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# Aluminium

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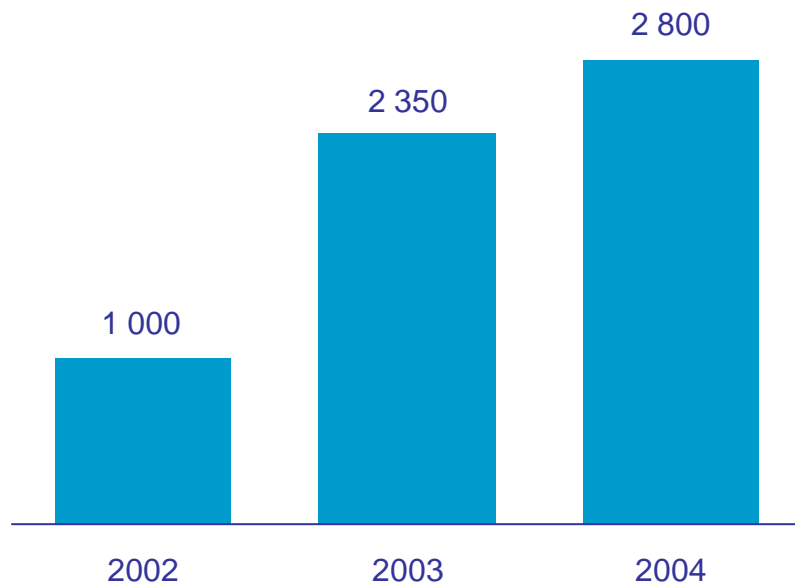
## Agenda

- Significant internal improvements achieved
- Increased costs – an industry challenge
- Repositioning Aluminium – enhanced upstream focus
- Roadmap to return target
  - Strong measures to improve downstream performance

# Continued cost improvement

## Effects of reported cost-reduction programs\*

Annual, NOK million



## Additional improvement efforts

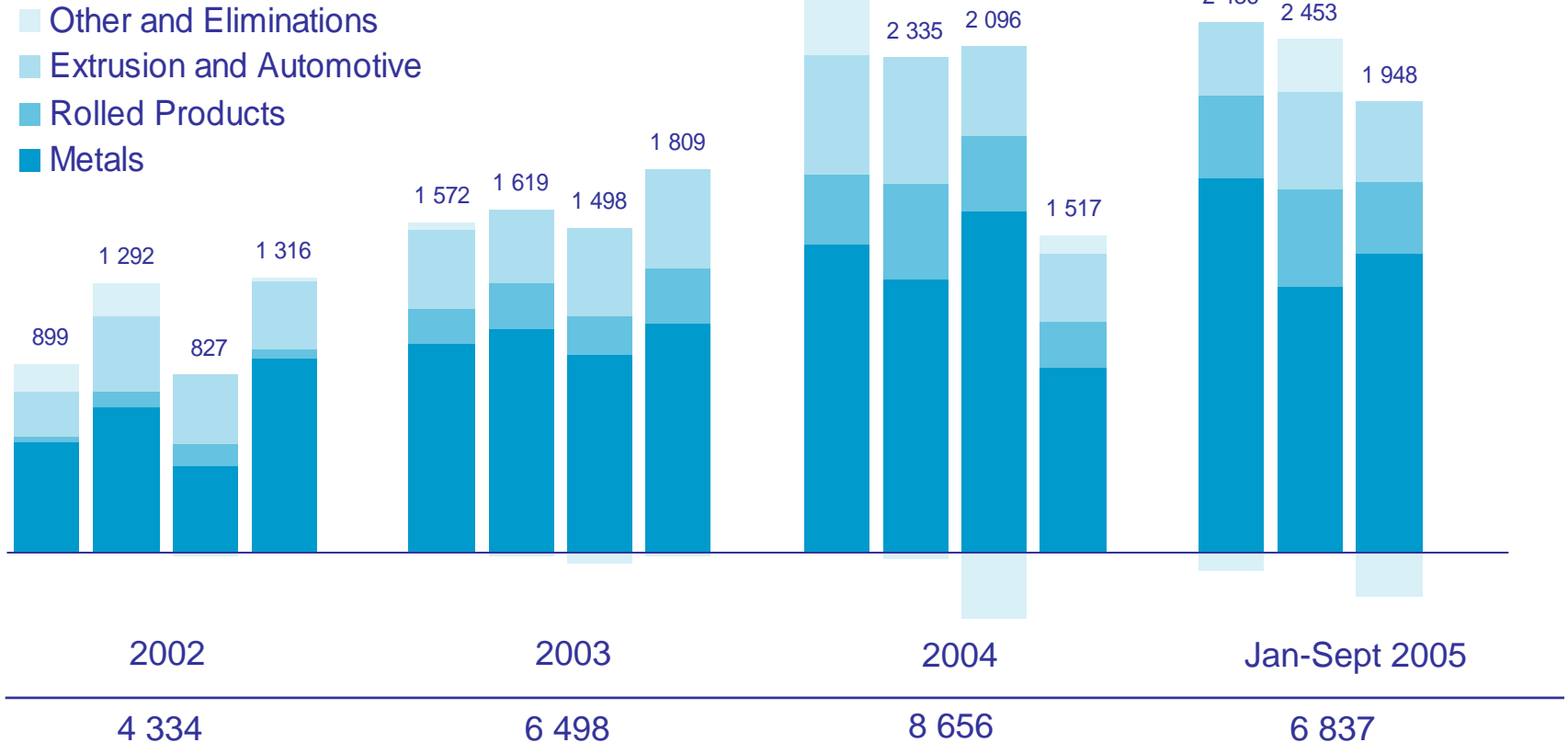
- Metals
  - Aluimprover 2004-2006
  - Neuss 2005-2006
  - Kurri-Kurri operational improvements
- Rolled Products
  - Improvement program 2002-2005
- Extrusion & Automotive
  - Capacity adjustments in Extrusion
  - Rationalization at Toulouse, Raeren, Holland and Adrian
- Closures and divestments
  - Söderberg lines (Norway), Hamburg and Stade
  - Leeds and Sanquhar
  - Puckett, Wuxi and Marine

