

# Decarbonization of Industry: Mapping Progress on the Lux Carbon Canvas



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**Decarbonization is becoming an increasingly important priority for government and industry**

NEWS COMMENTARY

**European Commission unveils the Green Deal Industrial Plan**

NEWS COMMENTARY

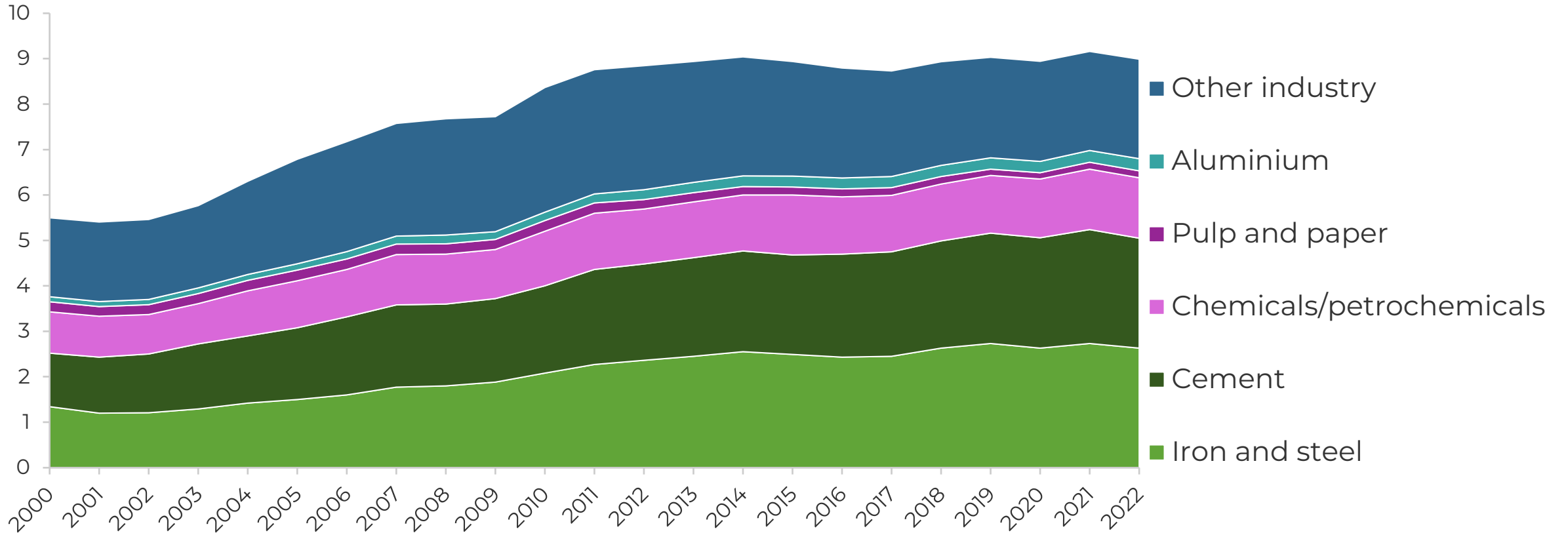
**H2 Green Steel to build 700-MW integrated green steel plant**

