

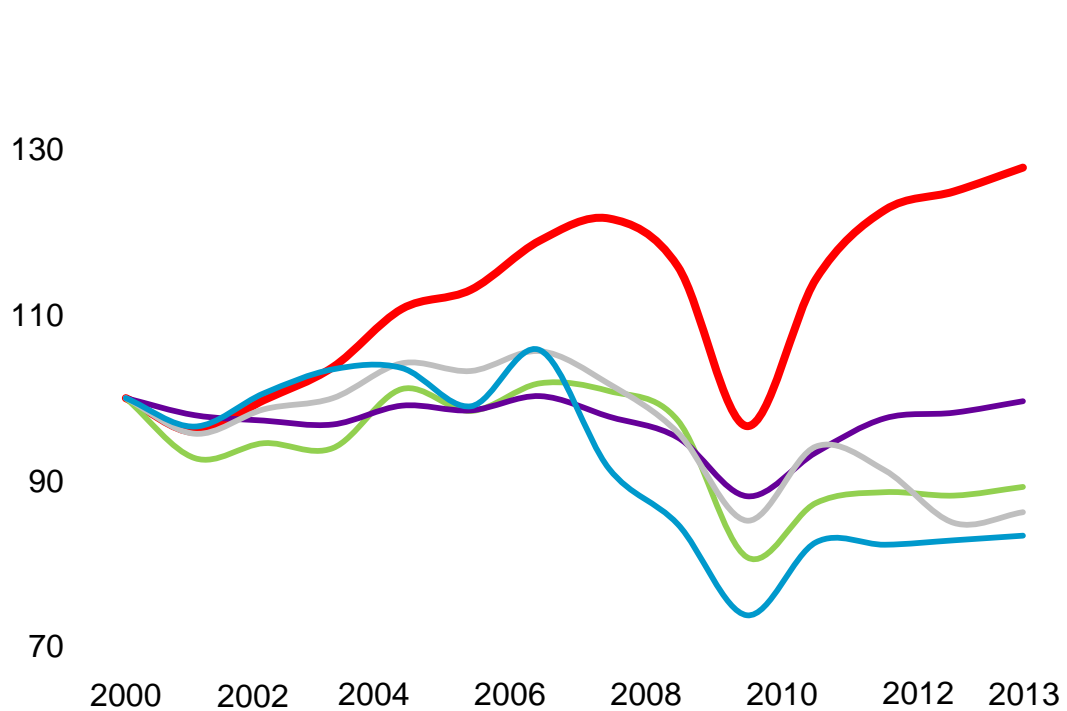
Market Update  
Pål Kildemo  
Head of IR



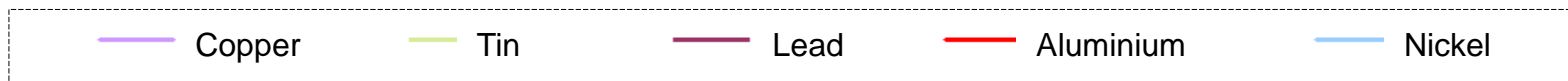
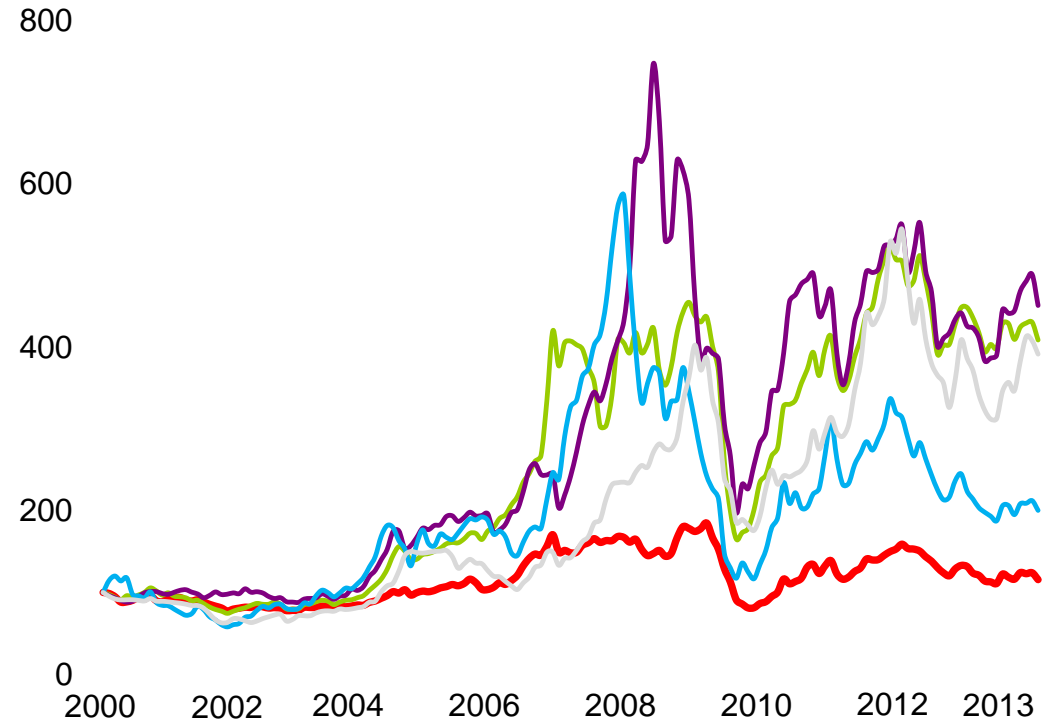
# The paradox of the aluminium industry

Demand winner – yet price laggard

Yearly consumption (Index 2000=100), global  
150



3-month LME price (Index 2000=100)

