

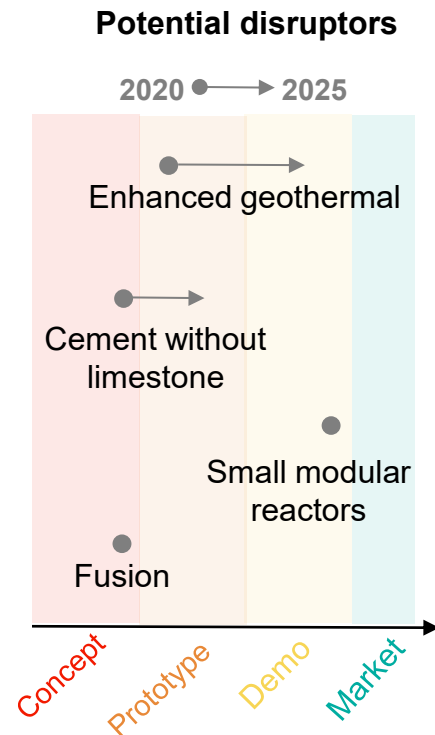
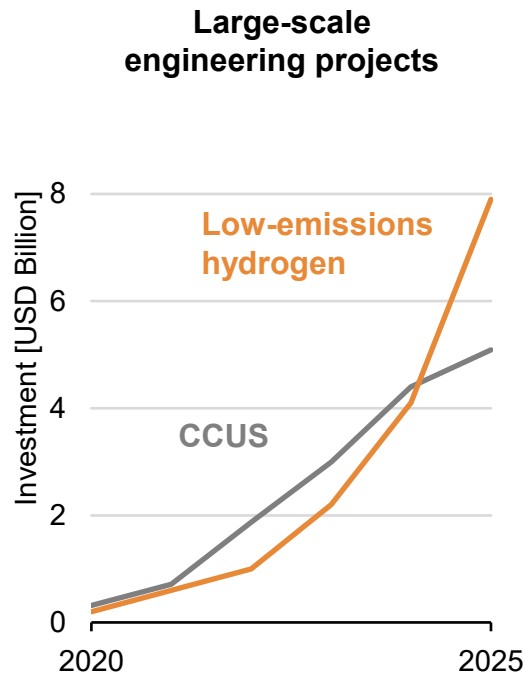
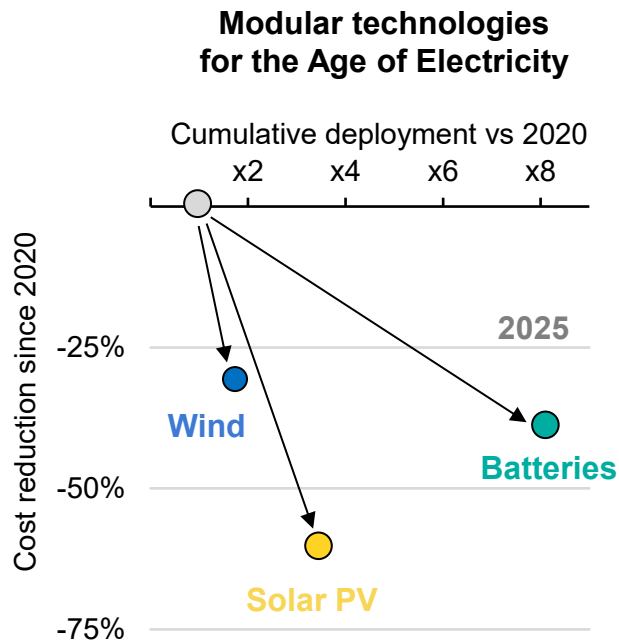