NEWS COMMENTARY

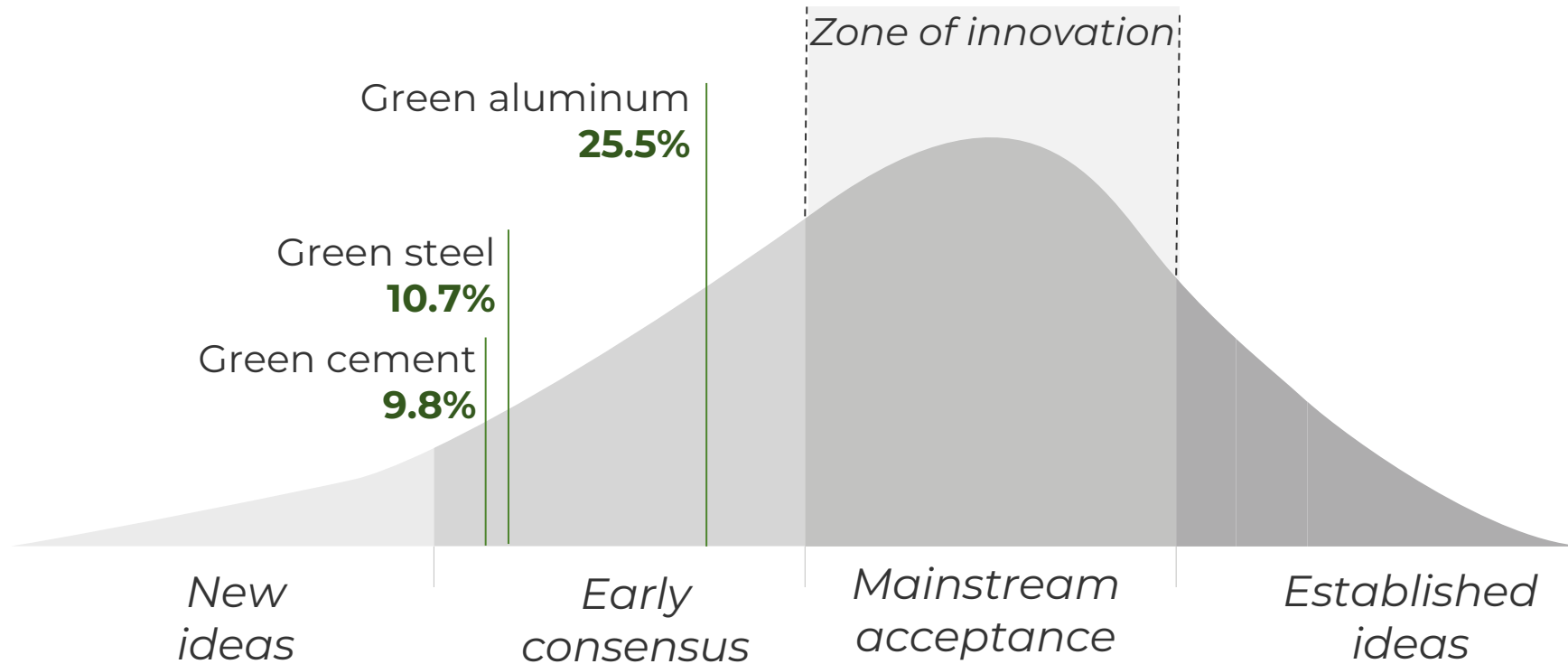
**Sublime Systems raises USD 40 million to decarbonize cement manufacturing, partners with SCG**