\* As reported Capital Markets Day 2004

# Improvements in cash from operations

## Adjusted EBITDA\*

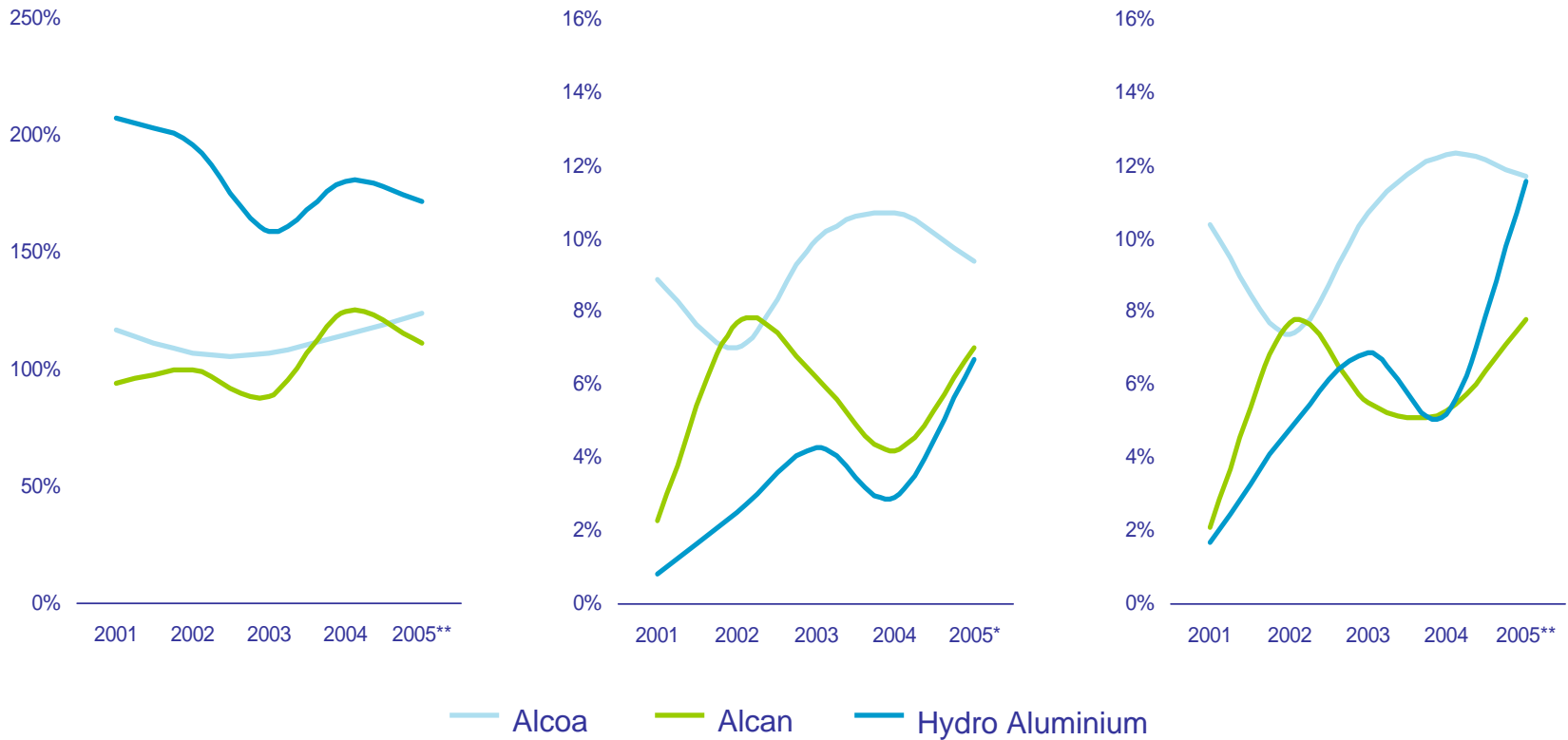
NOK million



\* Income/(loss) before tax, interest expense, depreciation, amortization and write-downs