El pulso de la tecnología energética y la competitividad global

III Foro Industria y Energía. Madrid, 12 Mayo 2026

Araceli Fernández, Head Technology Innovation Unit, IEA

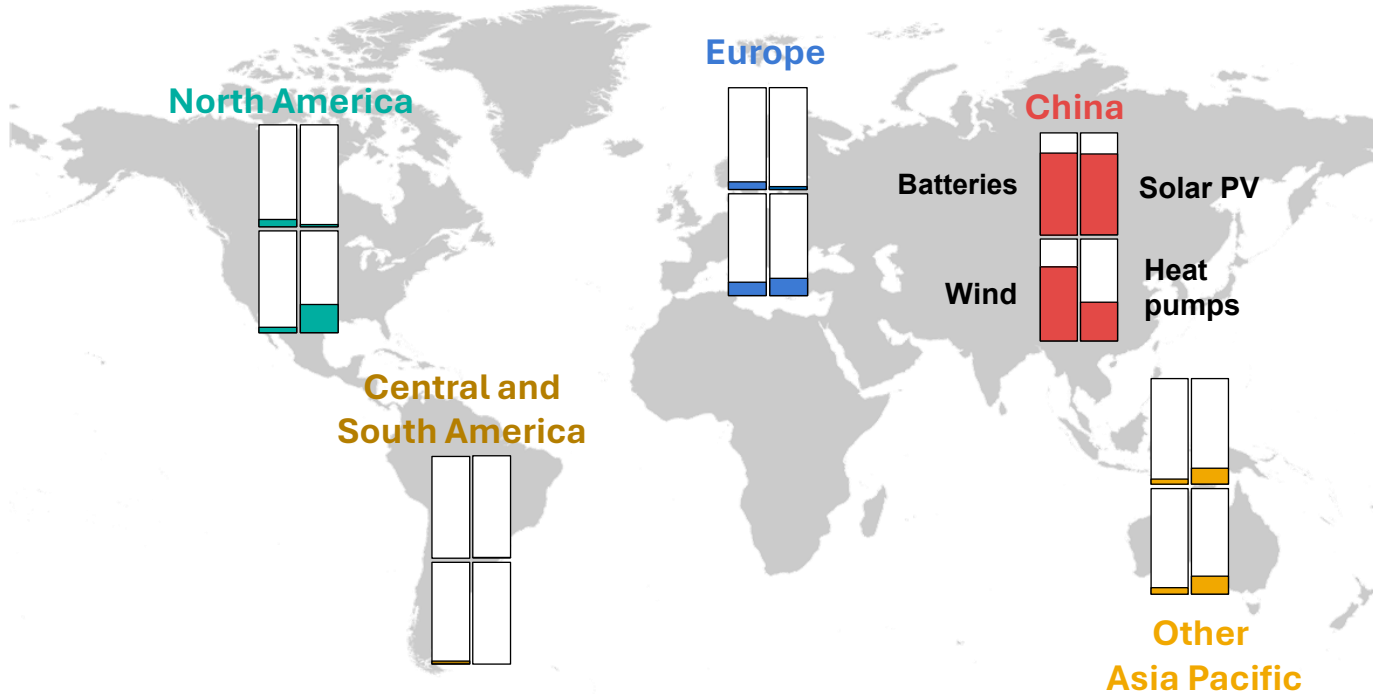
Technology innovation and deployment continue to make progress



Continuous investment in technology development allowed for a reduction of costs that made clean technologies competitive and widespread. As more technologies advance in the innovation journey further opportunities arise.