# Why steel, aluminum, and cement?

**Industry direct CO<sub>2</sub> emissions**  
Gtonne CO<sub>2</sub>e



# Consumers are beginning to develop an awareness of decarbonized materials

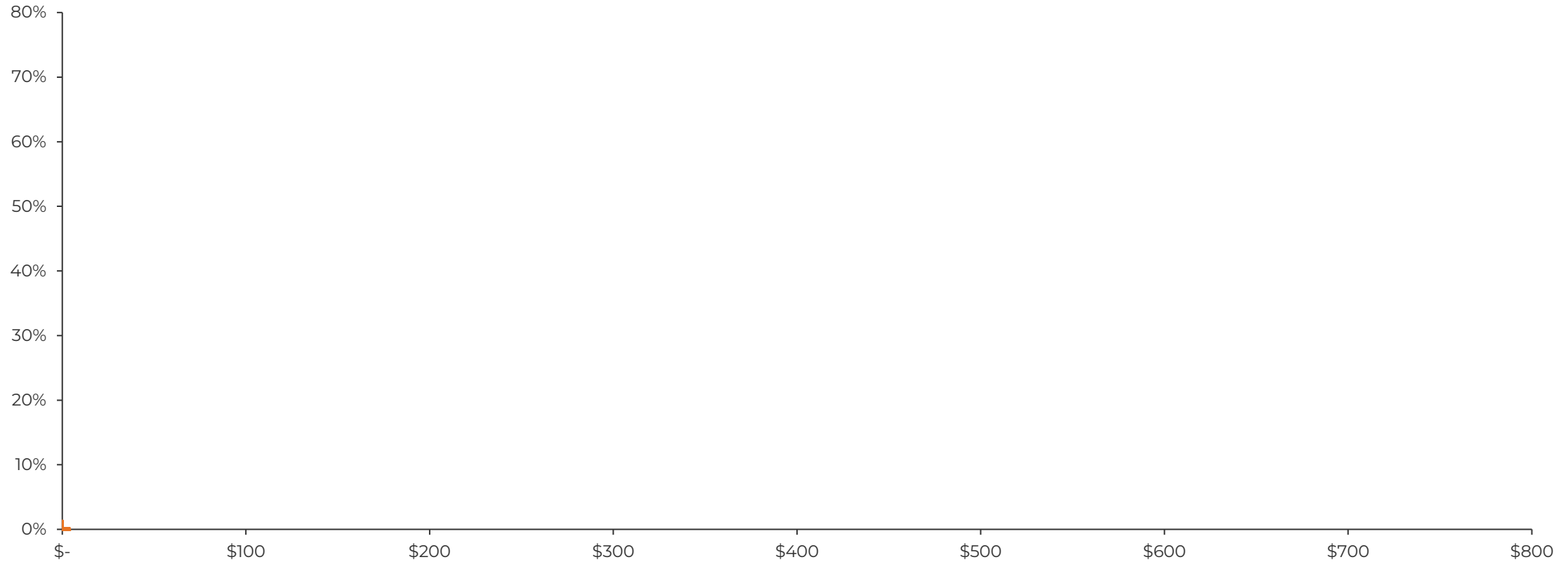


*The maturity curve tells us how much agreement or consensus there is among a population about the meanings behind a topic or trend under examination.*

# The Lux Carbon Canvas measures resilience to carbon pricing and ability to decarbonize

## Lux Carbon Canvas: Framework to Evaluate Levels of Resilience to Carbon Pricing

Available capital from sales (y-axis); critical carbon price USD per Mtonne CO<sub>2</sub>e (x-axis)



## Critical carbon price

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Measures a company's  
resilience to carbon pricing

**Critical  
Carbon  
Price**

=

**Gross profit** **-** **10% margin  
on sales**

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**Scope 1 carbon  
emissions**

## Available capital from sales

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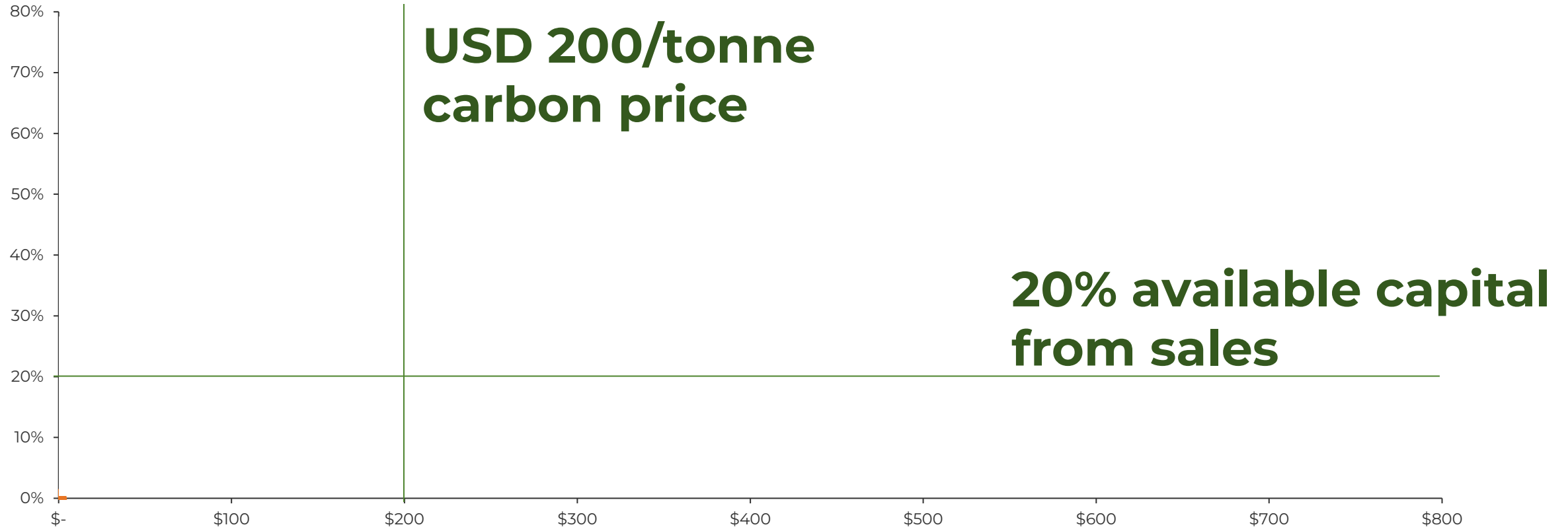
Measures a company's capability to invest in decarbonization

