



# CRU Silicon Market Forum 2022

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# Elkem at a glance

## SILICONES



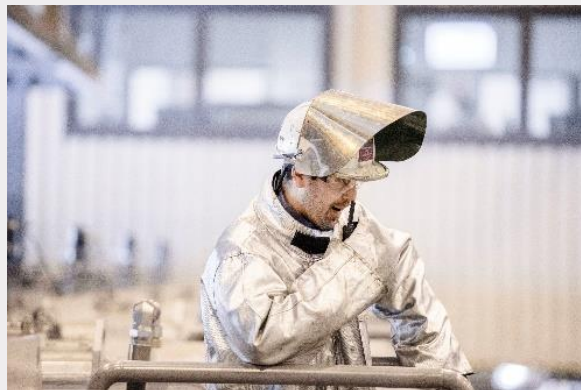
- Producer of silicones with two upstream sites (France and China)

## SILICON PRODUCTS



- Global producer of silicon, ferrosilicon, foundry alloys and microsilica

## CARBON SOLUTIONS



- Leading producer of electrode paste and other carbon products

## GREEN VENTURES



- Battery Materials (Vianode)
- BioCarbon

Global team of 7,000 people

NOK 33,7 billion in revenues in 2021

Listed at Oslo Stock Exchange

We are Elkem

Advanced material solutions shaping a better and more sustainable future

5-10%  
Yearly revenue growth target

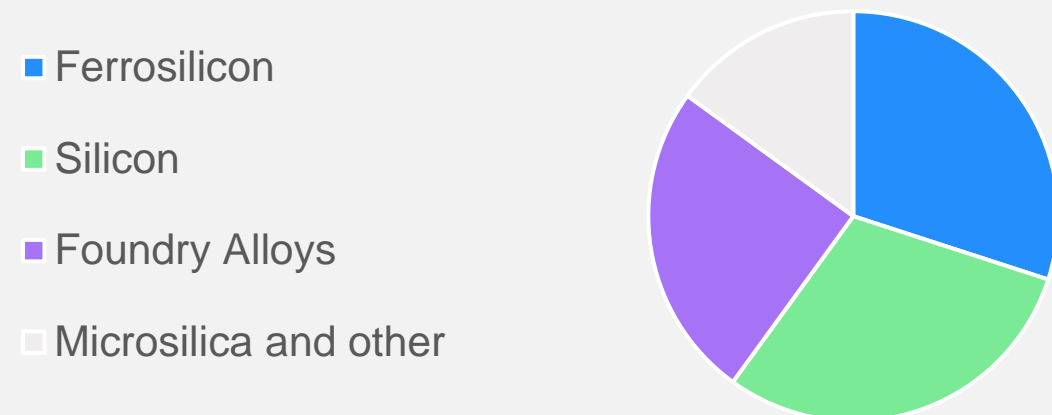
Net 0  
CO2 emissions by 2050



# Elkem Silicon Products: Global leader in silicon based materials and solutions

- Producer of silicon, ferrosilicon, foundry alloys and microsilica
- Strong positions based on scale, operational excellence, global footprint and sustainable hydro power
- Robust market positions based on high degree of customized products, deep application knowledge and close customer relationships
- Employees: >1900
- Revenues 2021: 14,8 NOK billion