Clean technology manufacturing is widespread and yet concentrated

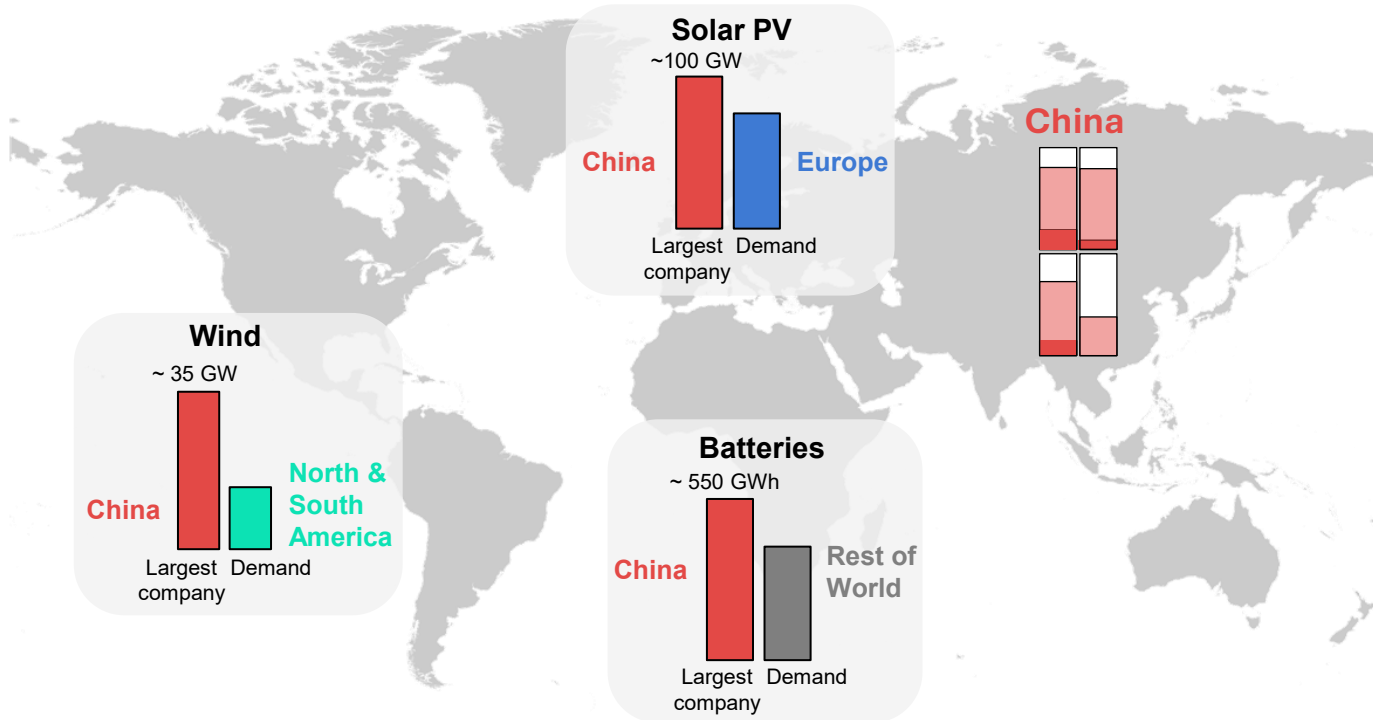
Regional shares in global production of clean energy technologies, today



China plays an outsized role in clean energy technology supply chains – individual companies and factories in China could meet the demand of entire continents on their own.