$$\text{Available capital} = \frac{\text{Gross profit} - \text{10\% margin on sales}}{\text{Total Revenue}}$$

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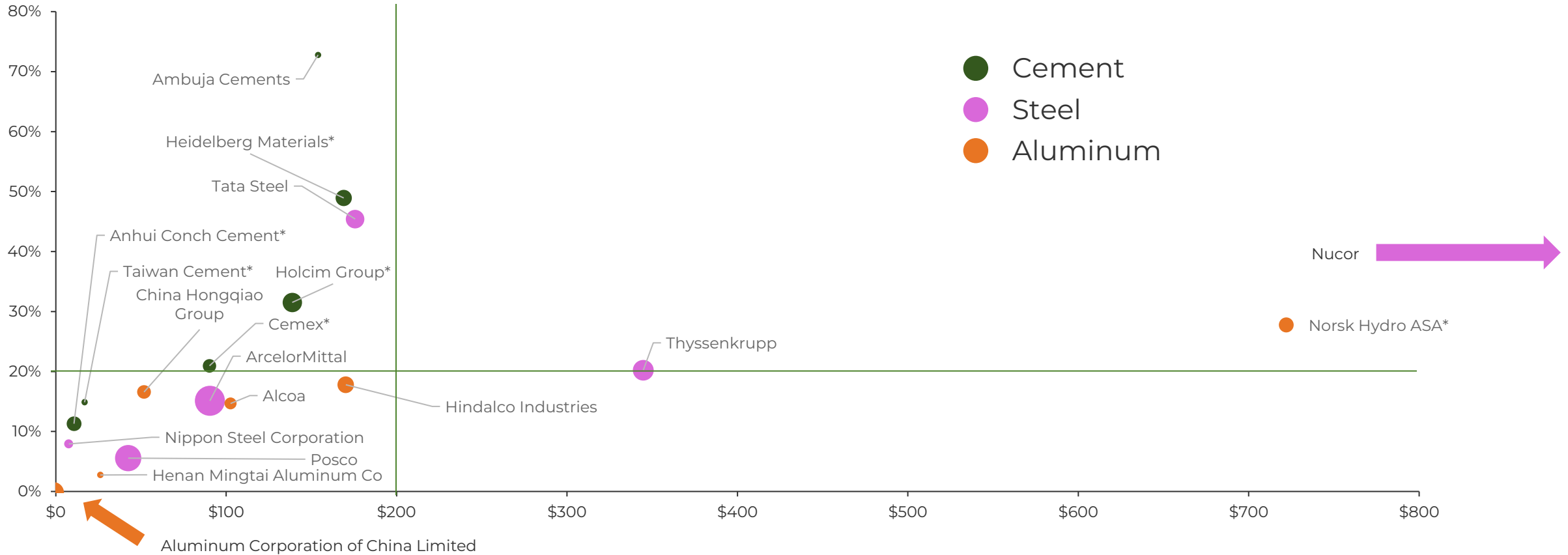