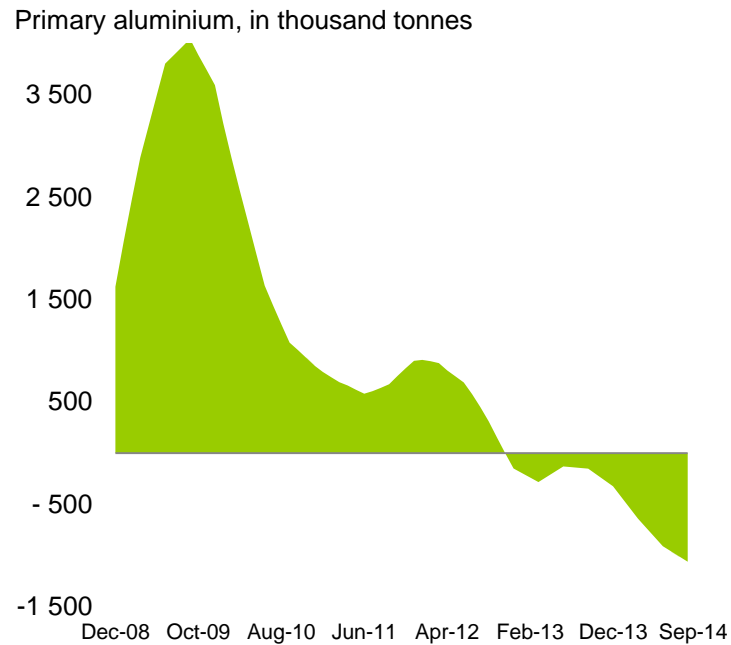


Source: CRU/Global Insight

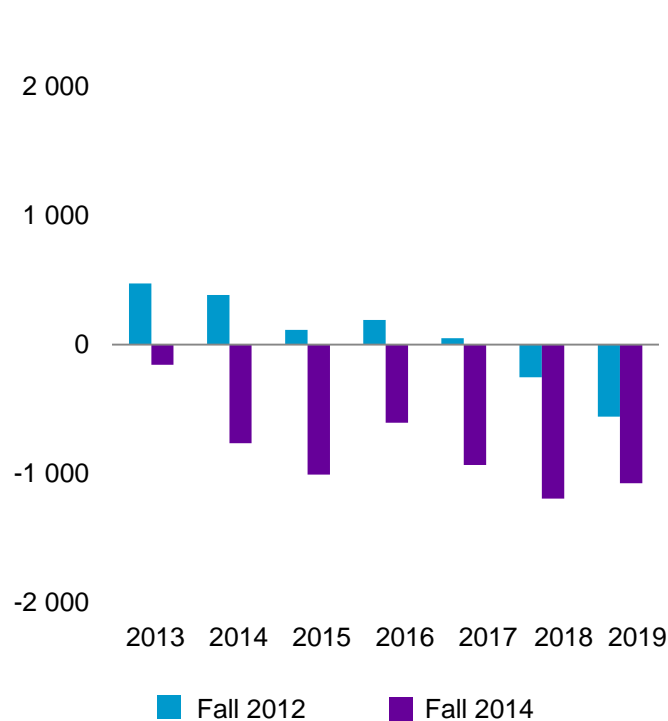
# Improved market balance

Brighter outlook after years of overproduction, world ex-China

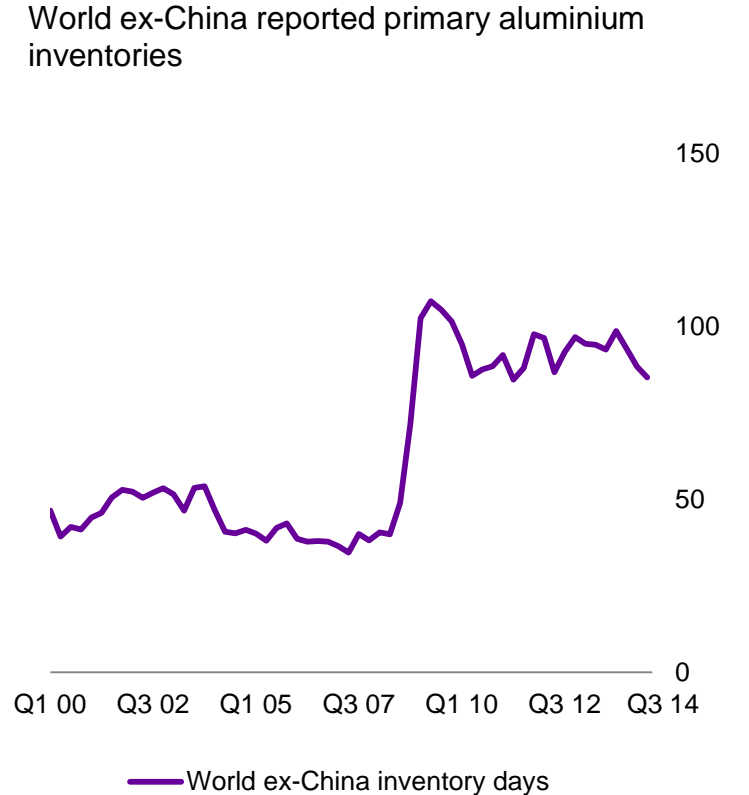
**Production less demand world ex-China**  
Quarterly annualized\*