# Closing performance gap

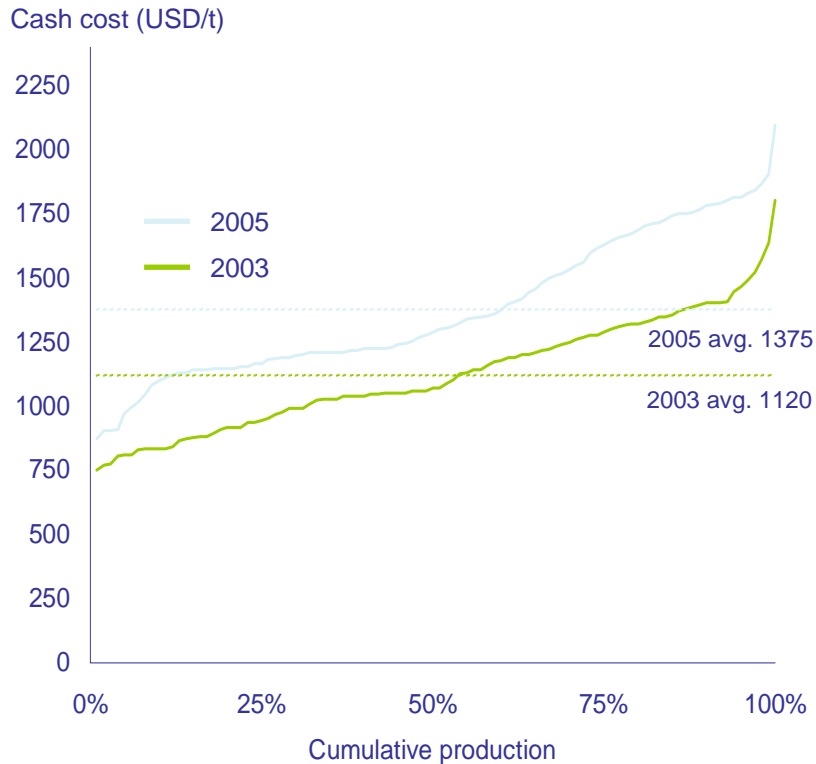
Revenues / capital employed X EBIT / revenues = EBIT / capital employed



Source: Company reports and Hydro estimates. Proxy figures where needed to obtain comparative figures  
 \* YTD Q3. \*\* YTD Q3 annualized

# Increased costs – an industry challenge

Significant shift in industry cost curve\*



- Energy
  - Oil and gas prices
  - Coal prices
  - CO<sub>2</sub> emission trading
  - Supply/demand for electricity
- Alumina
- Other raw materials
- Freight

\* Source: CRU (Corporate Operating Cost definition)



## Aluminium power supply

- 2006 primary smelter power requirement 27 TWh
  - Long-term contracts: 23 TWh
  - Short-term supply: 4 TWh
- 2006 estimated power cost increase of NOK 1.4 billion\*
  - 2007-2010: only limited price changes expected on long-term contracts
- Price level on long-term contracts in line with global industry average

\* Including upstream and downstream

# Aluminium prices at higher levels

## 5-year forward prices, LME

USD/tonne



- Attractive supply/demand outlook
- Increased cost supports higher price
- 5-year price from 1 400 to 1 850 USD/t

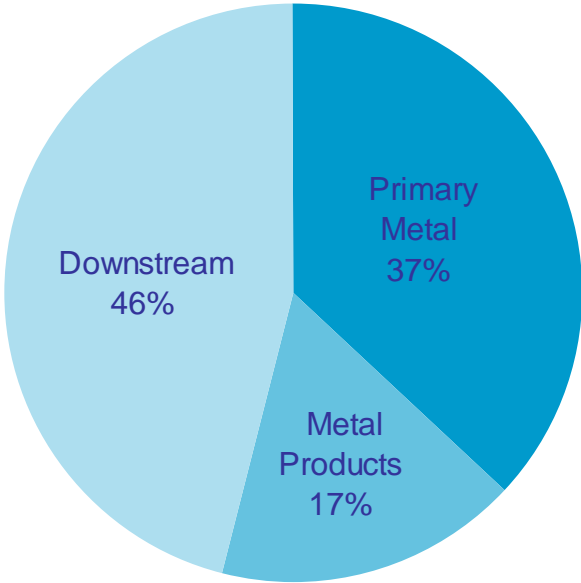


## Strategic shift in Aluminium

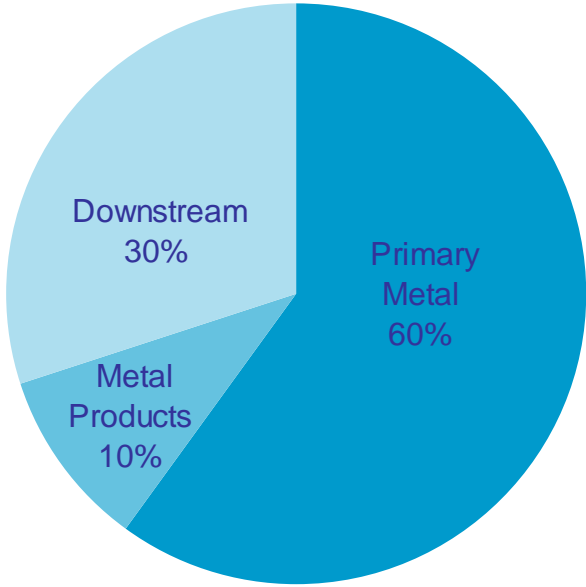
- Priority to upstream investments for repositioning and growth
- Improve profitability and cash generation downstream
- Enhance value through metal products positions