Clean technology manufacturing is widespread and yet concentrated

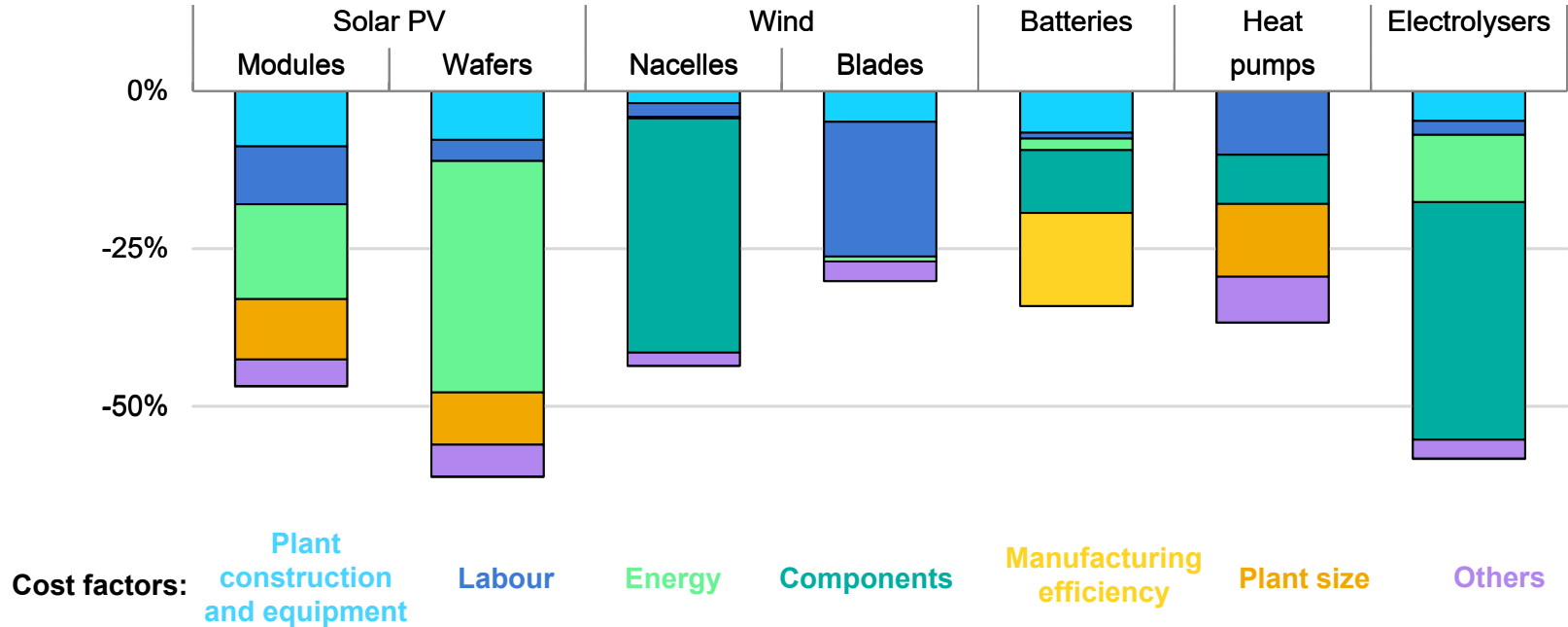
Maximum potential output of largest **company** compared to regional demand, today



China plays an outsized role in clean energy technology supply chains – individual companies and factories in China could meet the demand of entire continents on their own.

There are multiple factors behind China's competitive edge

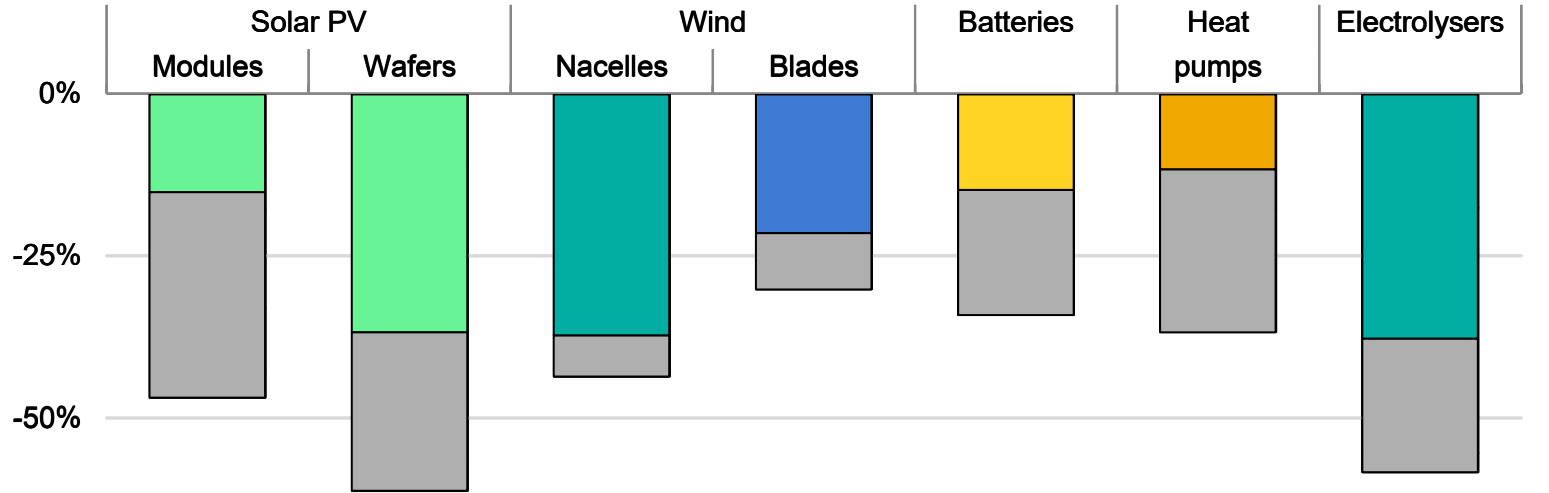
Levelised cost of production gap between the European Union and China, today