**Supply/demand world ex-China\*\***  
Primary aluminium, in thousand tonnes



**Inventory days**

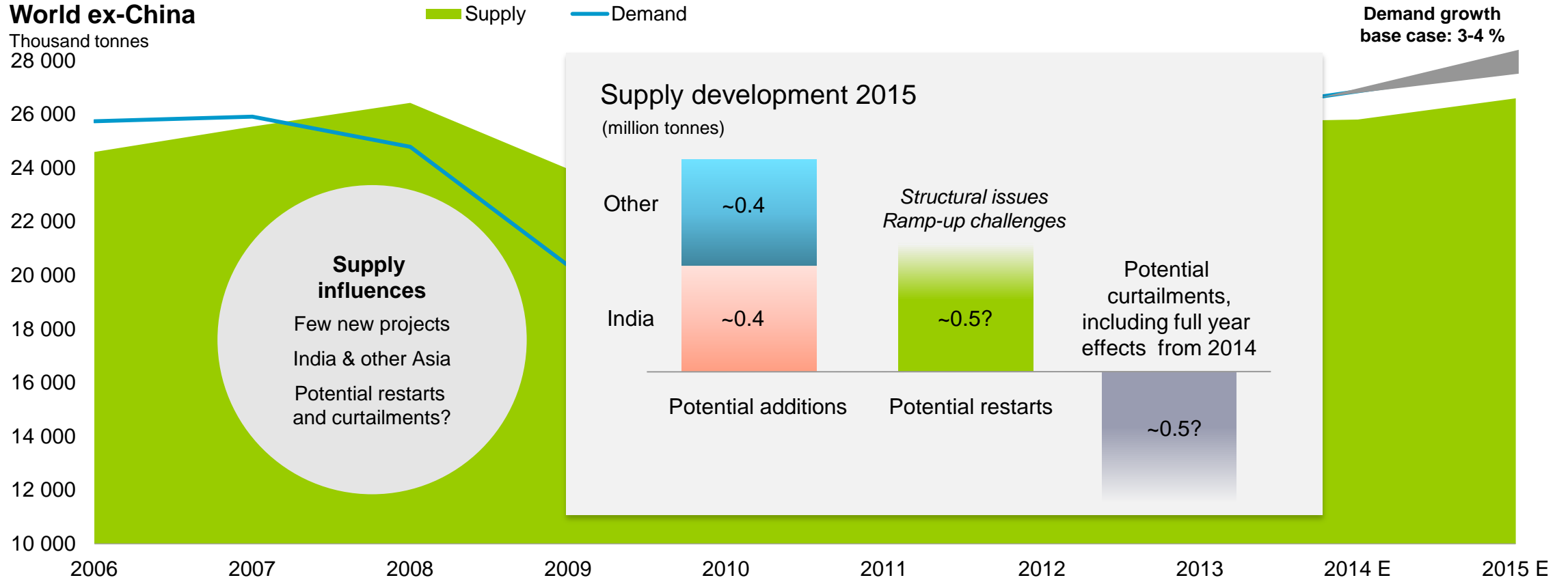


Source: CRU/Hydro  
\*12 month rolling average \*\* CRU estimates

# Supply growth next year mainly in Asian regions

## World ex-China

Thousand tonnes  
28 000



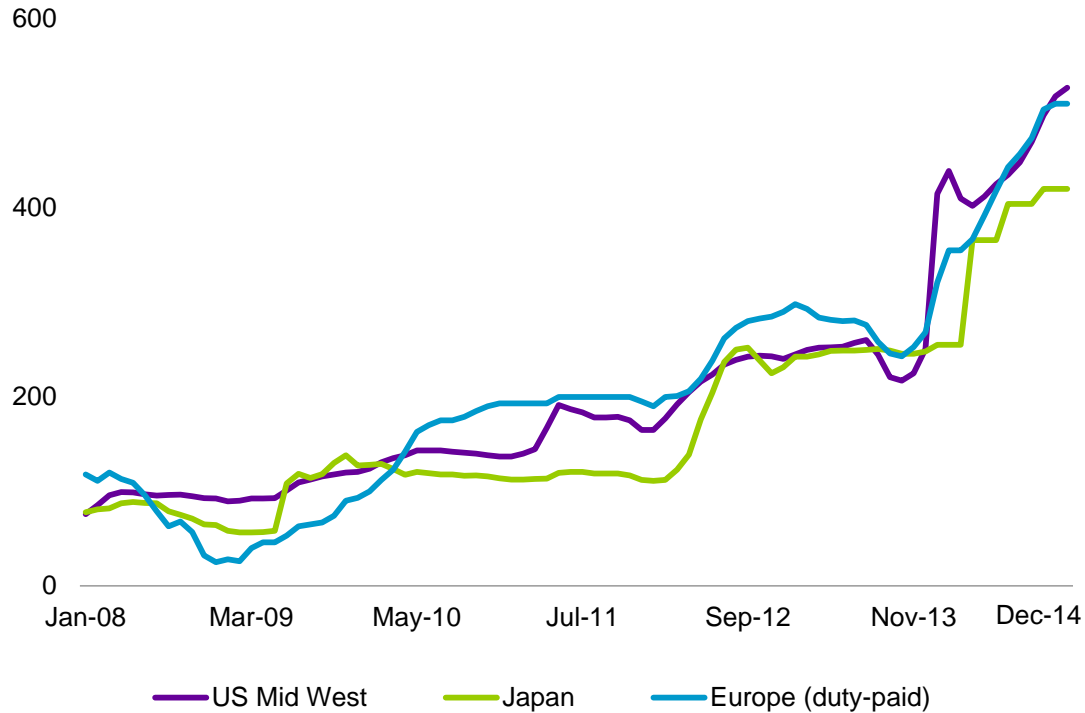
Source: CRU, Hydro Analysis

# All-in price of aluminium in upward trend

All-in ingot price exceeds USD 2 500/tonne as premiums continue to rise to new records

