

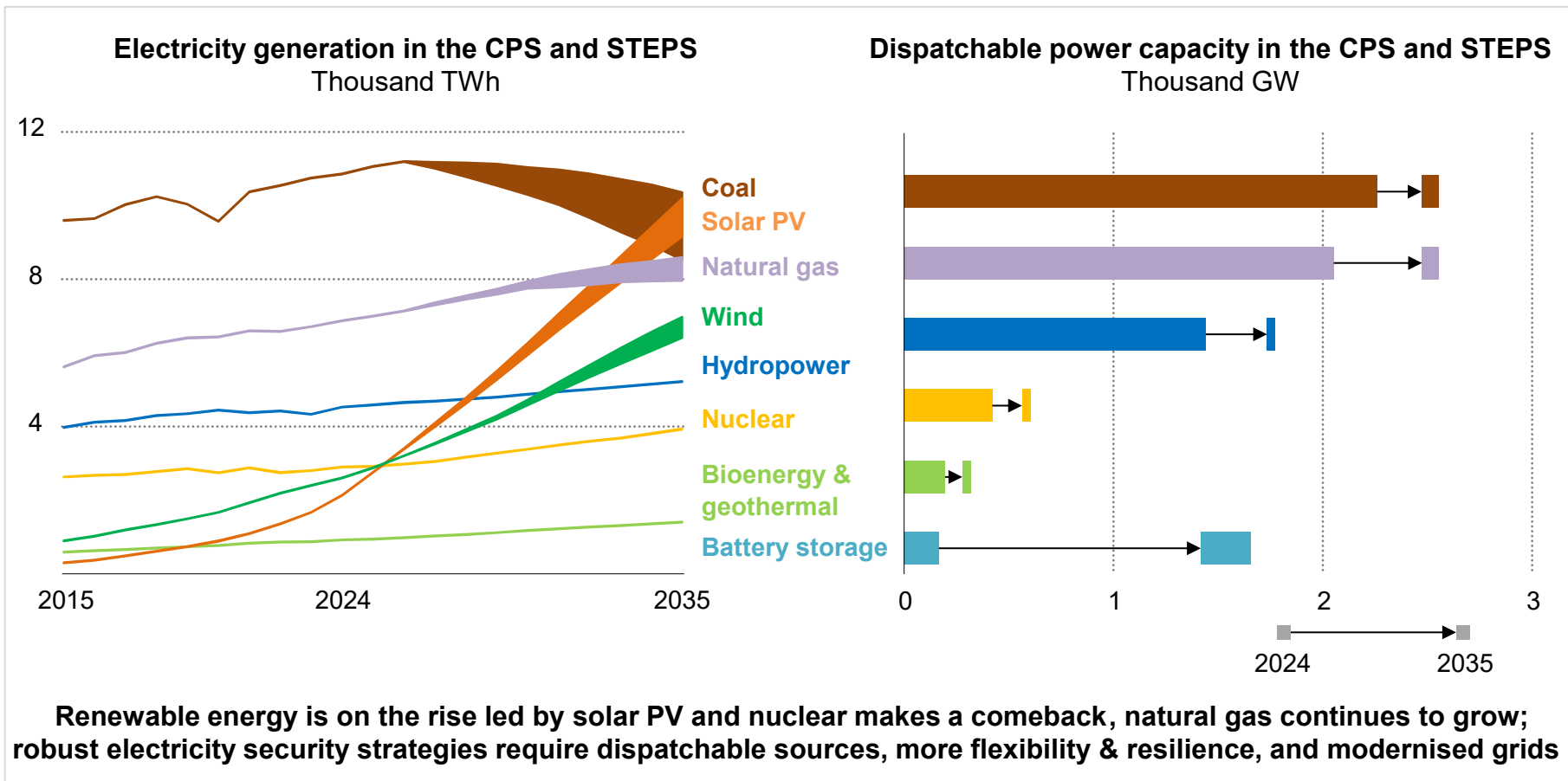


Clean technology supply chains today

Jack Jaensch

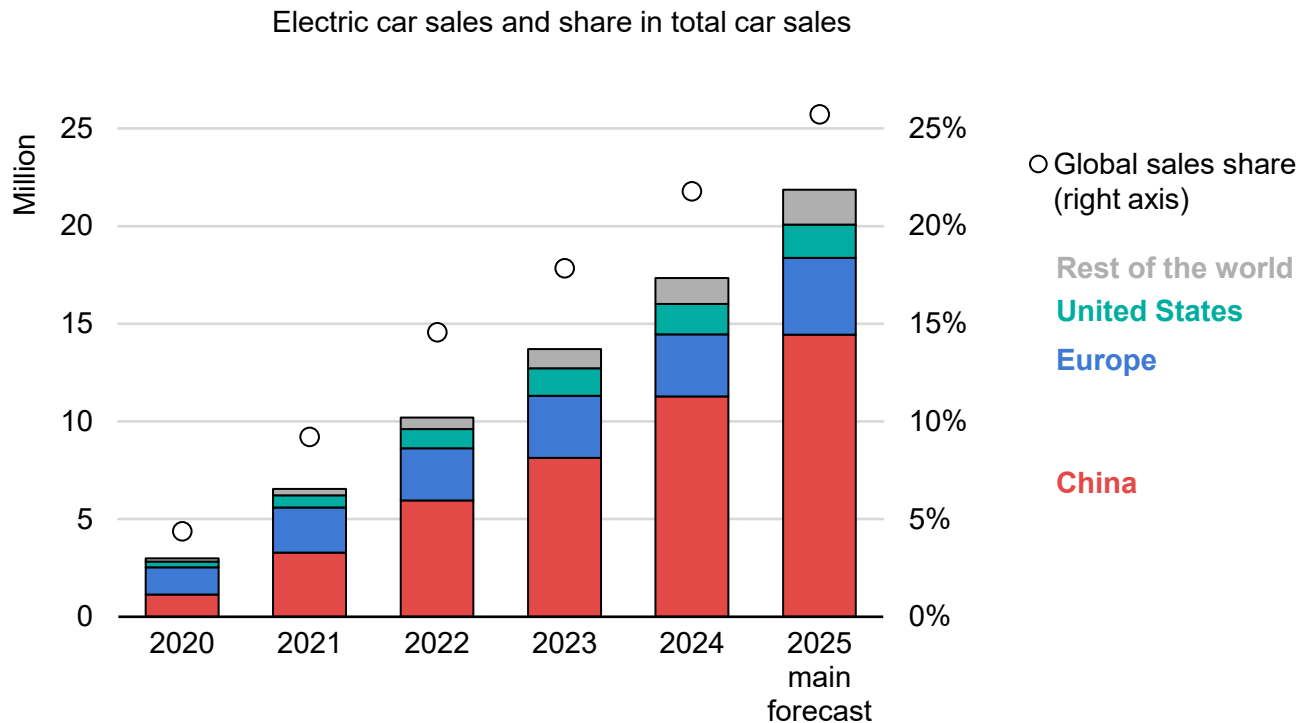
JRC Petten, November 2025

Changing power systems are reshaping electricity security



Renewable energy is on the rise led by solar PV and nuclear makes a comeback, natural gas continues to grow; robust electricity security strategies require dispatchable sources, more flexibility & resilience, and modernised grids

Global electric car sales continue to break records



EV sales in 2025 are set for a new record, building on global 35% year-on-year growth in Q1. Two-thirds of battery electric cars sold in China are now cheaper than their conventional equivalent.