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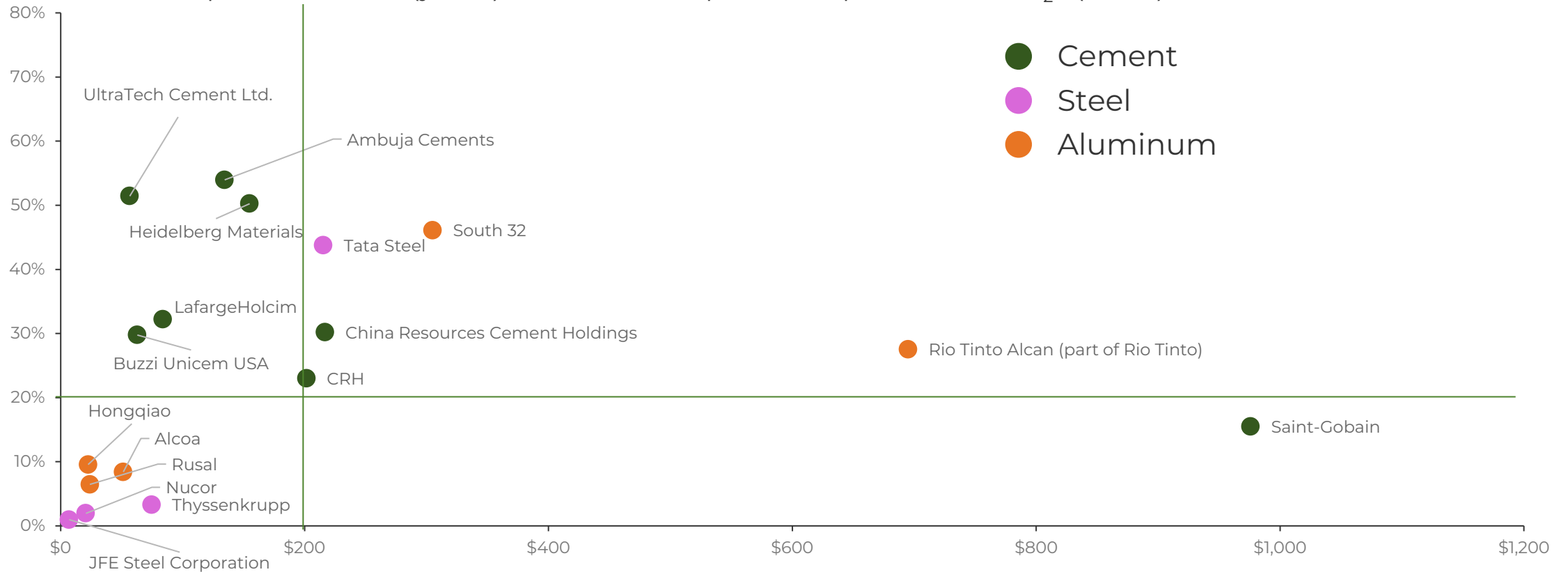
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# The 2019 data show that companies have less financial firepower but haven't made much progress on decarbonization