There is no single recipe for bridging the competitiveness gap with China; there are different underlying factors to address for each technology and component.

There are multiple factors behind China's competitive edge

Levelised cost of production gap between the European Union and China, today



Main factor:

Energy

Components

Labour

Manufacturing efficiency

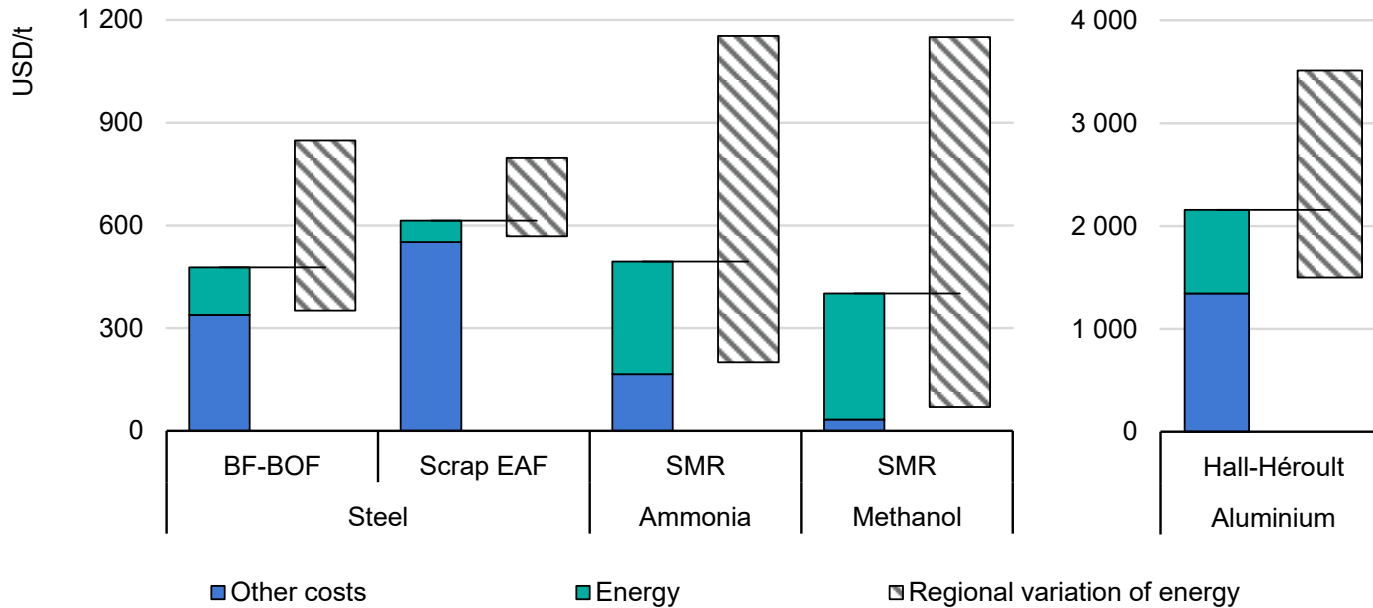
Plant size

Components

There is no single recipe for bridging the competitiveness gap with China; there are different underlying factors to address for each technology and component.