Investment in clean technology manufacturing is booming

Clean technology manufacturing facilities in operation, 2023

Solar PV

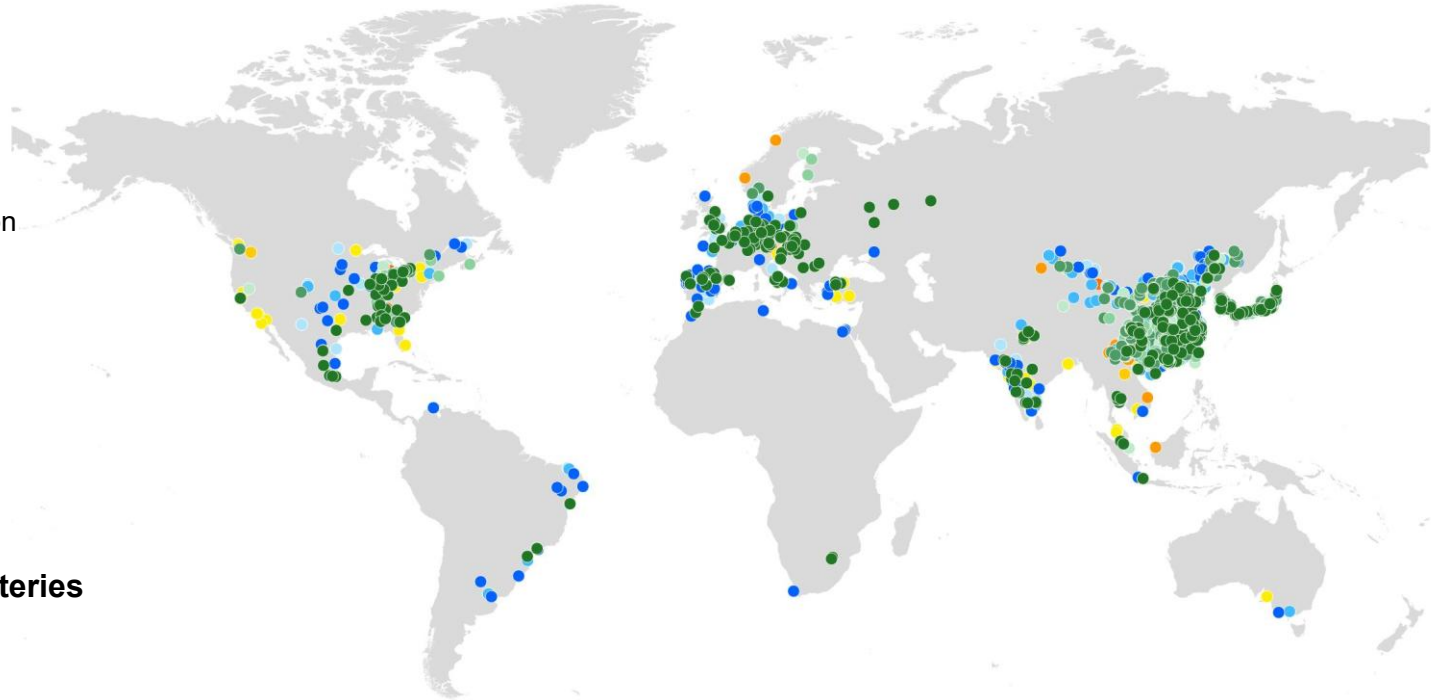
- Polysilicon
- Wafer
- Cell
- Module

Wind

- Blade