# Capital allocation toward upstream

Capital employed  
2004

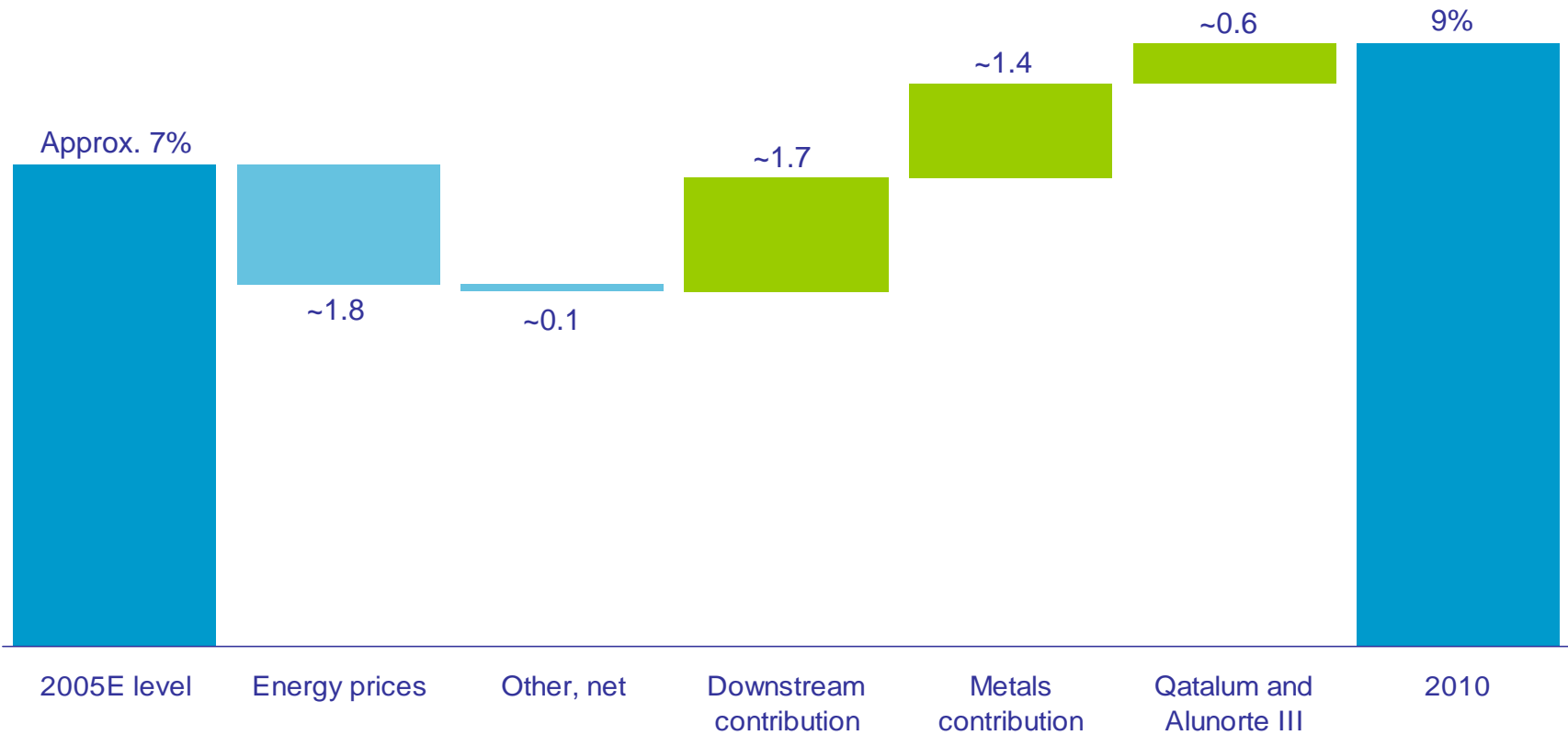


Capital expenditure  
2006-2010E



# Roadmap to return target

## Return on average capital employed - RoaCE



Roadmap excludes price, market and one-time effects. Aluminium price and currencies at 2005 levels (1 850 USD/t and 6.50 NOK/USD)



## Urgent measures downstream

- Reduce investments
- Cash contribution NOK 6-7 billion 2006-2010E
- Turn around, close or sell underperforming units



## Leverage metal products positions

- Further develop performance in Europe
- Improve operations in North America and develop stronger presence in Asia
- Capitalize on Qatalum – new pillar in global marketing system
- Increase use of scrap in remelters

# New projects strengthen primary production

## Smelter project in Qatar

- Hydro to market all metal - 570 000 tonnes per year
- Attractive profitability
- Expected start-up Q4 2009