Sales 2021



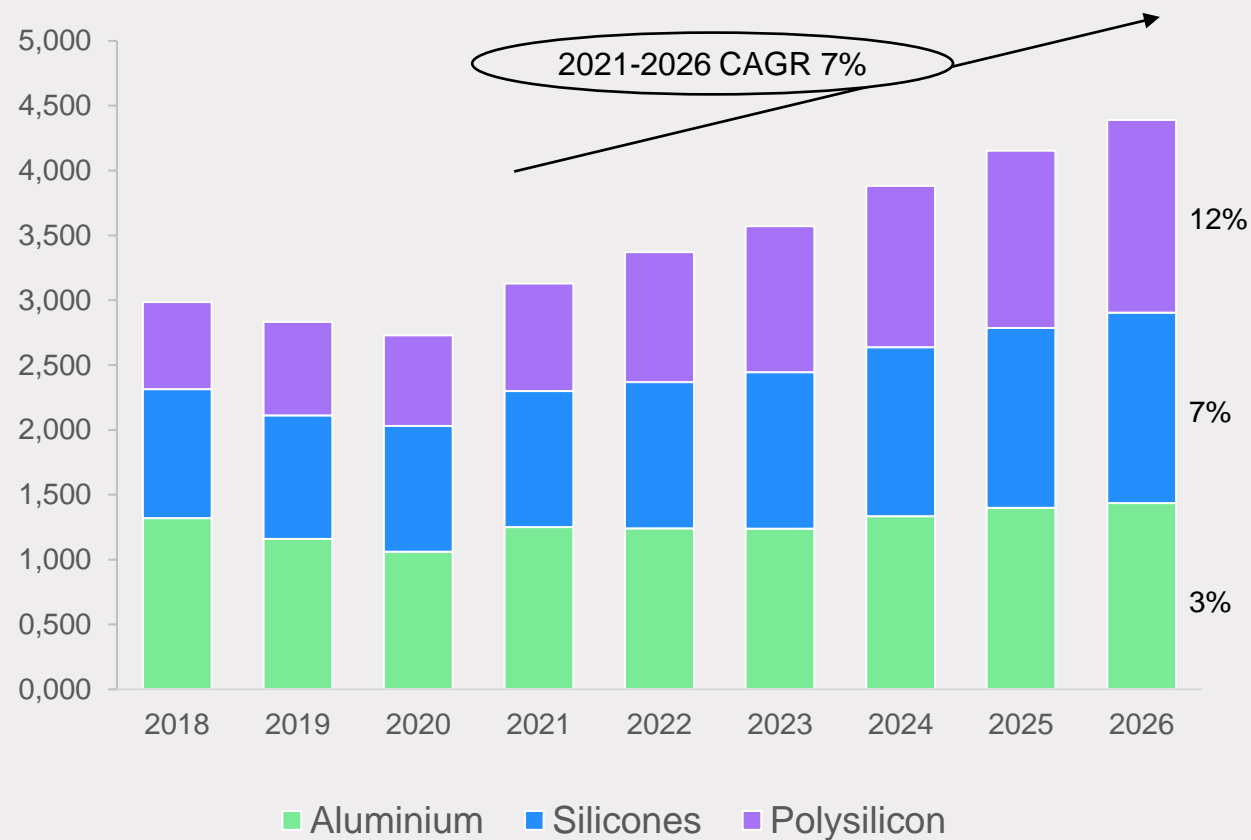
## Main production plants

Norway	Salten, Thamshavn, Rana, Bremanger, Bjølvfossen
Iceland	Grundartangi
Canada	Chicoutimi
Paraguay	Limpio
China	Shizuishan
India	Nagpur