## Regional standard ingot premiums

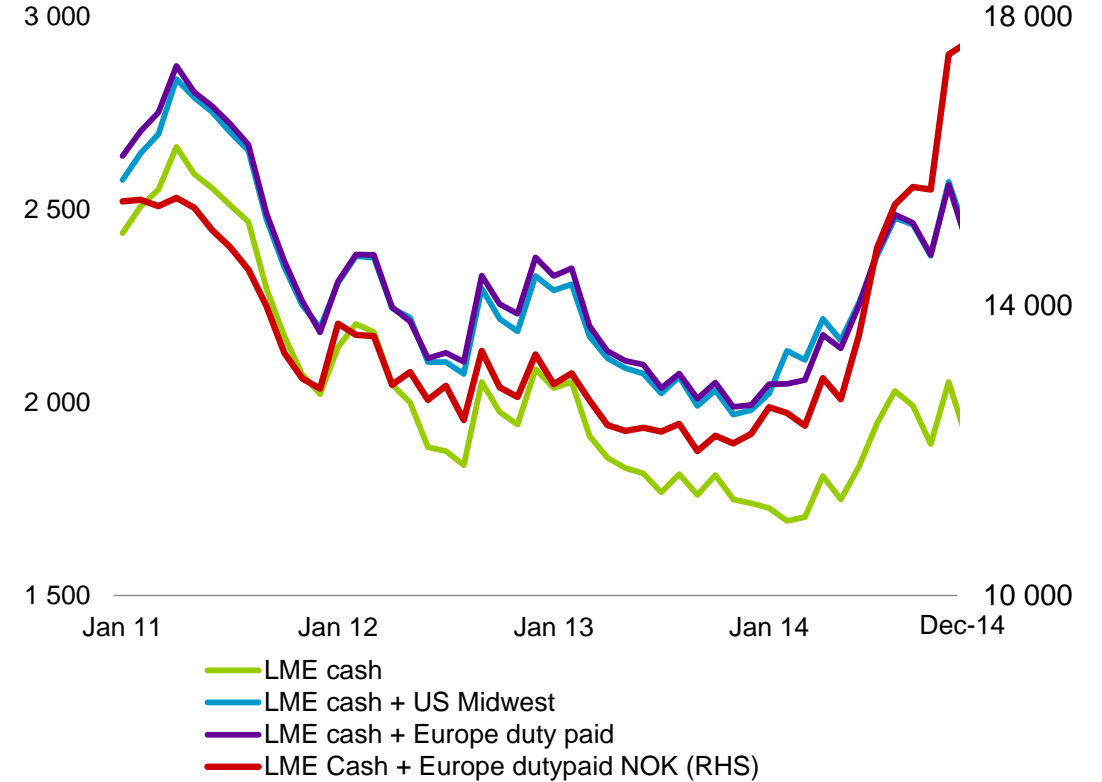
USD per tonne



## All-in ingot aluminium price

USD per tonne

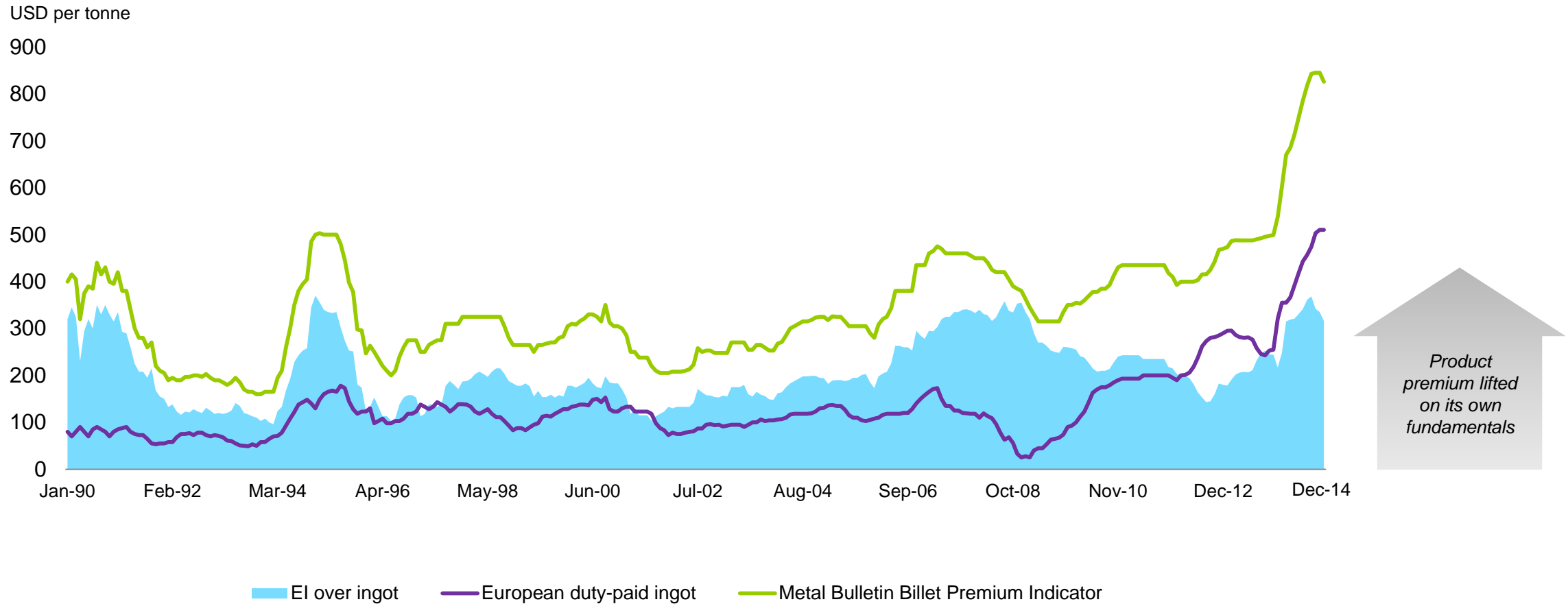
NOK per tonne



Source: Metal Bulletin, MW/MJP: Platts

Source: Metal Bulletin, MW/MJP: Platts, Reuters Ecowin

# Product premiums also at record high levels



Source: Metal Bulletin, Hydro Analysis

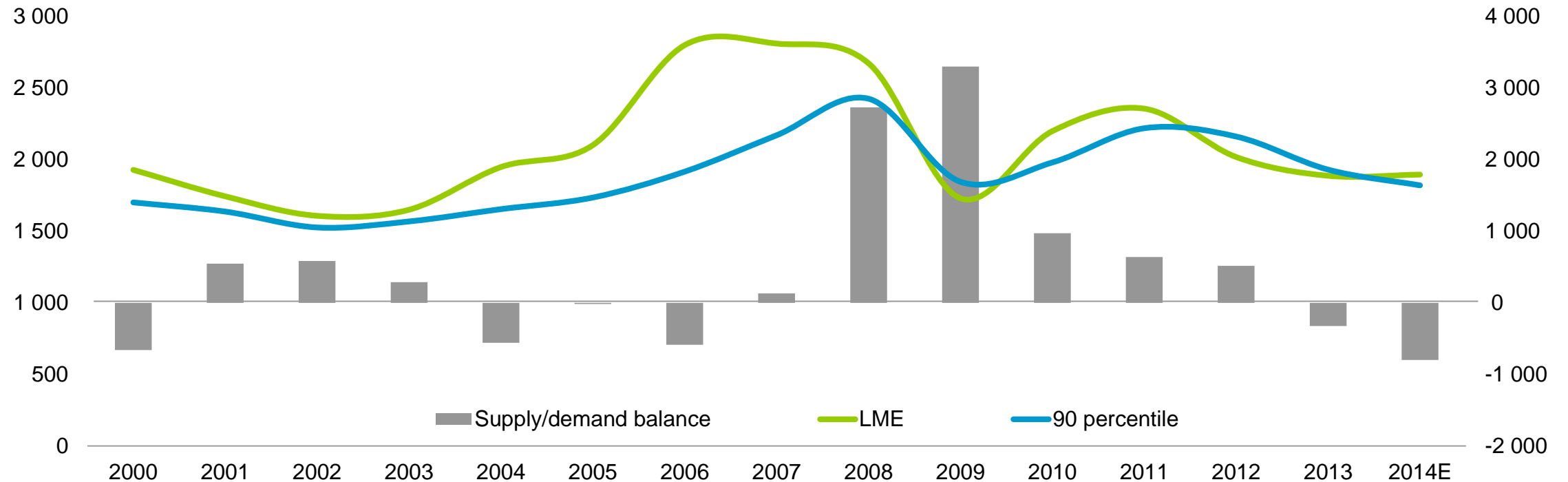
# Market balance indicates pricing above 90<sup>th</sup> percentile on the cost curve

High inventories separates current period from earlier periods where demand exceeded production