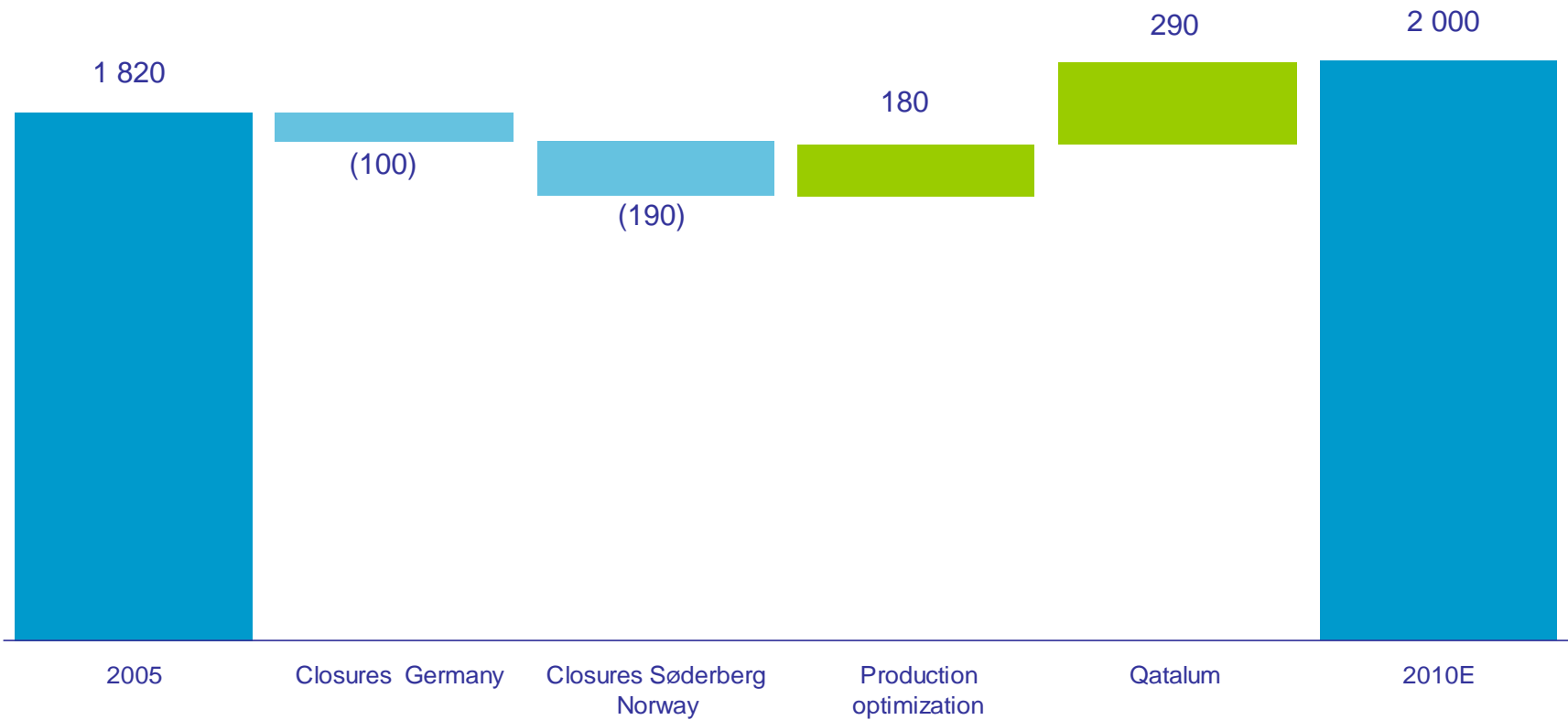
## Expansion 3 of Alunorte alumina refinery

- Expansion of 1.9 million tonnes to 6.5 million tonnes
- Among the most competitive conversion costs in the industry
- Expected project completion Q4 2008