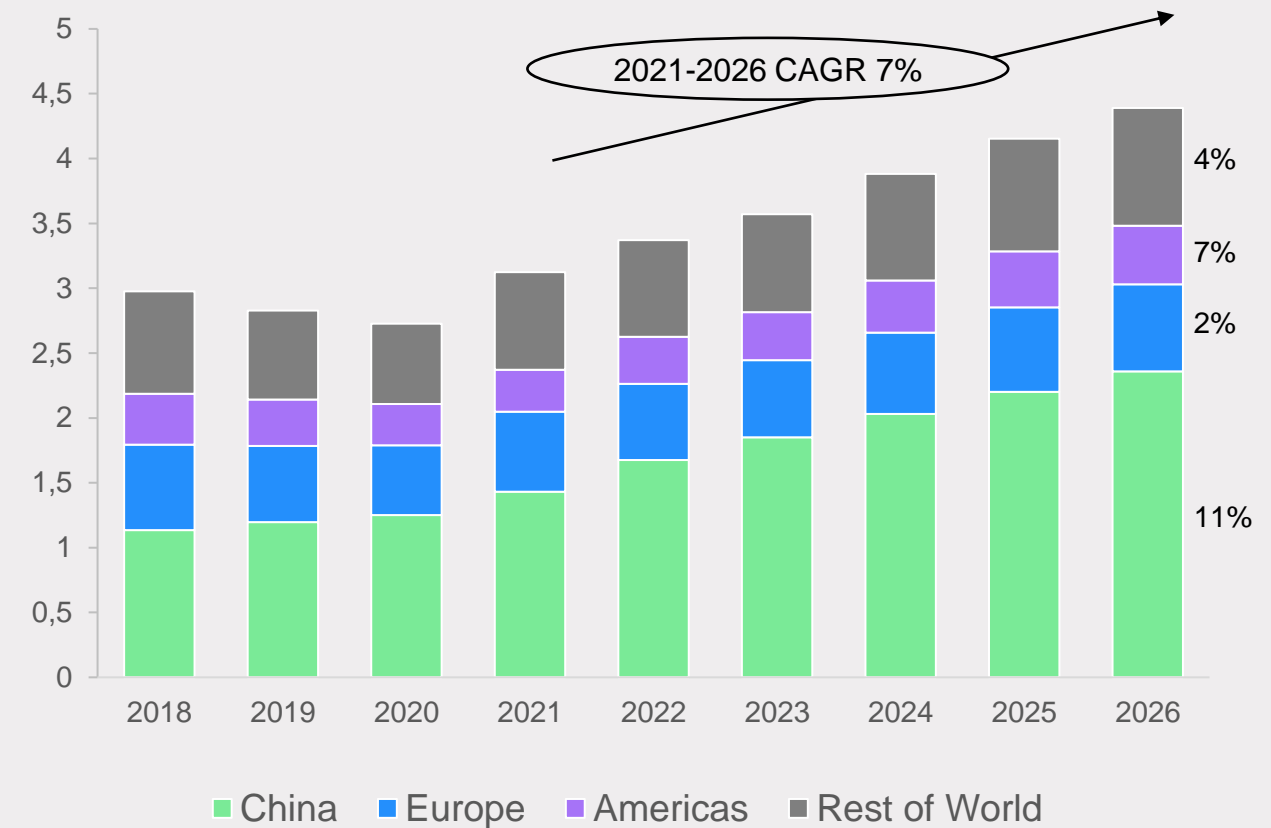
# Strong growth in silicon driven by silicones and polysilicon, especially in China

Silicon per end-use (million tons)