## LME price vs BOC development world ex-China

LME price and marginal smelter in USD

Supply/demand balance in world ex-China in thousand tonnes

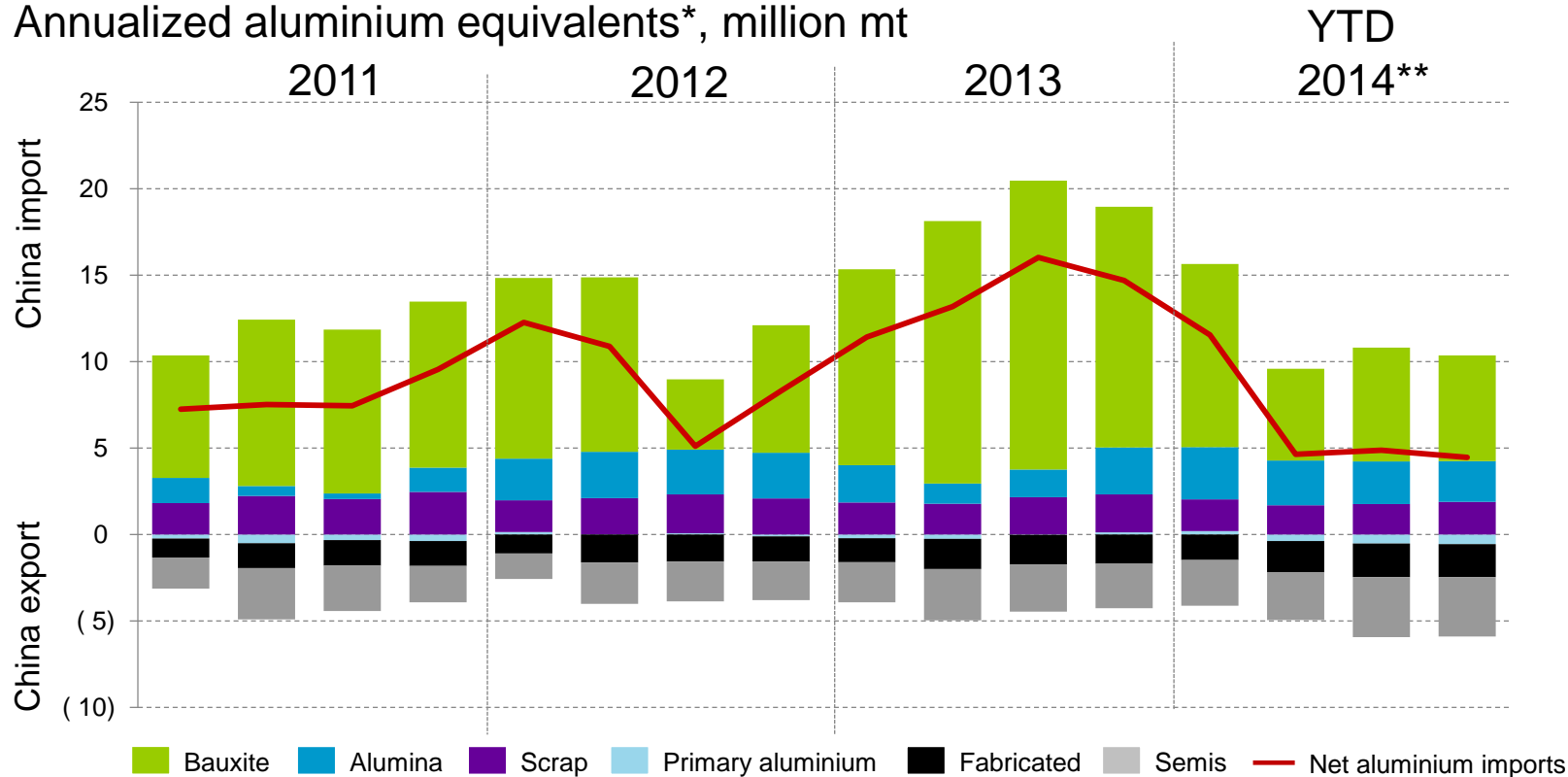


Source: CRU/Hydro  
\*BOC = Business Operating Costs

# China to remain balanced on imports/exports of primary aluminium

Bauxite import declined amid Indonesian export ban

Annualized aluminium equivalents\*, million mt



- Bauxite and alumina
  - Significant drop in bauxite imports since January
  - Alumina imports increasing 33% YTD
- Primary aluminium
  - No significant import or export expected in 2015. Export duties remains at 15% as before.
- Semis and fabricated
  - Uptick in export of semis and fabricated products