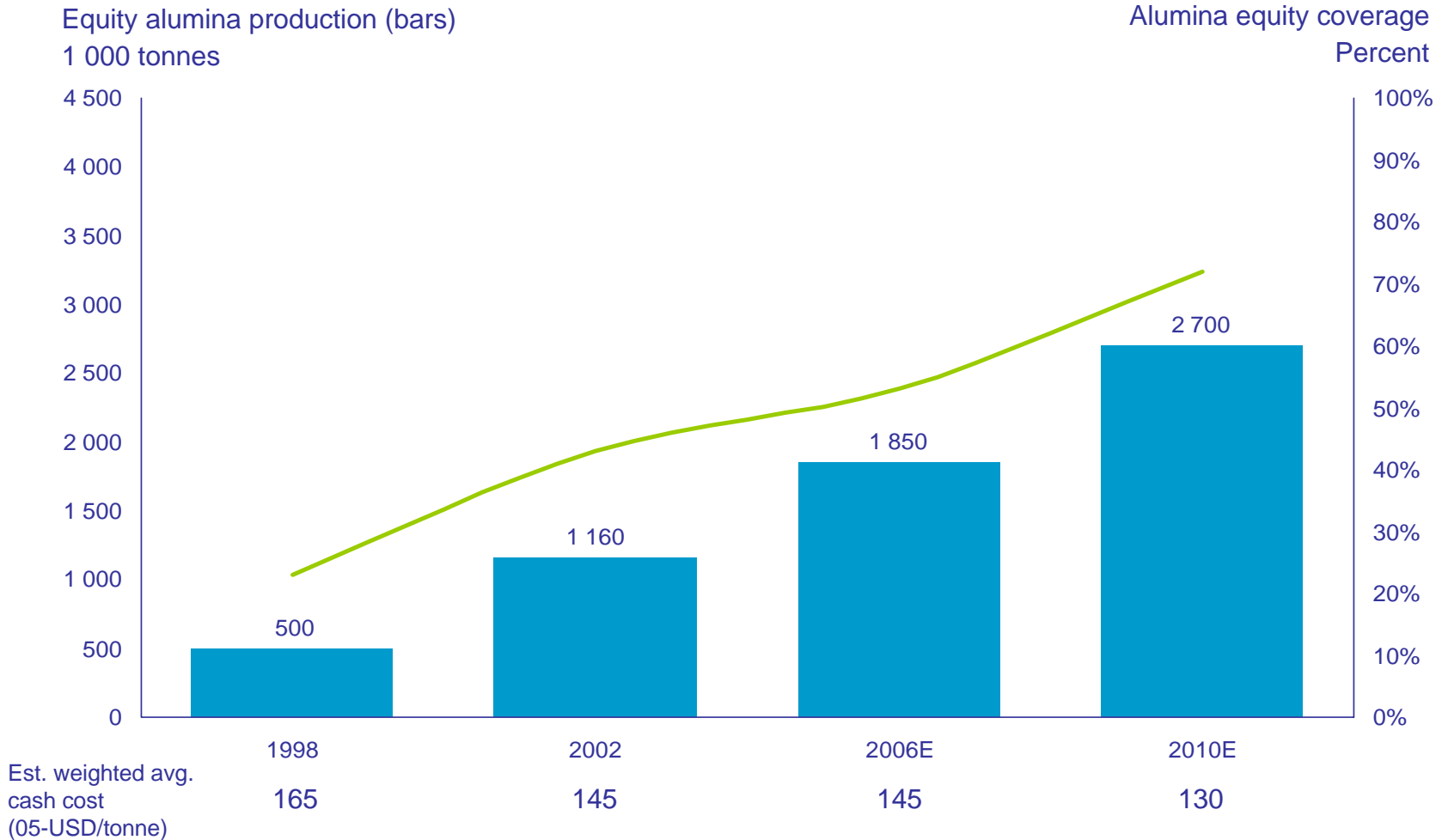


# More competitive smelter portfolio

Primary production, 1 000 tonnes



# Increased alumina equity coverage at lower cost





## Priorities

- Execute in line with roadmap
- Implement urgent measures downstream
- Reposition and grow upstream
- Enhance value through metal products positions