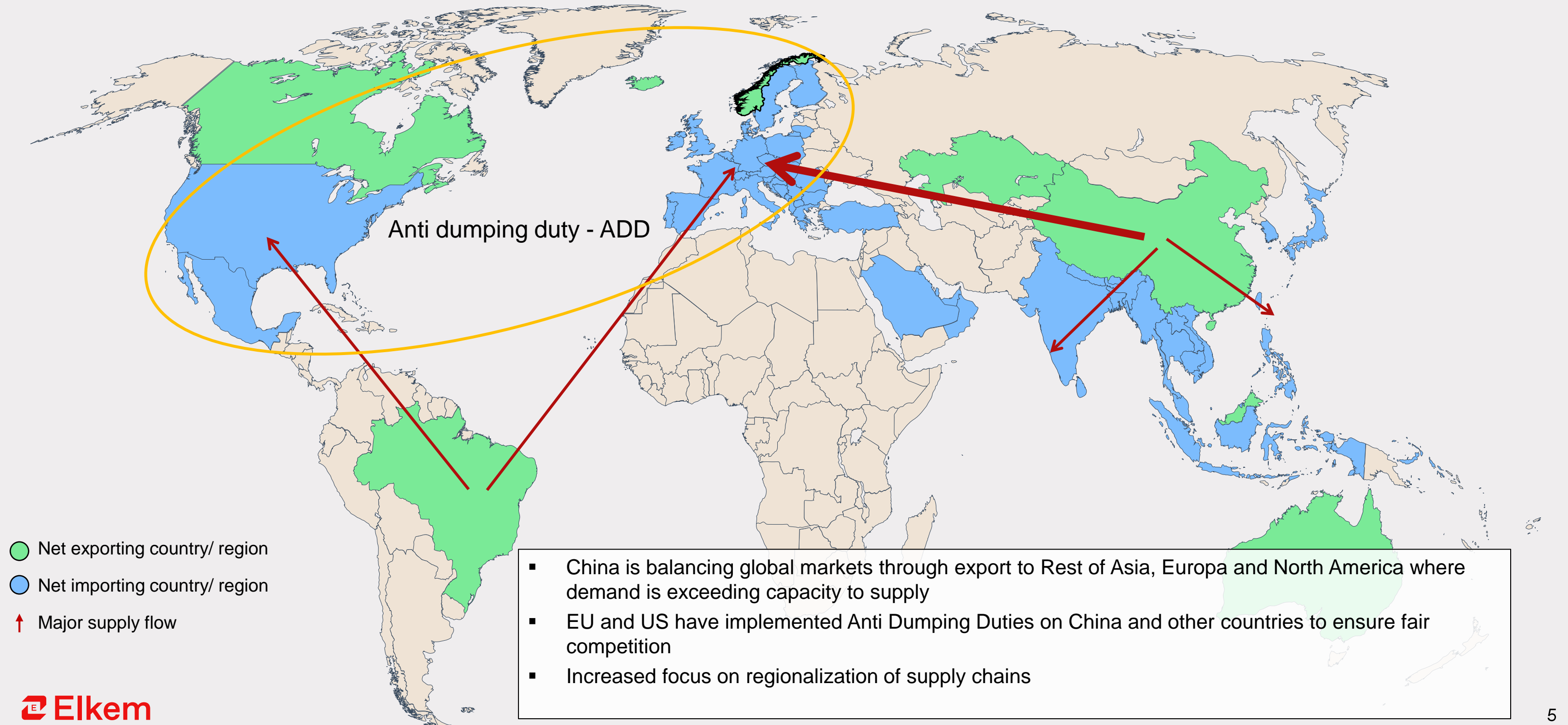
- Strong growth driven by silicones and solar
- Stable demand from aluminium
- Significant potential from batteries