Source: CRU/Antaika/Hydro

\* Bauxite/alumina to aluminium conversion factor: 5.0/1.925

\*\*December estimated to be same as November

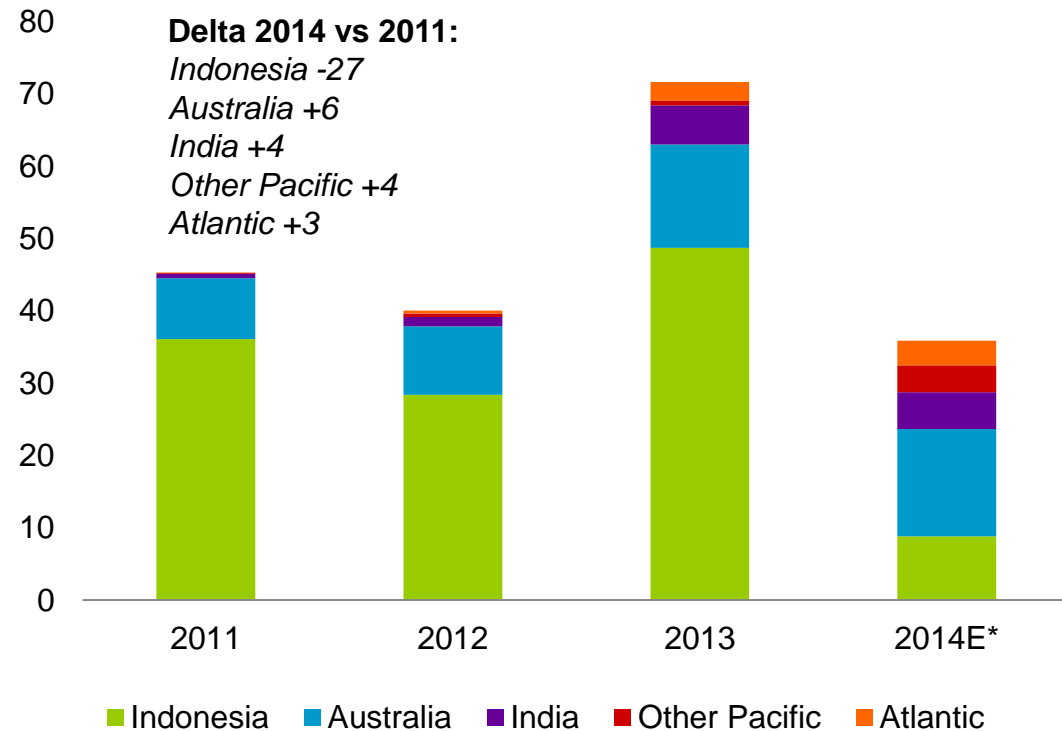


# China developing new bauxite import sources

No Indonesian bauxite exports translates to higher prices average CIF China

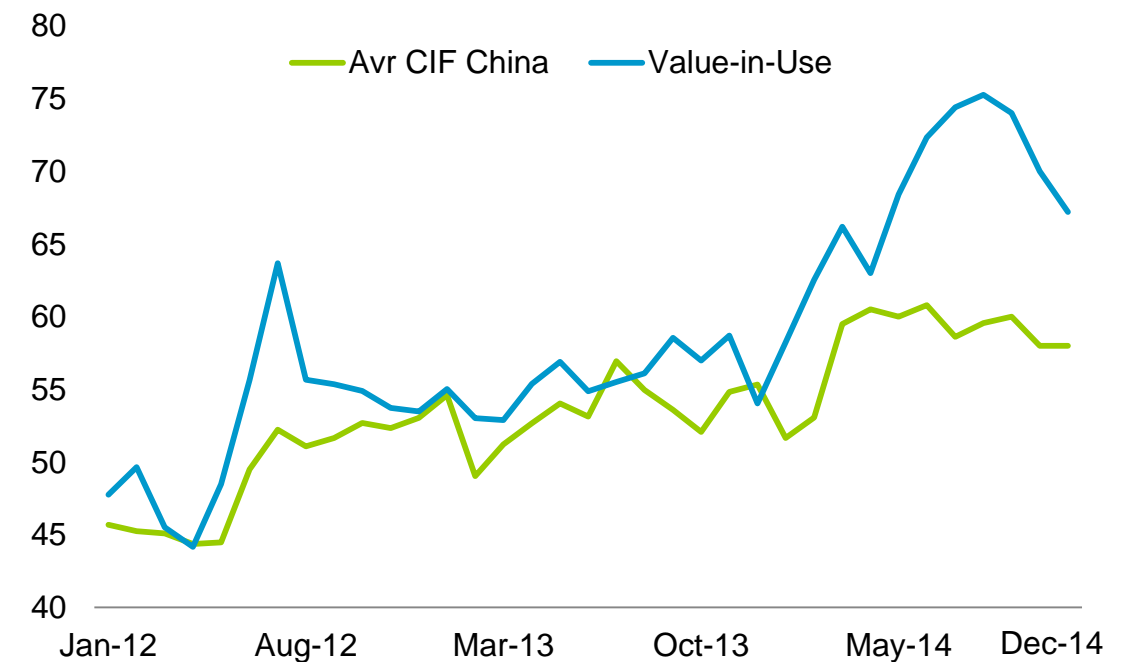
## Import volume by origin

Million tonnes



## Value-in-use bauxite price increasing more

USD per tonne

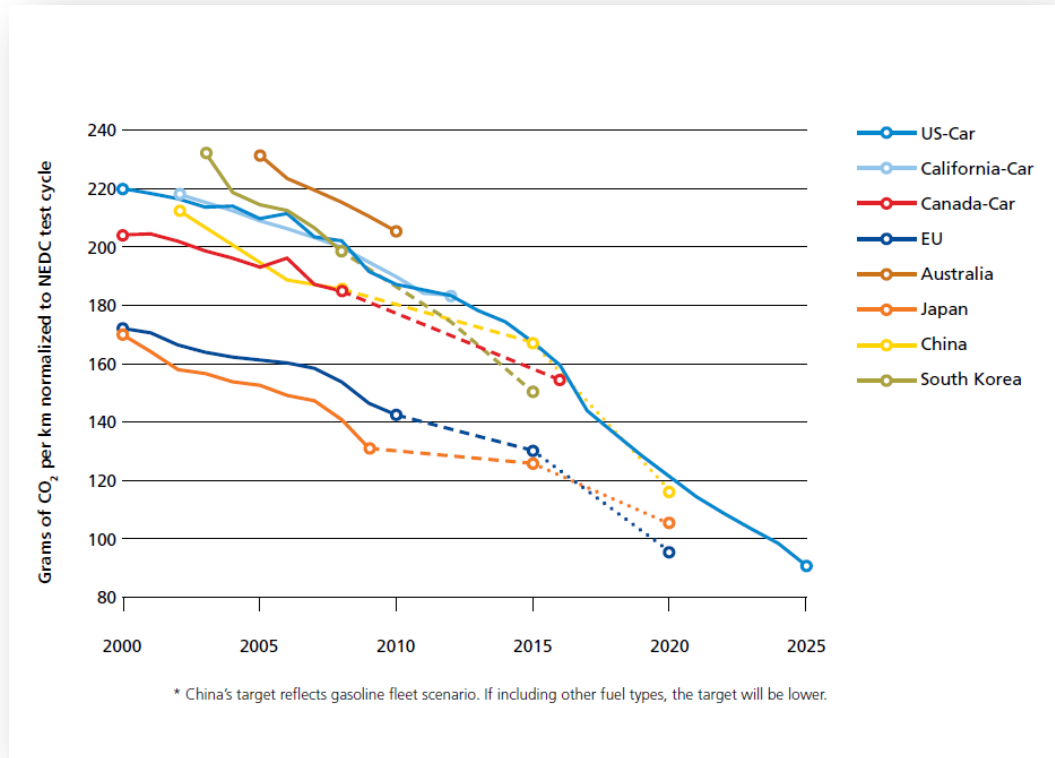


Source: China Custom, CMgroup, Hydro Analysis, \* assuming Dec 14 imports same as Nov 14

# Lighter vehicles make a big impact on the climate challenge

Aluminium – part of the solution

## Declining CO<sub>2</sub> emission targets around the world



For each **10%** reduction in vehicle weight, car manufacturers achieve fuel-savings of **5-7%**