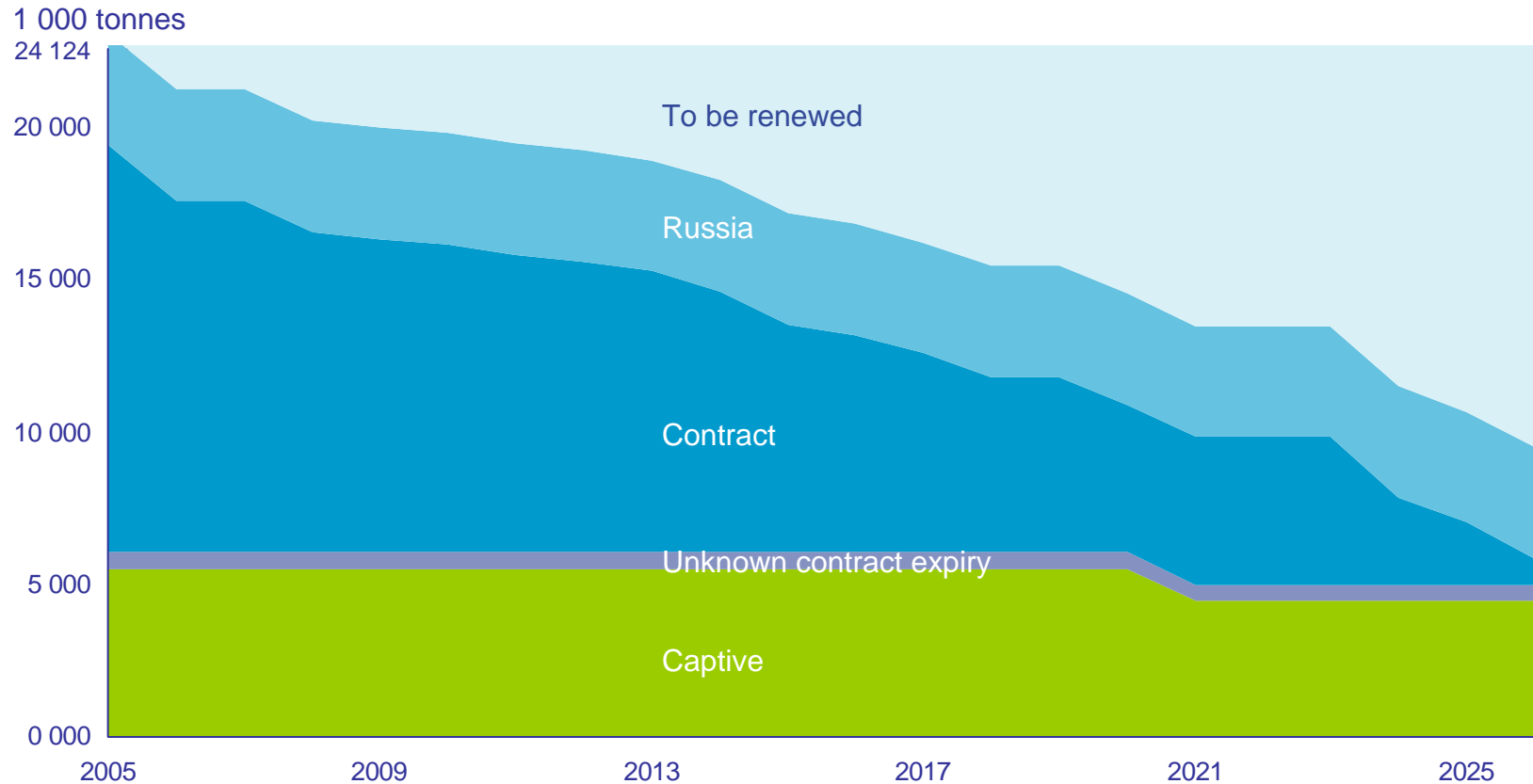


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Additional information

# Industry increasingly exposed to market power prices

## Aluminium production\* – power sourcing

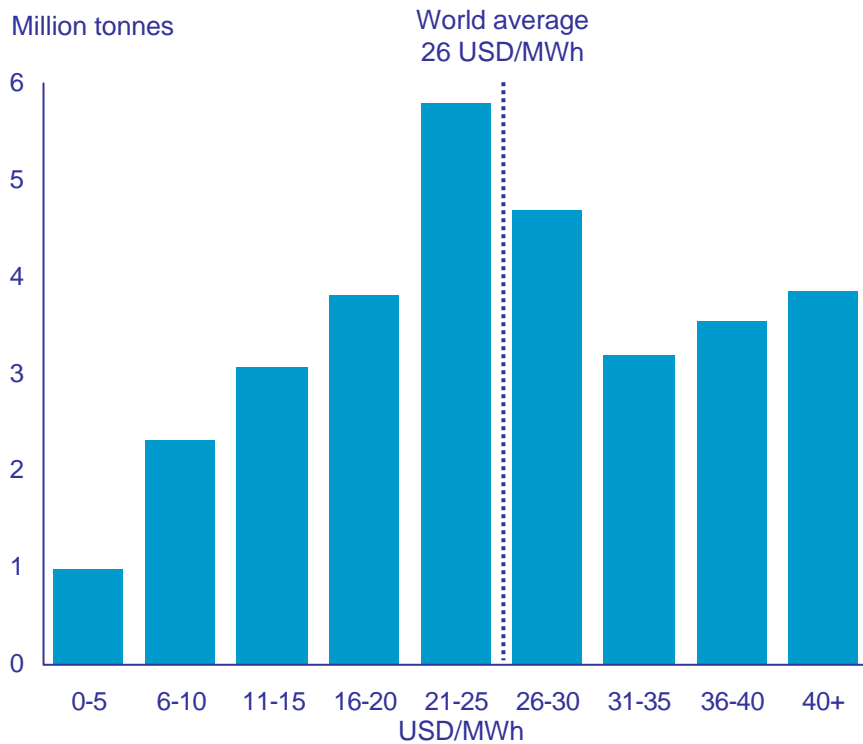


\* Excluding China  
Source: CRU / Hydro

# Hydro power costs on world average

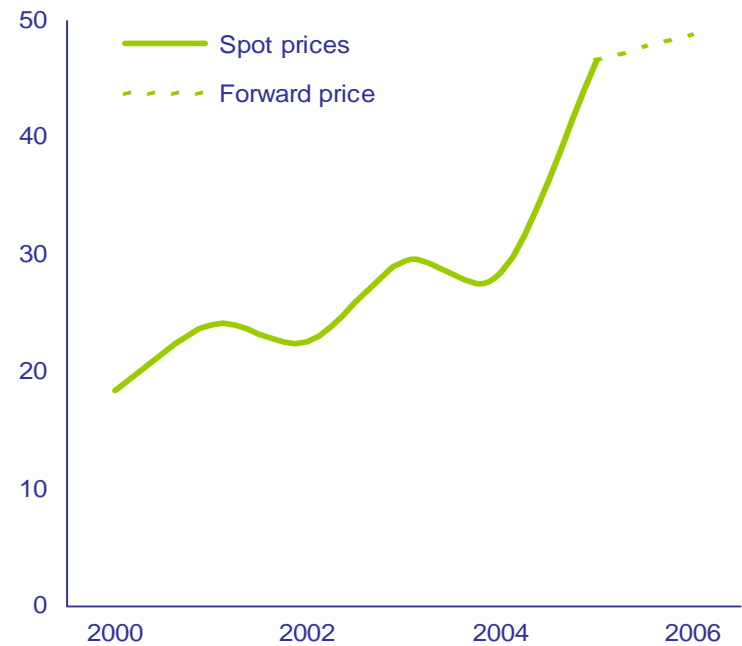
## German prices not competitive

Power prices  
World smelter production 2005



Source: CRU 2005

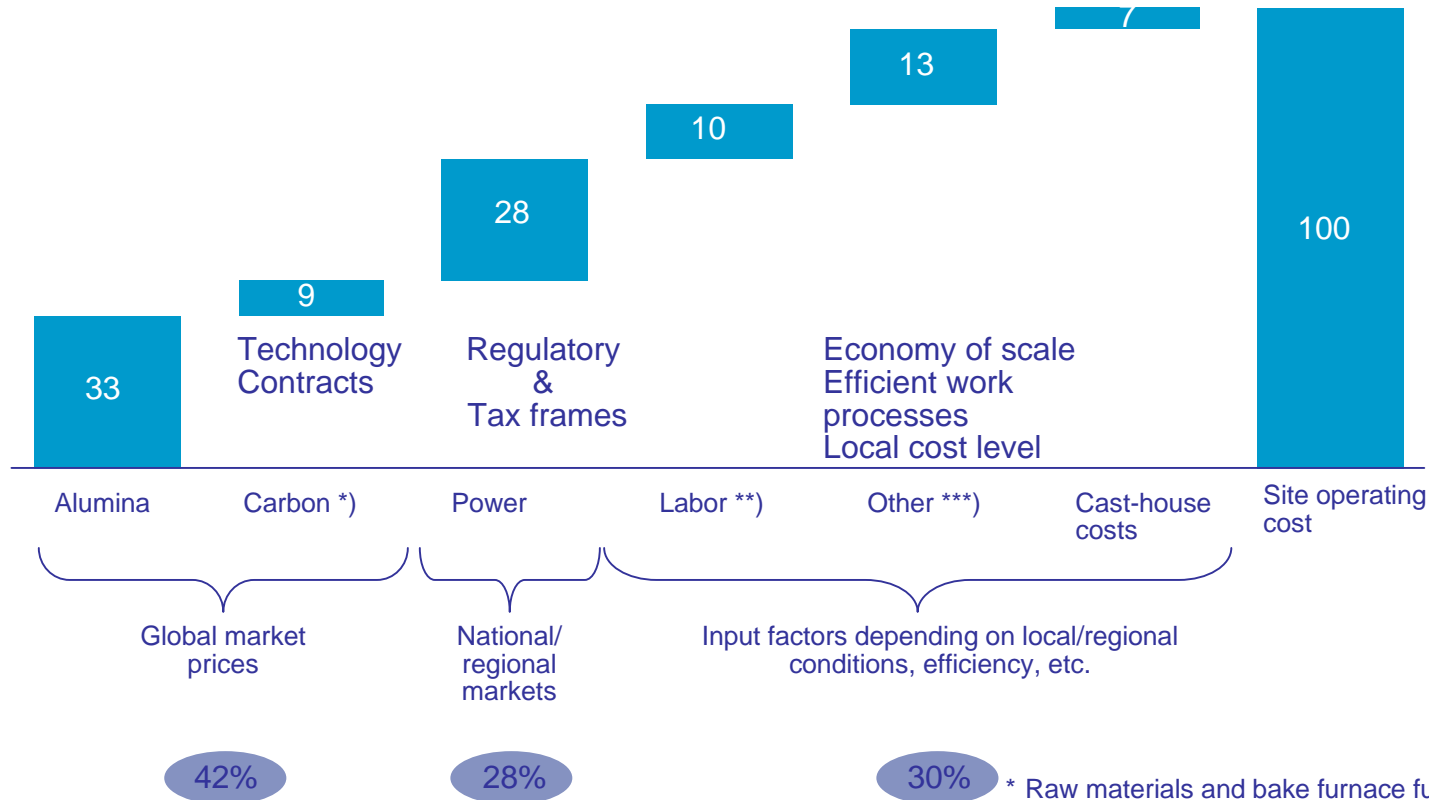
German electricity prices  
€/MWh



Source: EEX. Price delivered site approx.  