Silicon per region (million tons)



- Strong growth in China driven by large expansions in silicones and solar capacity

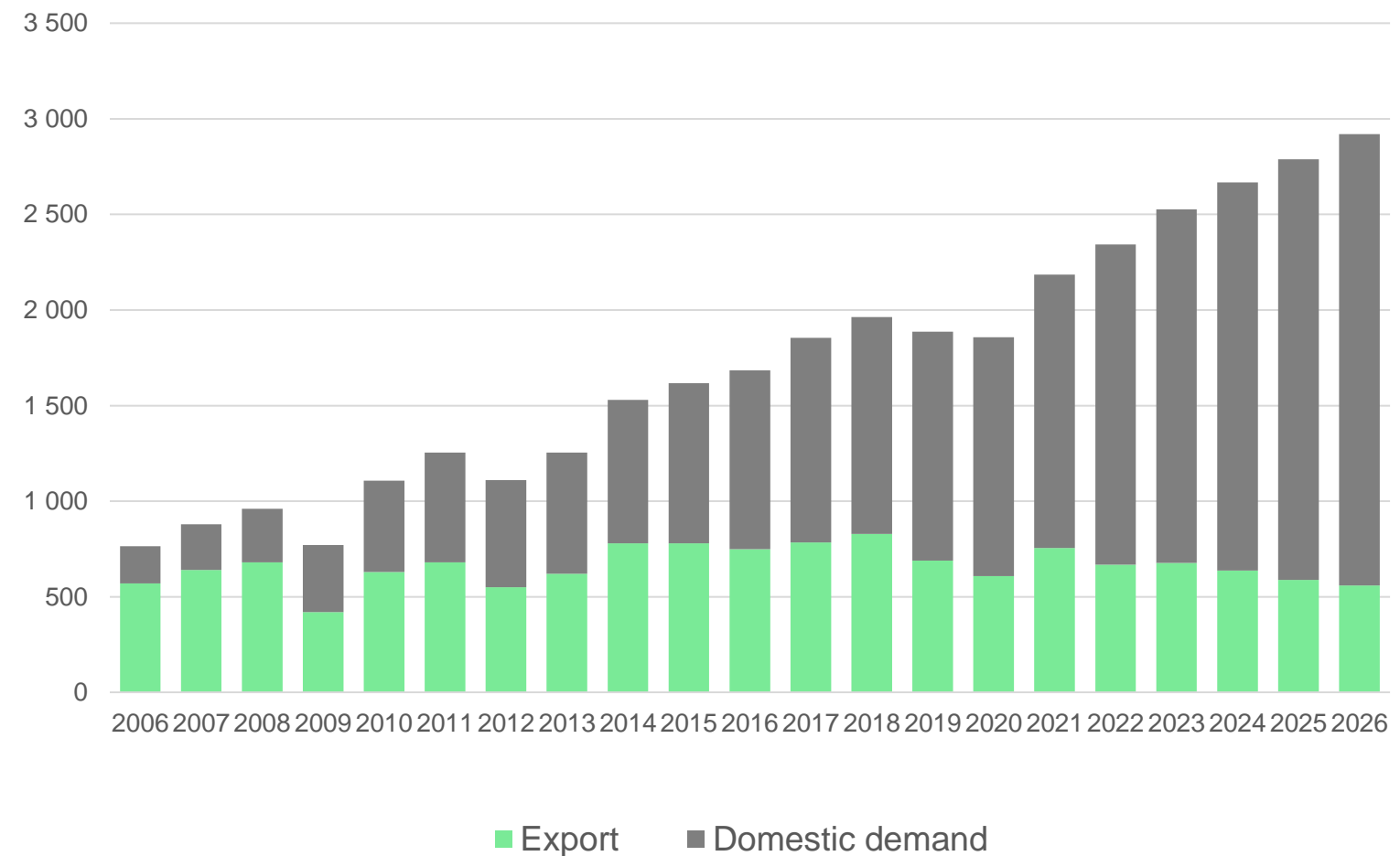
# Supply dynamics – China balancing global markets