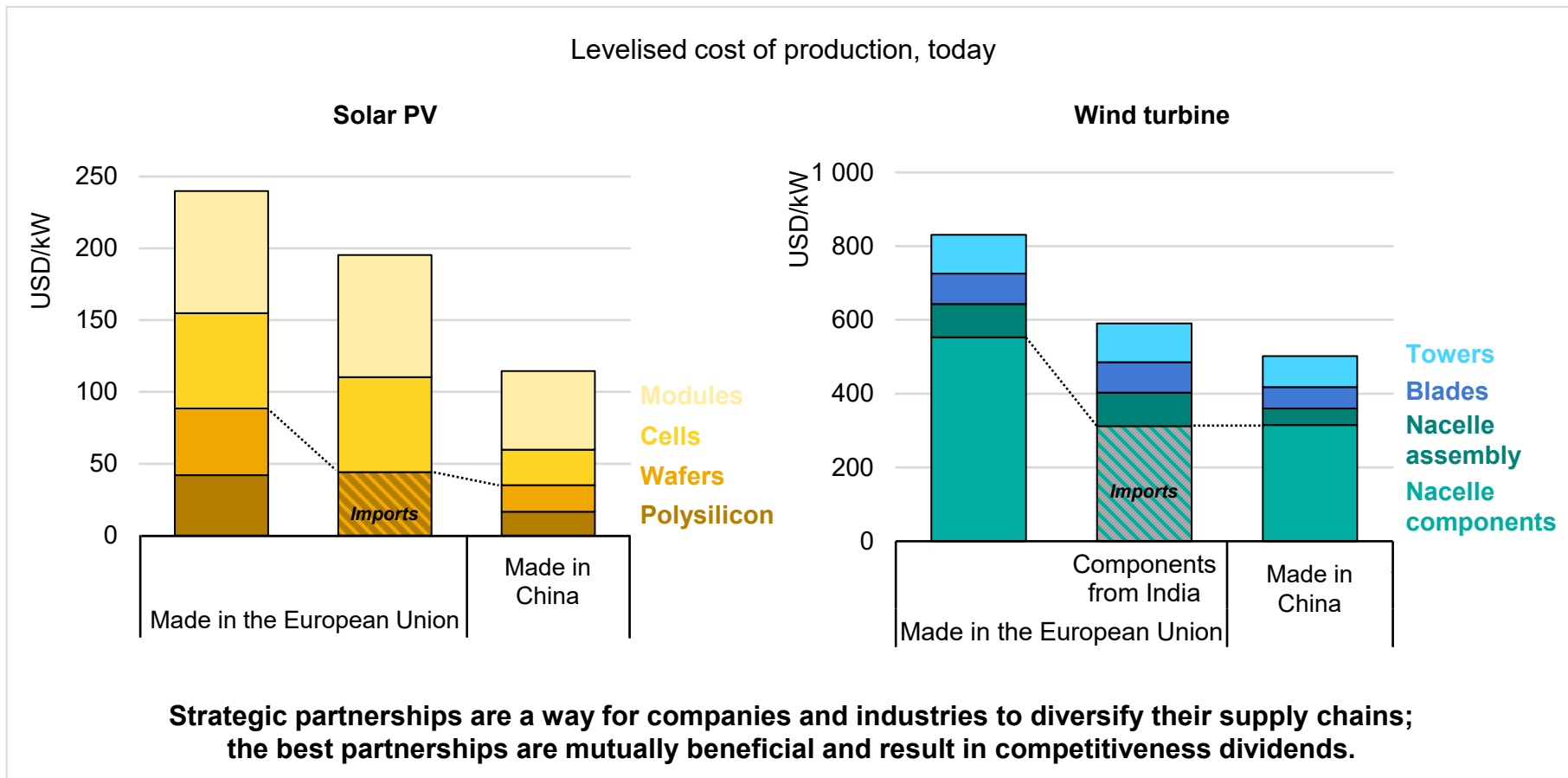
Energy prices shape today's regional cost advantages in heavy industries