5-6 €/MWh higher (grid tariff & tax)

# Smelter site operating cost position

Weighted average, percent

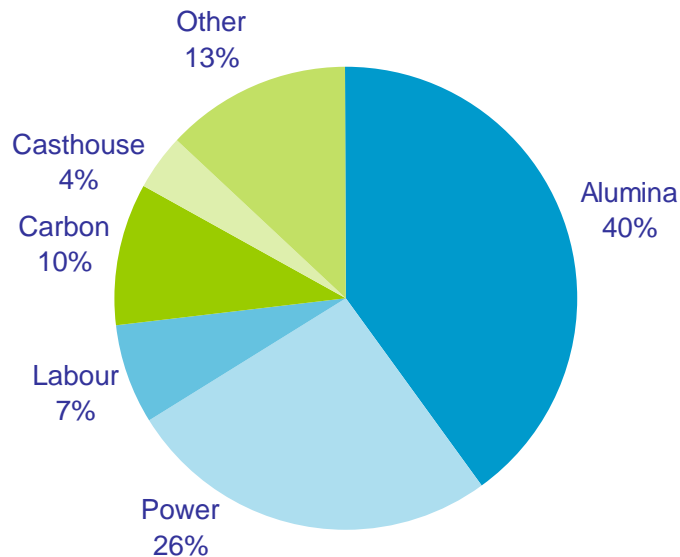


Source: 2005 CRU industry cost model's figures for Hydro

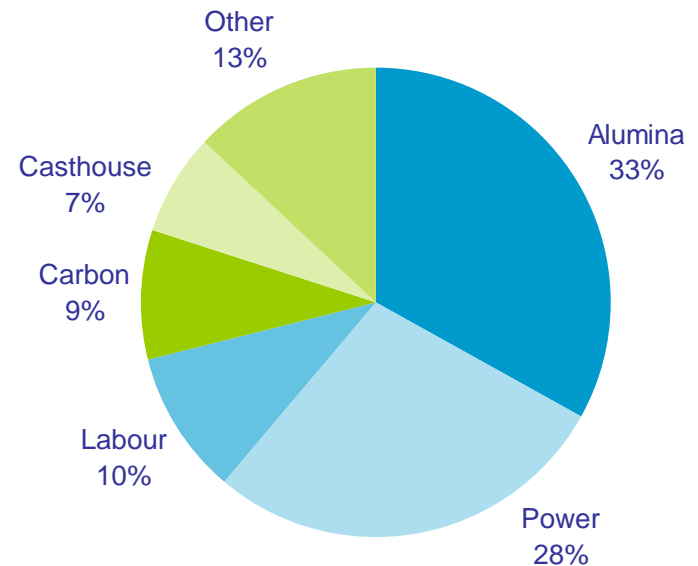
\* Raw materials and bake furnace fuel costs  
 \*\* Includes carbon plant, potroom and maintenance labor costs  
 \*\*\* Relining cost, capital replacement cost and administrative cost

# Alumina and power main smelter cost elements

World average cost structure\*



Hydro average cost structure\*



\* CRU 2005, Site Operating Cost definition