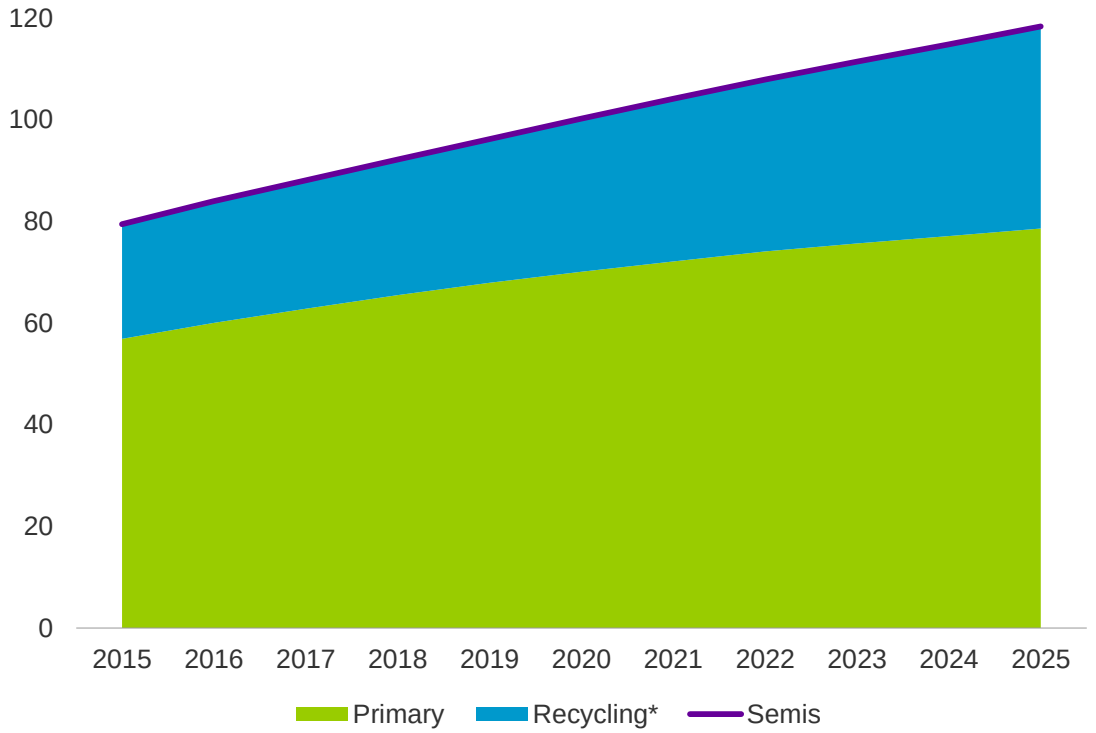


*The process of changing the form-set to allow for the casting of another dimension
** WMR Recycling GmbH

Taking advantage of the growing post-consumed scrap stream

- Expect increasing amount of post-consumed scrap
- WMR acquisition allows Hydro to “dig deeper” into scrap pile
- Benefit from increased margins through utilizing lower-grade scrap
- Trend towards customer demanding recycled and sustainable materials
- Positive contribution to Hydro’s overall carbon footprint

Primary vs. scrap-based metal usage globally, in million mt



Source: CRU, Hydro Analysis
* Post-consumed and fabrication scrap

Targeting the high-growth automotive segments

Strong commitment to quality

Sheet ingot

- AFM[1] implementation in both Årdal and Høyanger – rapidly increasing automotive volumes
- Large shift in portfolio - entry into new product segments/ alloys, in particular automotive body sheets

Extrusion ingot

- Working closely with customers to develop alloys with tailor made properties
- Advanced production of alloys to automotive customers – heat exchangers one of the main end-products

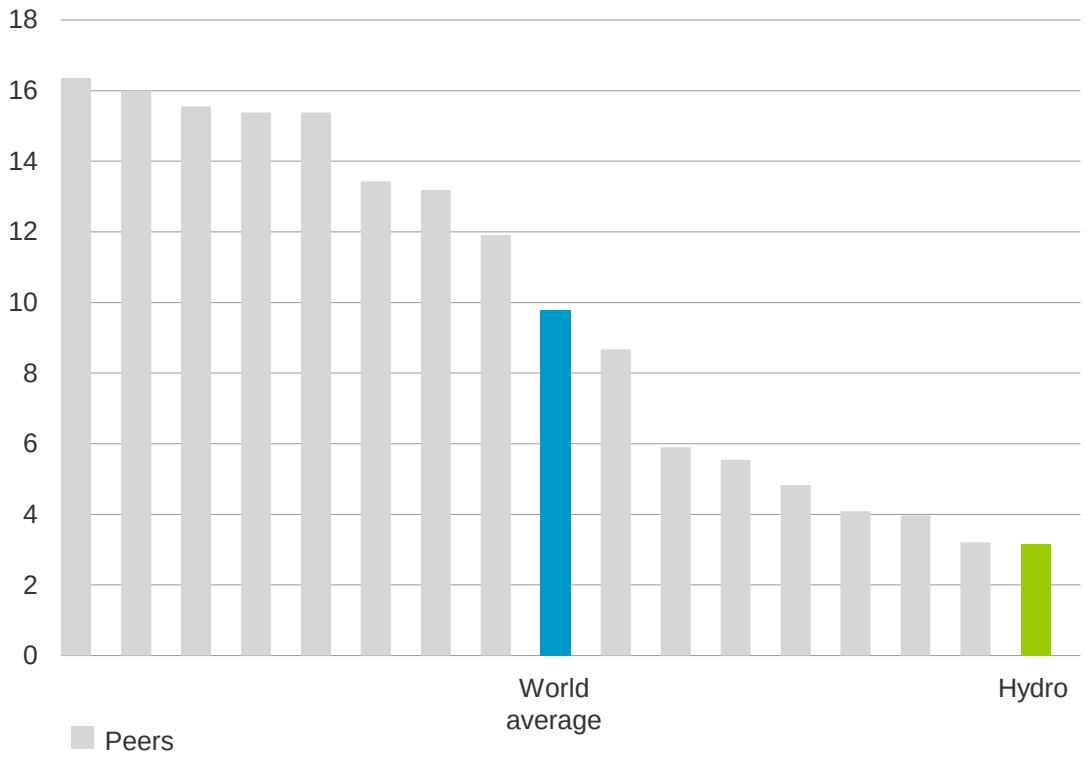
Foundry alloy

- Increasing PFA[2] demand from automotive sector

1) Adjustable flexible mould
2) Primary foundry alloys

Green energy base gives Hydro low carbon footprint

Indirect emissions, in tonne CO_2/t al



- Primary Metal consumes ~31 TWh of energy per year in primary smelters*
- ~2/3 of current aluminium capacity covered with long-term hydro power supply
- ~1/3 of current aluminium production covered with equity power
- Current aluminium capacity >80% with energy coverage until 2024

Source: CRU 2012
* Hydro's consolidated share

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Primary Metal mid-term goals

Creating shareholder value by strengthening relative cost position through lean operations and technology

Ambitions	Target	Timeframe
• Improve safety performance – strive for injury-free environment	TRI <2	2020
• Deliver BNOK 1 bn under new improvement ambition	BNOK 1.0	2019
• Realize ~200 000 mt technology-driven capacity creep	200 000 mt	2025
• Verify world's most energy efficient primary technology, including spin-off elements	complete Pilot*	2017**
• Increase post-consumed scrap recycling to improve margins and environmental footprint	150 000 mt	2020

Better Bigger Greener

*Karmøy technology pilot
**Dependent on build decision early 2016

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