- Nacelle
- Tower

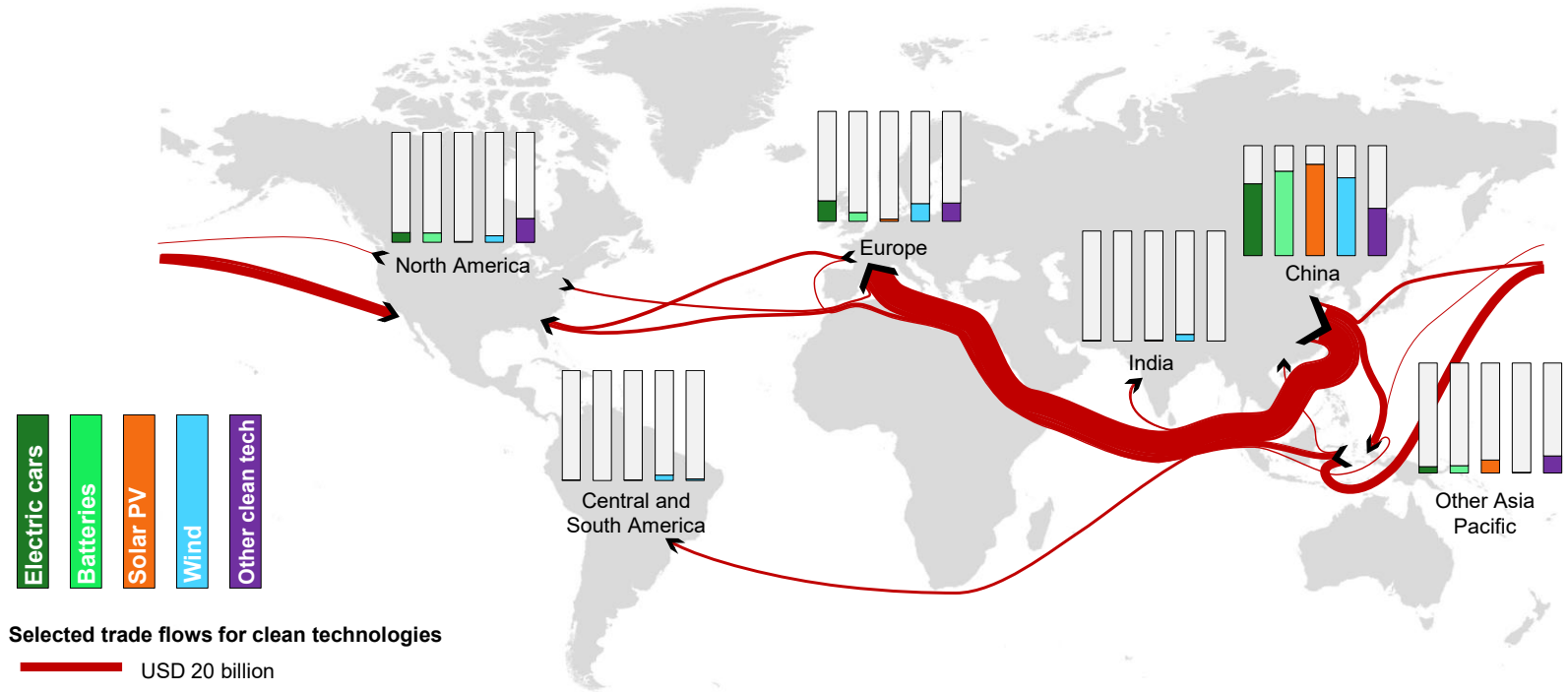
EVs & batteries

- Anode
- Cathode
- Cell
- Electric vehicles



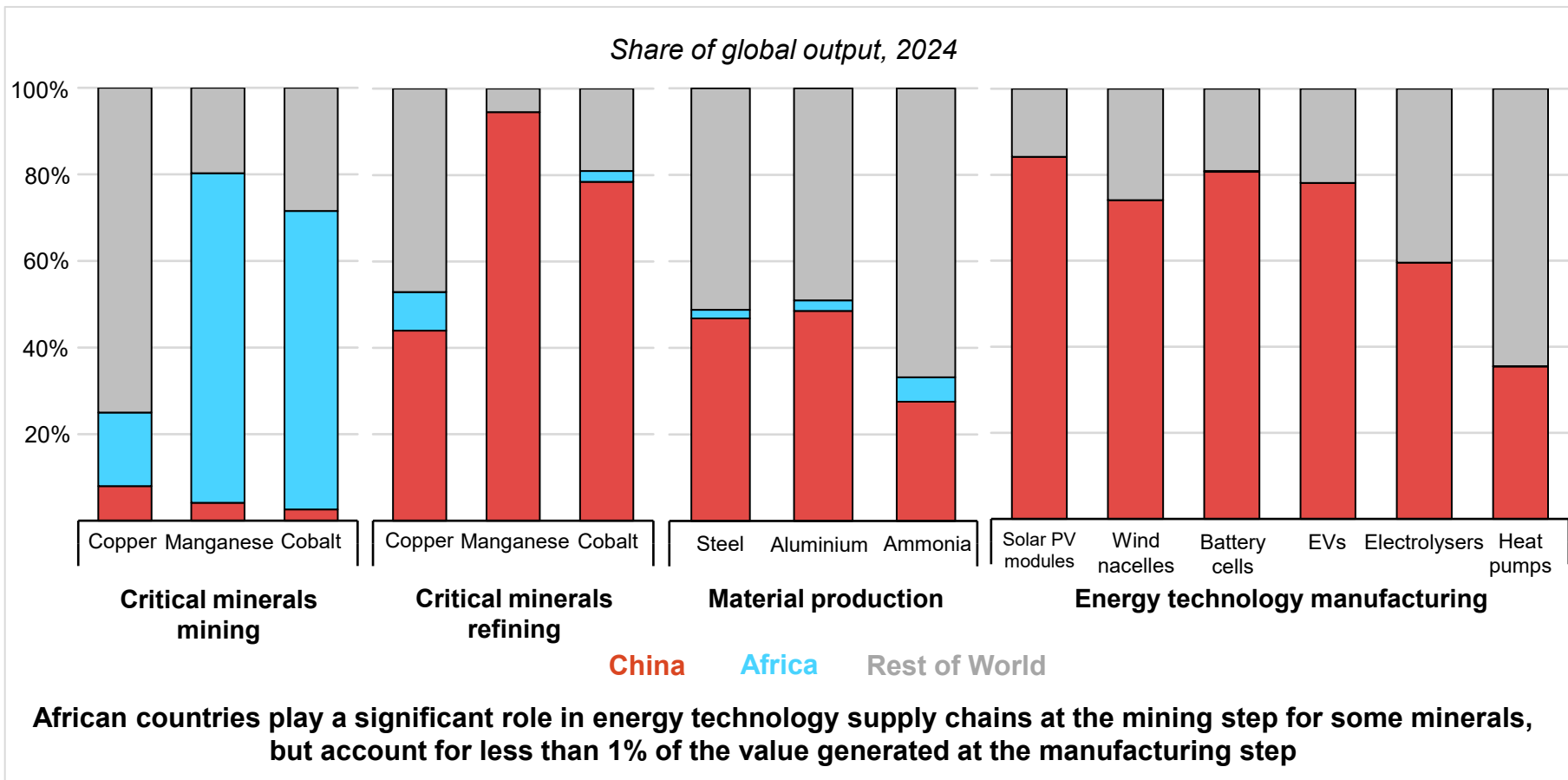
Investment in clean technology manufacturing is booming