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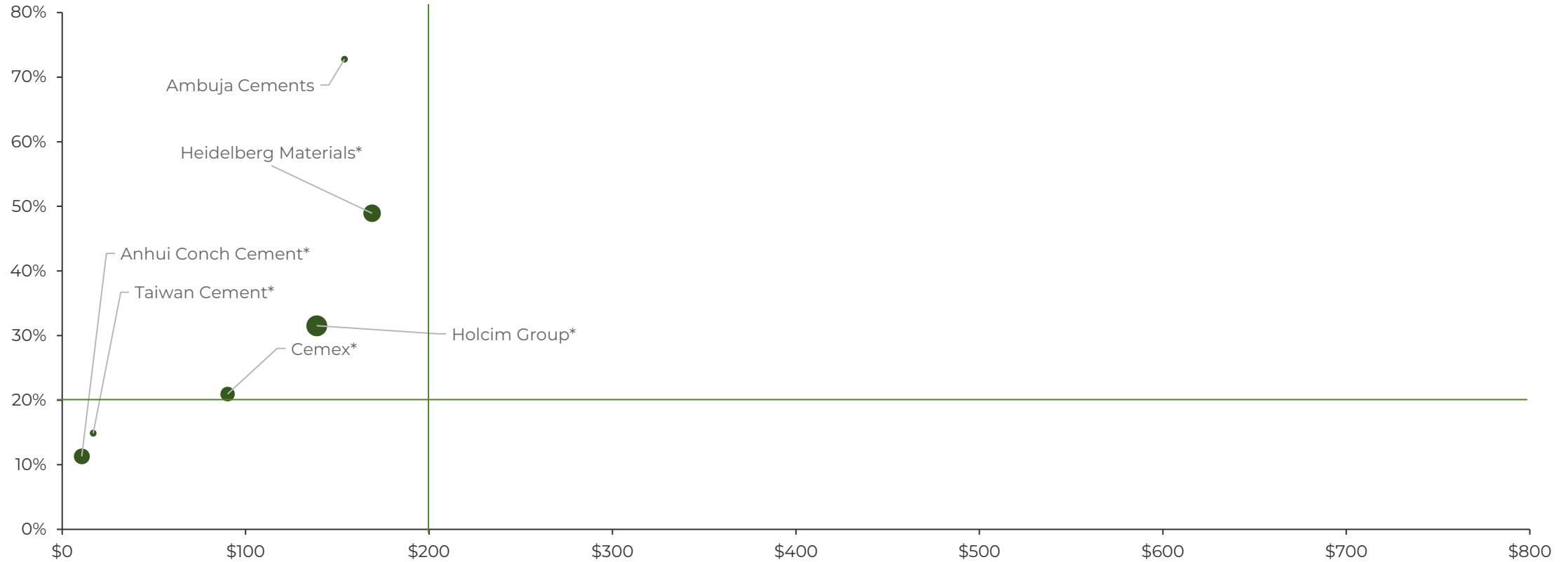
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# Cement companies are in a much more challenging financial position as decarbonization efforts pick up

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Available capital from sales (y-axis); critical carbon price USD per Mtonne CO<sub>2</sub>e (x-axis)



**Heidelberg Materials** has the money to pursue CCUS, with more than 8 Mtonne of capacity planned.



While Heidelberg is investing in other technologies, CCUS represent a single point of failure as a decarbonization approach.



# Aluminum companies have more straightforward paths to decarbonize but are still in a very risky position

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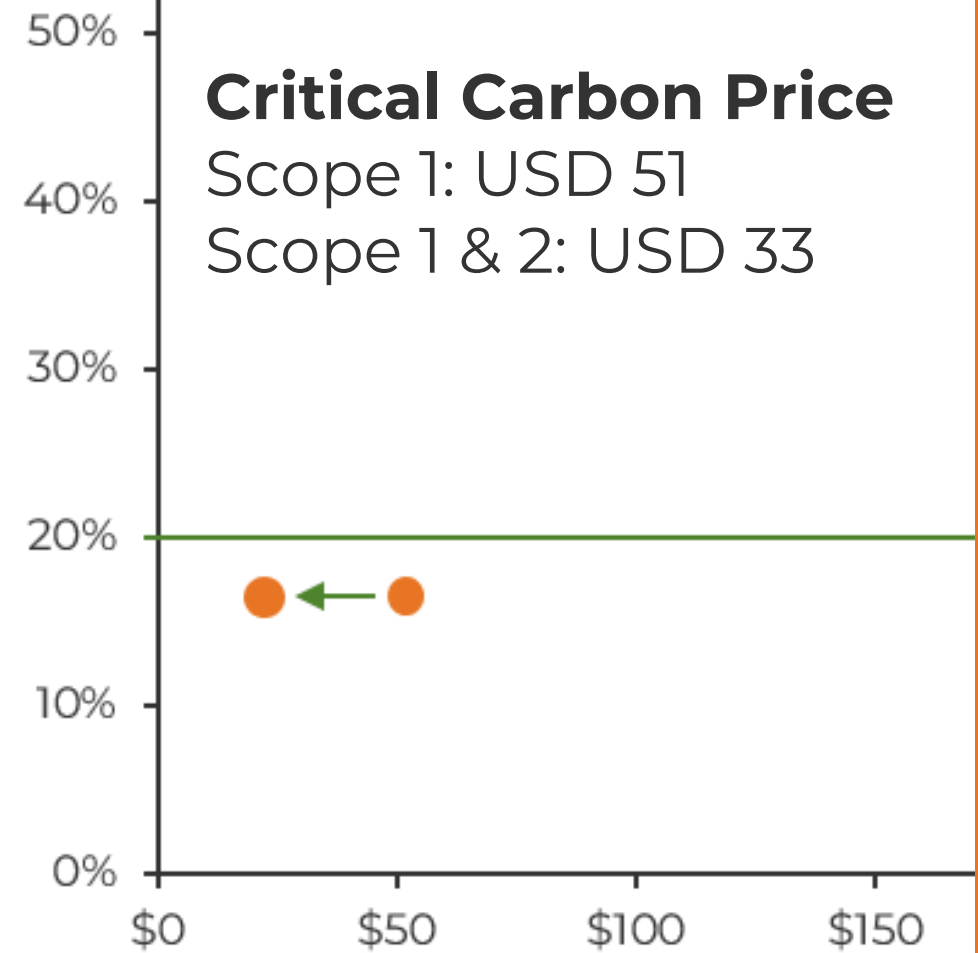
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**Hongqiao** faces a double challenge with Scope 1 and 2 emissions.