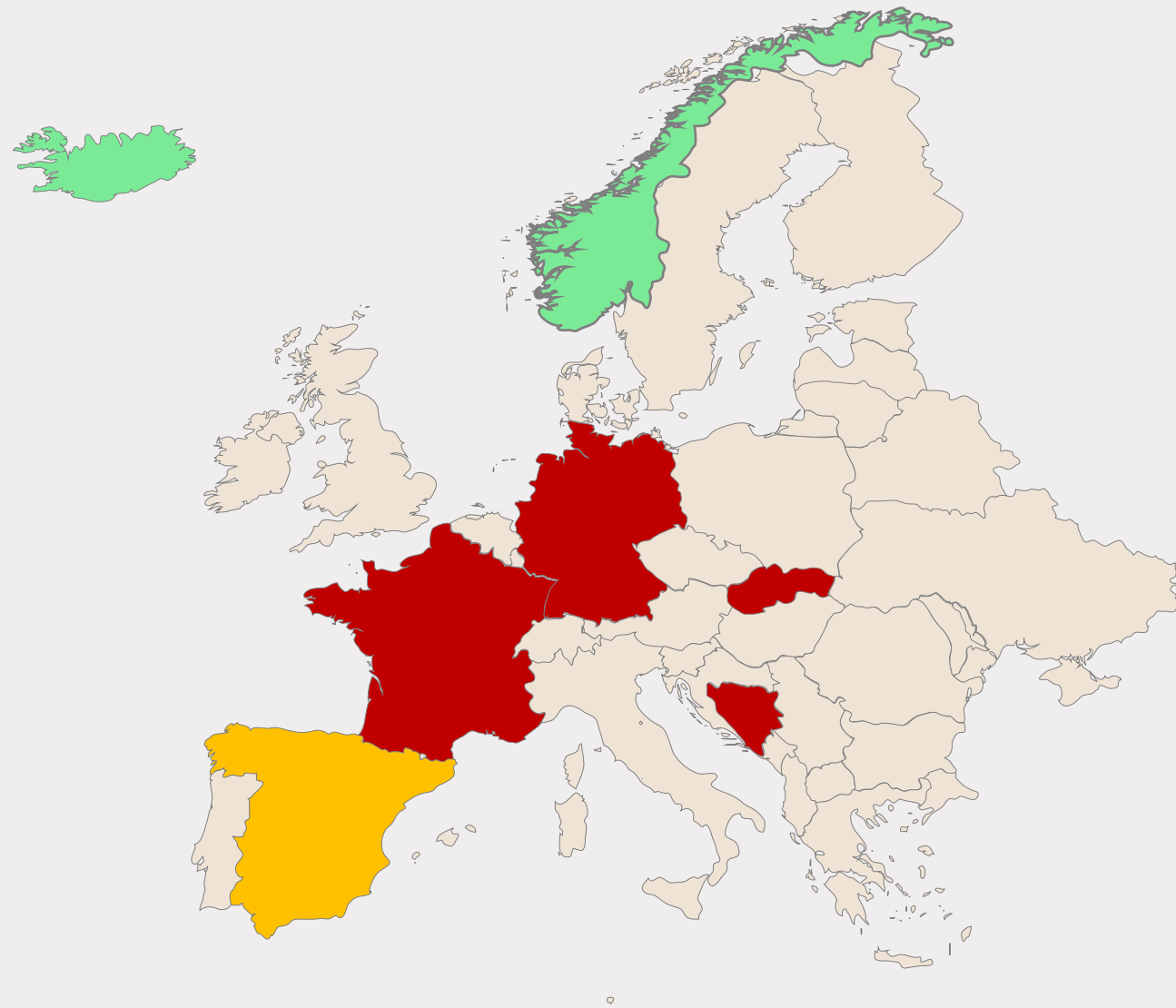
# China's role balancing silicon likely to change