Levelised cost of production of steel, ammonia, methanol and aluminium, 2024



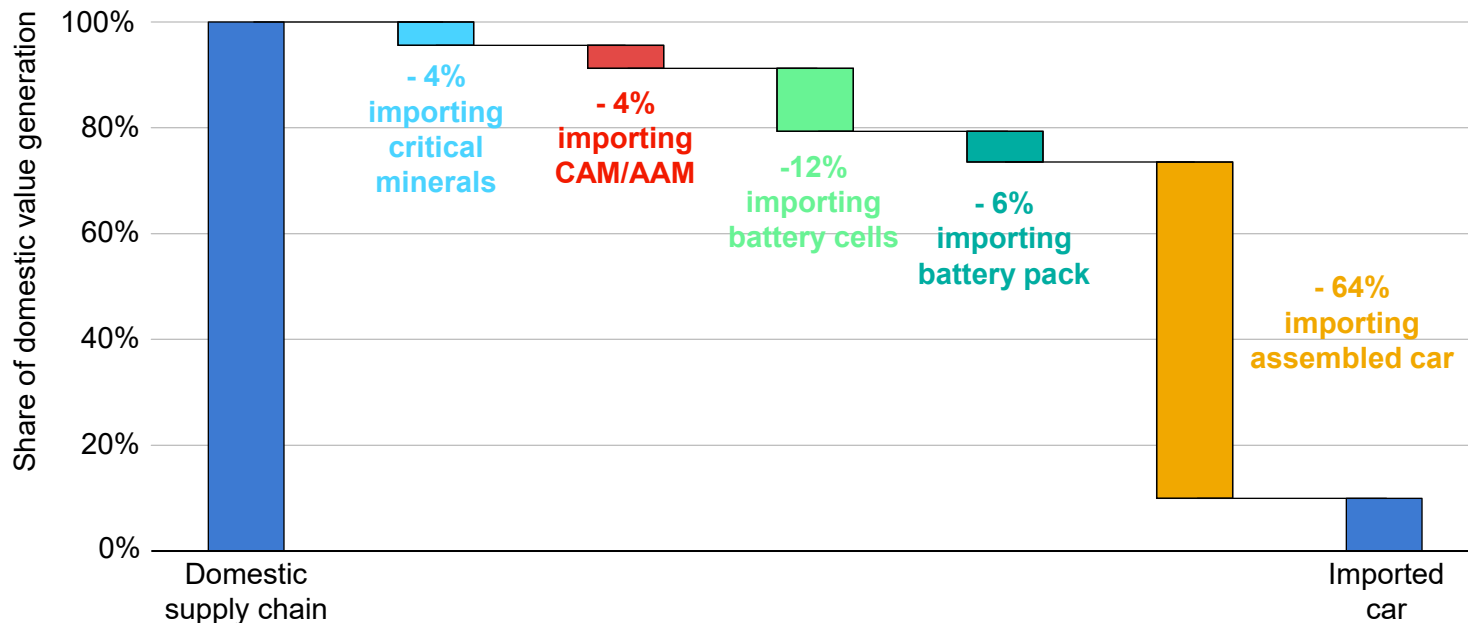
**Energy represents 15-90% of production costs depending on the material.
Significant regional energy price differences explain cost competitiveness gaps at large.**

International collaboration helps diversification & competitiveness



Value is often distributed unevenly across supply chains

Indicative shares of domestic value generation for various EV manufacturing supply chain arrangements, 2024



For EV manufacturing, nearly two-thirds of the value generation would still be retained domestically if the finished battery pack was manufactured elsewhere and imported. Strategic partnerships should leverage relative strengths.

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