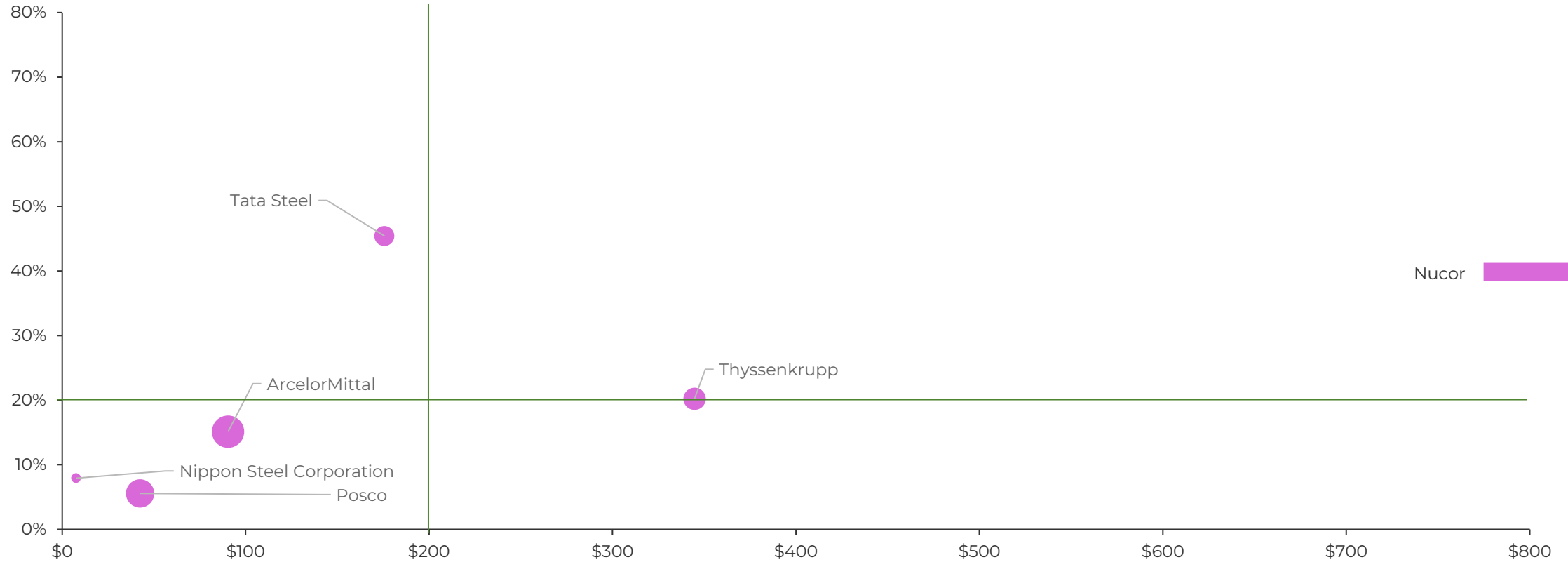
As a primarily domestic producer of aluminum, it's going to take regulation from the Chinese government to meaningfully curb emissions.