- China silicon production established as low-cost exports
- Domestic demand has increased
- Production cost increasing
  - Energy cost
  - Environmental regulations
  - General cost level
- Exports of silicon likely to decrease with price expected to increase

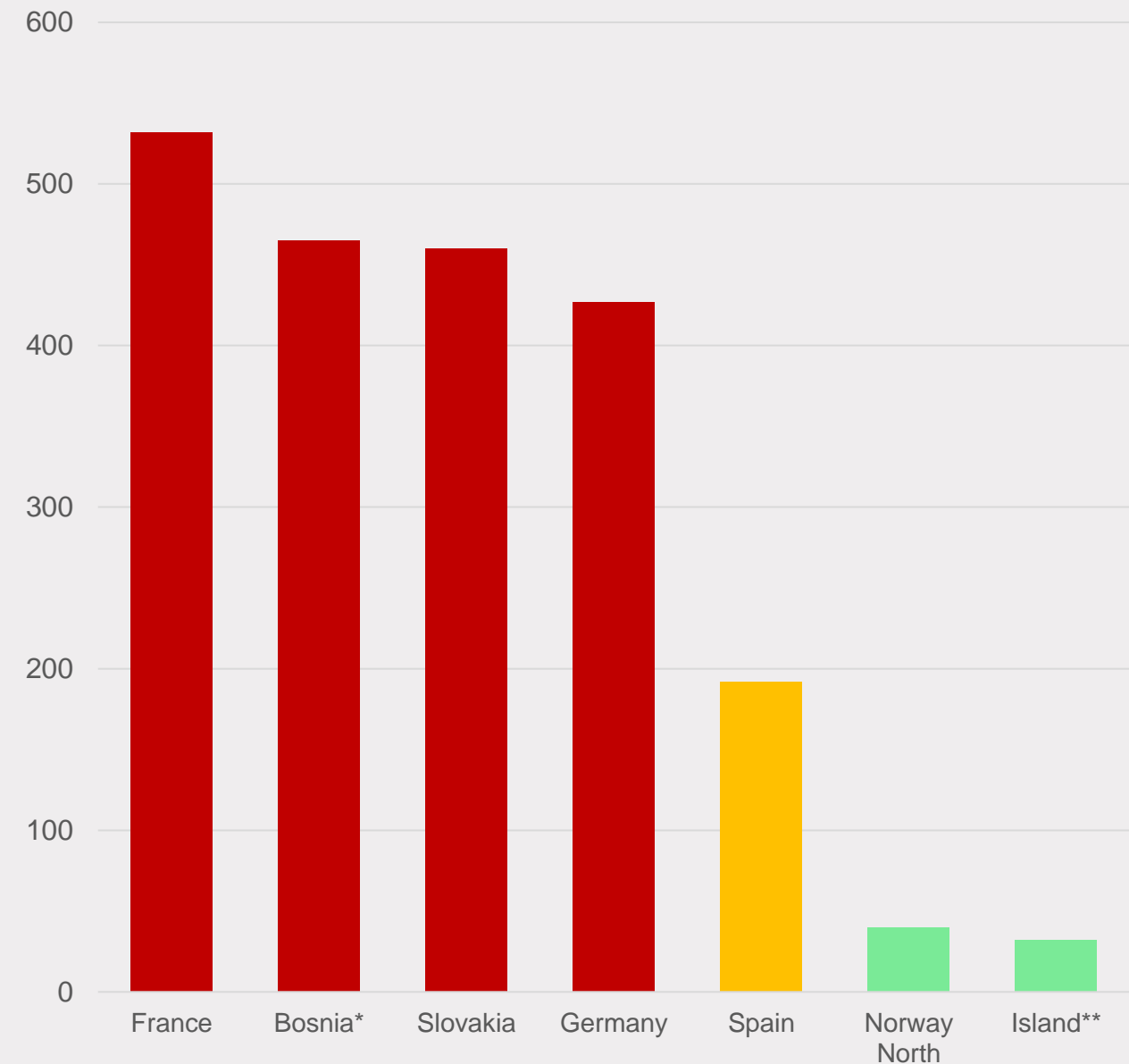
Chinese silicon exports vs. domestic demand (000' mt)