Land Rover Sport 2010

**3,100 kg**

CO<sub>2</sub> emissions  
**327 g/100 km**



Land Rover Sport 2014

**2,200 kg**

CO<sub>2</sub> emissions  
**194 g/100 km**

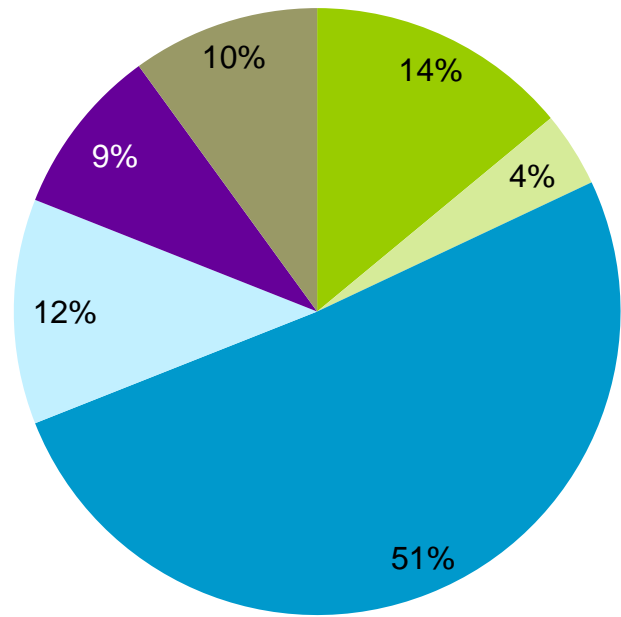
Sources: EAA, ICCT, IAI



# Robust long-term growth outlook for flat rolled products worldwide

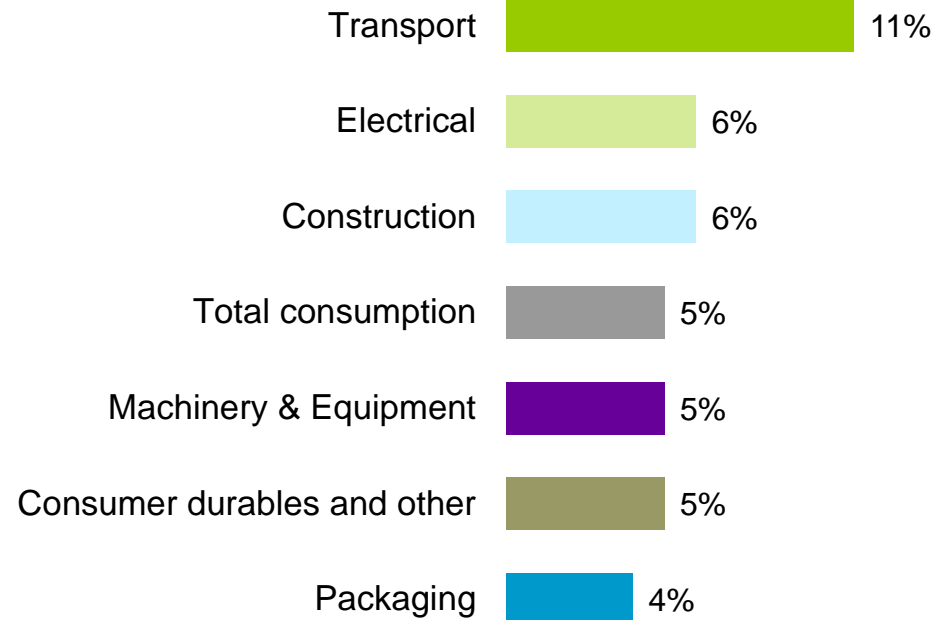
Transport is main driver for growth – Body-in-White consumption growth outperforming all other segments

Global FRP consumption by end-use 2014

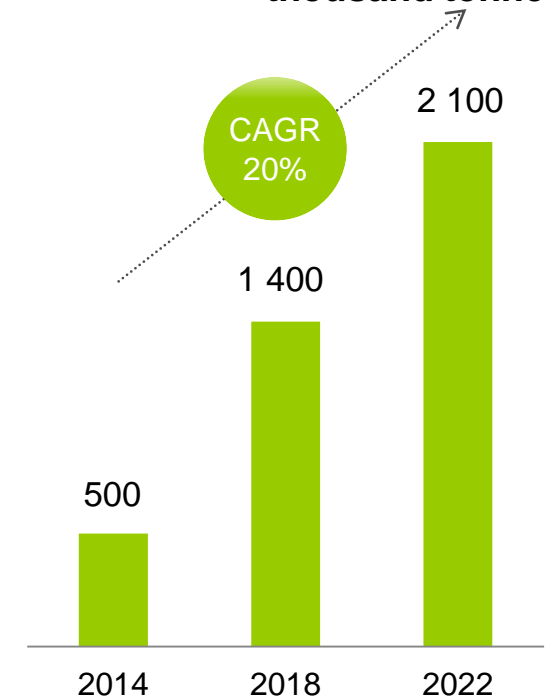


Total consumption around 23 million tonnes

CAGR 2014-2018



Body-in-White demand in thousand tonnes



Source: CRU FRP quarterly August 2014, Rolled Products analysis  
 FRP - Flat rolled products  
 CAGR – Compound annual growth rate

# Hydro's aspiration for higher value creation



*Better Bigger Greener*

# *Better*

- Continue improvements drive
- Capture commercial opportunities
- Extend technology and innovation lead