# Steel companies can seek to boost recycling in the near term but will have to find ways to invest in the long term

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Available capital from sales (y-axis); critical carbon price USD per Mtonne CO<sub>2</sub>e (x-axis)



**Nucor** has almost no risk from emissions pricing due to its recycling-centric business.



Everyone can't be a recycler: With global steel recycling rates at 60%, there's limited headroom for further decarbonization through circularity.

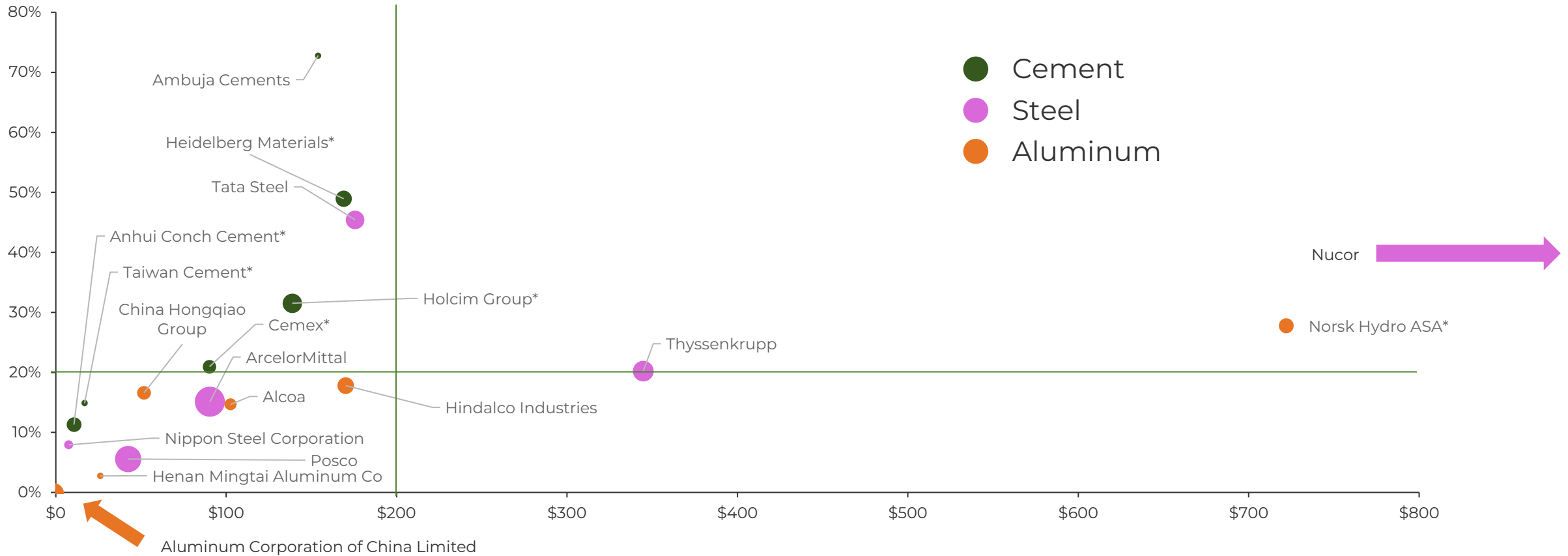




# The industrial sector has a pivotal few years ahead of it

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# Key Takeaways

**1** Industrials haven't made much progress on decarbonization since 2020

**2** Companies will have to scramble to cut emissions quickly and cost effectively amid rising taxes and pressure

**3** There are a lot of risks — geopolitical, energy, and inflation — that could derail these efforts

# Thank you

A link of the webinar recording will be emailed within 24–48 hours.

## UPCOMING WEBINARS

AUGUST 15

[Evaluating Technologies for CO<sub>2</sub> Removal and Building a Robust Carbon Offset Strategy](#)

AUGUST 22

[Building a Net-Zero Oil and Gas Company](#)

SEPTEMBER 7

[Can Japan Deliver on Sustainability?](#)



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