# Current power prices pose a significant challenge to European silicon smelters



2023 Forward prices EUR/MWh (per 11.10.22)





# Sustainability high on the agenda – the nature of our process poses a dilemma

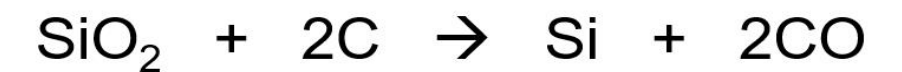
We need to reduce our CO<sub>2</sub> emissions



Silicon is essential to the energy transition

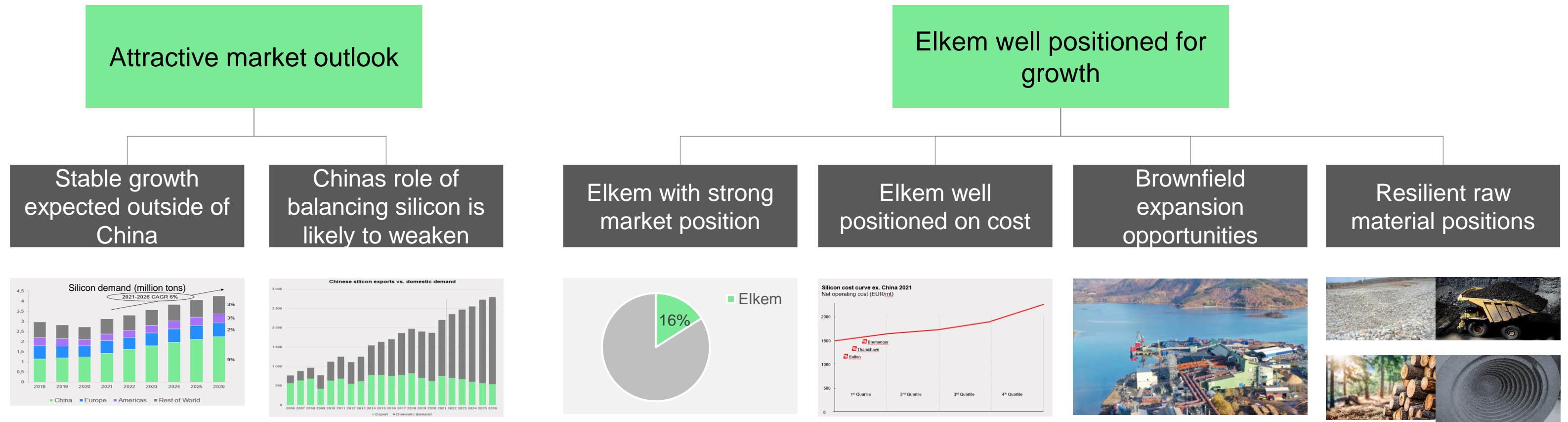


But our production process emits CO<sub>2</sub>





# Changing market dynamics, creates attractive opportunity for Elkem to grow Silicon in the western hemisphere



# Elkem's strategic means to reduce fossil CO2 from silicon alloy production

## By 2031:

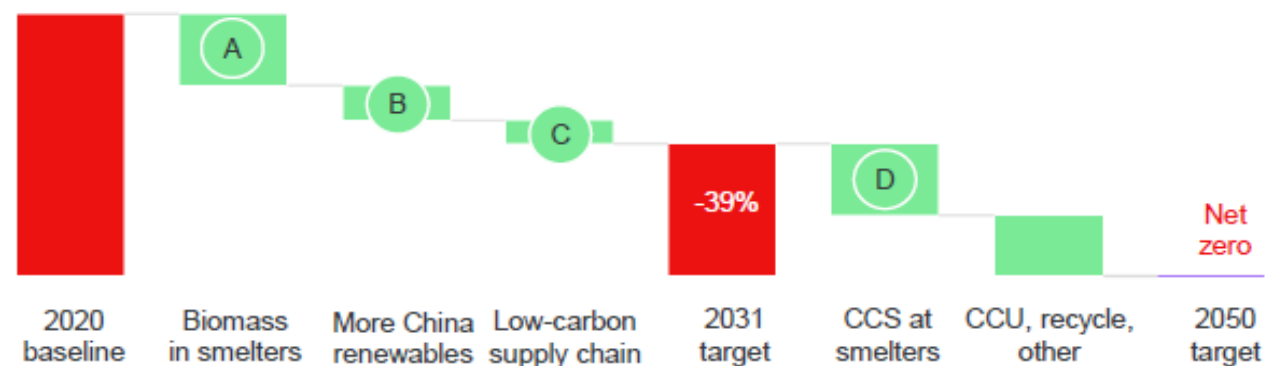
- Reducing absolute emissions\* by **28%** from 2020-2031
- Delivering **39%** improvement in product footprint\*\*

## By 2050:

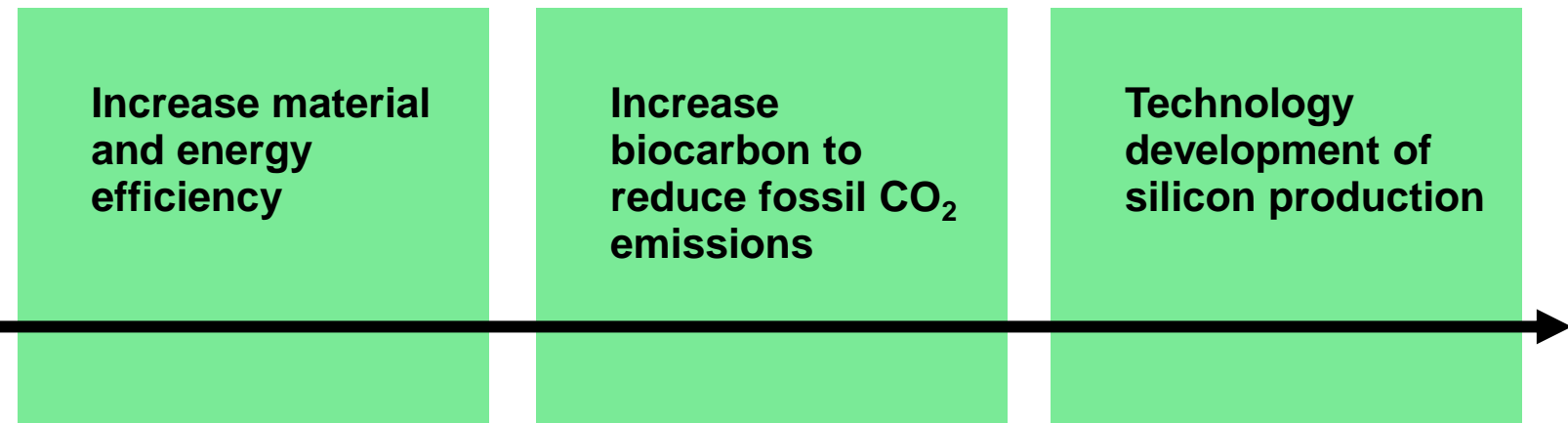
- Achieving fully carbon neutral production (zero fossil emissions) globally



## Our roadmap to climate neutral products (Illustrative)



\* Total global fossil CO2 emissions, scope 1 and 2  
 \*\* Main products average fossil CO2 emissions, scope 1-3





Delivering your potential