Share of global clean technology manufacturing output by technology, 2023



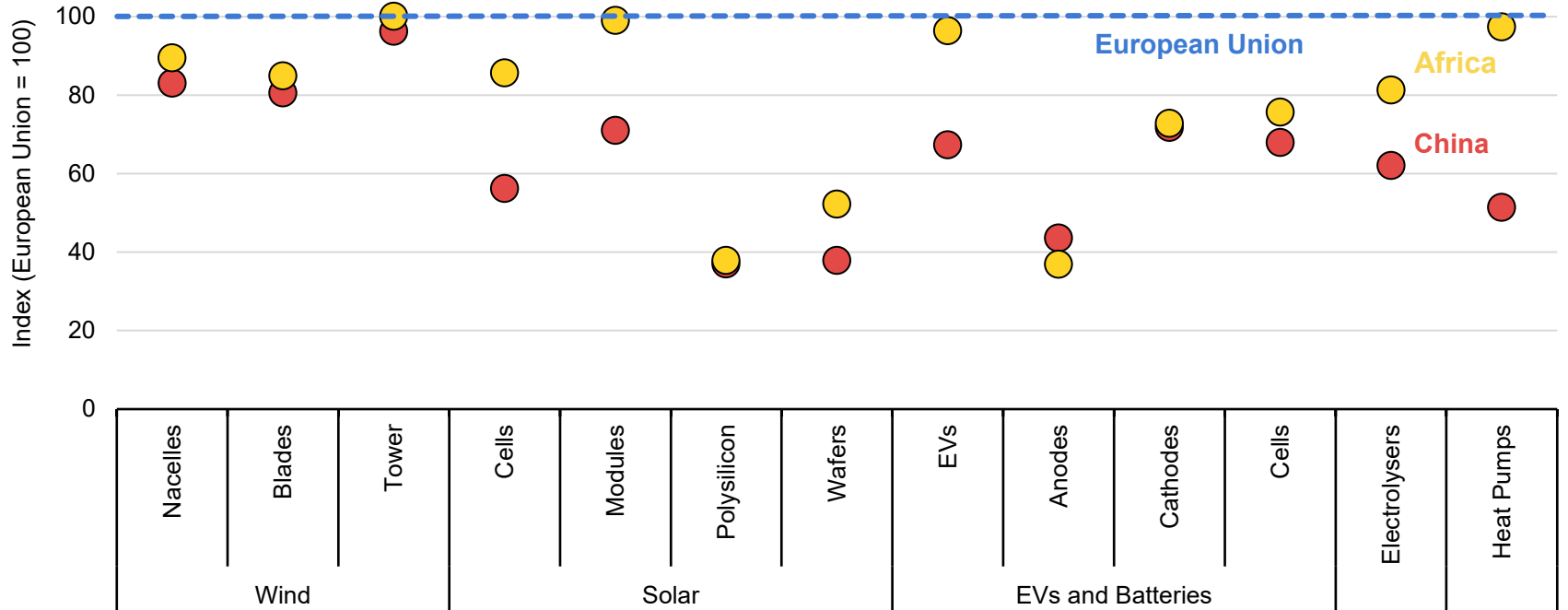
The manufacturing of clean technologies is highly concentrated geographically, with China accounting for around 70% of the global manufacturing output value for the six key clean technologies.

Supply chains remain heavily concentrated



Opportunities in energy technology manufacturing

Estimated levelised cost of manufacturing key energy technologies and components by region, 2023



Africa is in theory among the cheapest regions to produce energy technologies like EVs and wind components, with costs around 10% lower for nacelles, 15% for blades, and 4% for EVs, compared with the European Union

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