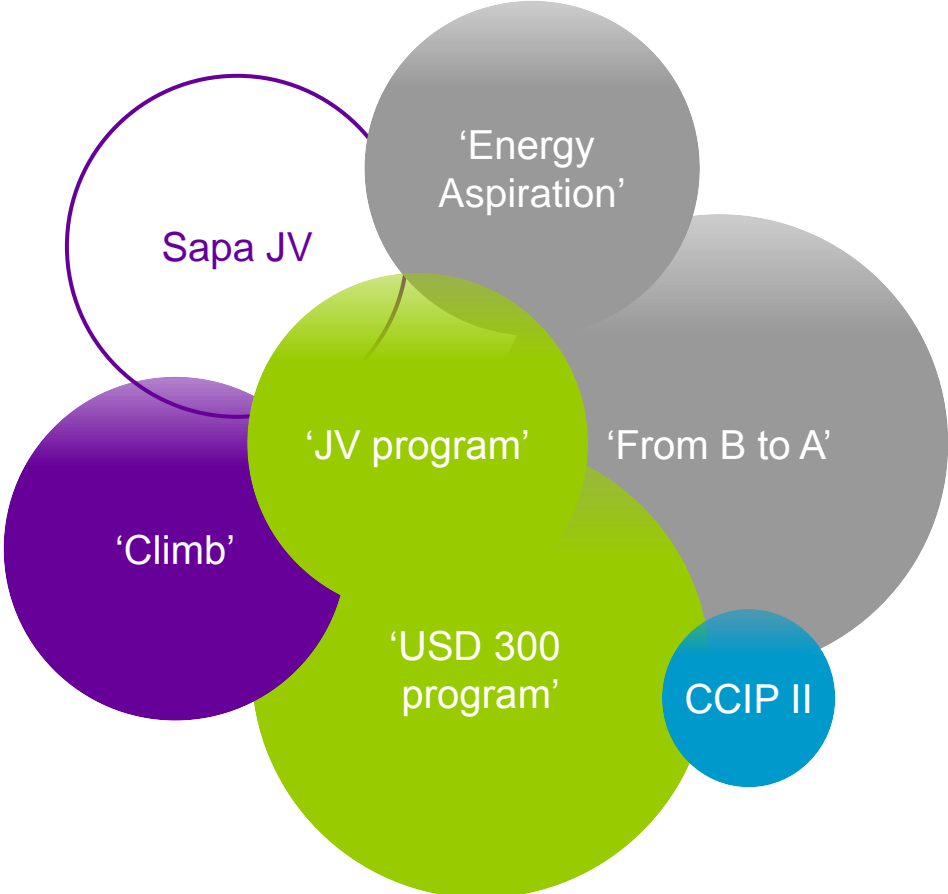
# *Bigger*

- Further strengthen relative industry position
- Enhance market positions and high-grade portfolio
- Mature selective growth projects for when time is right

# *Greener*

- Turn leading HSE/CSR position into competitive advantage
- Deliver on fast-developing customer demands
- Capitalize on strong climate position over time

# Hydro improvement drive continues at full pace



Total contribution from Hydro's improvement programs (excl. Sapa)

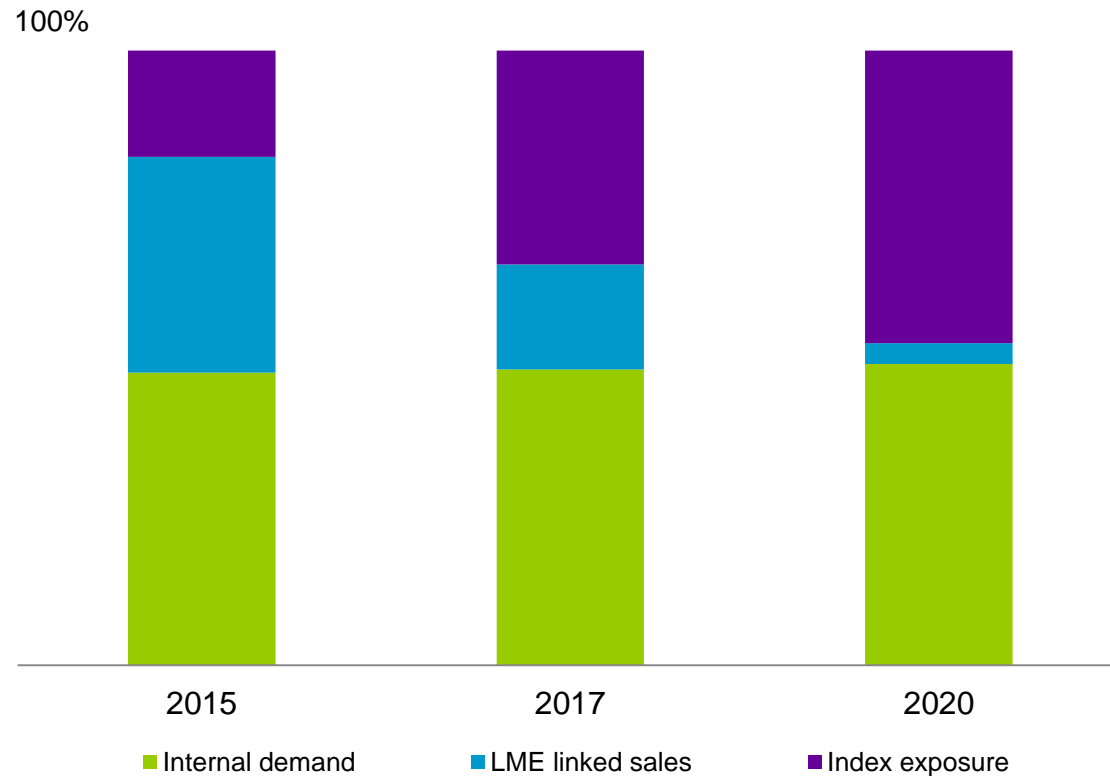
2011\*-2014  
**BNOK 3.7**

2015-2016\*\*  
**BNOK 1.5**

\* USD 300 from 2009  
\*\* Real 2014 terms  
Realized improvement efforts is YTD Q314 annualized.

# Alumina pricing on own fundamentals

## Index spot price exposure



## Alumina price



# Bigger: A solid platform for building an even stronger Hydro



## Bauxite & Alumina

- Move beyond nameplate capacity
- Further improve bauxite positions
- Mature CAP project and Paragominas expansion for when time is right



## Energy

- Mature captive growth opportunities
- Raise income potential from market operations
- Leverage value from Nordic power surplus



## Primary Aluminium

- Enhance position in high-margin segments
- Realize 100,000 tonnes creep in fully-owned smelters
- Extend technology lead with Karmøy pilot plant
- Mature Qatalum 2 and Alouette expansion for when time is right



## Rolled Products

- Expand automotive capacity to 200,000 t/yr by end-2016
- Increase recycling of post-consumed scrap above 250,000 t/year\*
- Build positions and lift margins through technology leadership and innovation

\* Includes recycling ambition in Primary Metal



# The industry's most ambitious climate strategy: Carbon-neutral by 2020

Supported by the three pillars of Hydro's technology strategy



## Energy and primary production

Reduce emissions, increase efficiency



## Aluminium in use

Maximize user-phase benefits



## 'End-of-life'

Increase recycling, back to the loop



# Hydro 2015

## Lifting performance and shareholder value in tight physical markets

- Delivering on improvement programs
- Targeting high-margin markets and maturing growth portfolio, while maintaining tight capital discipline
- Increasing energy-efficiency and lowering climate footprint

*Better Bigger Greener*

