

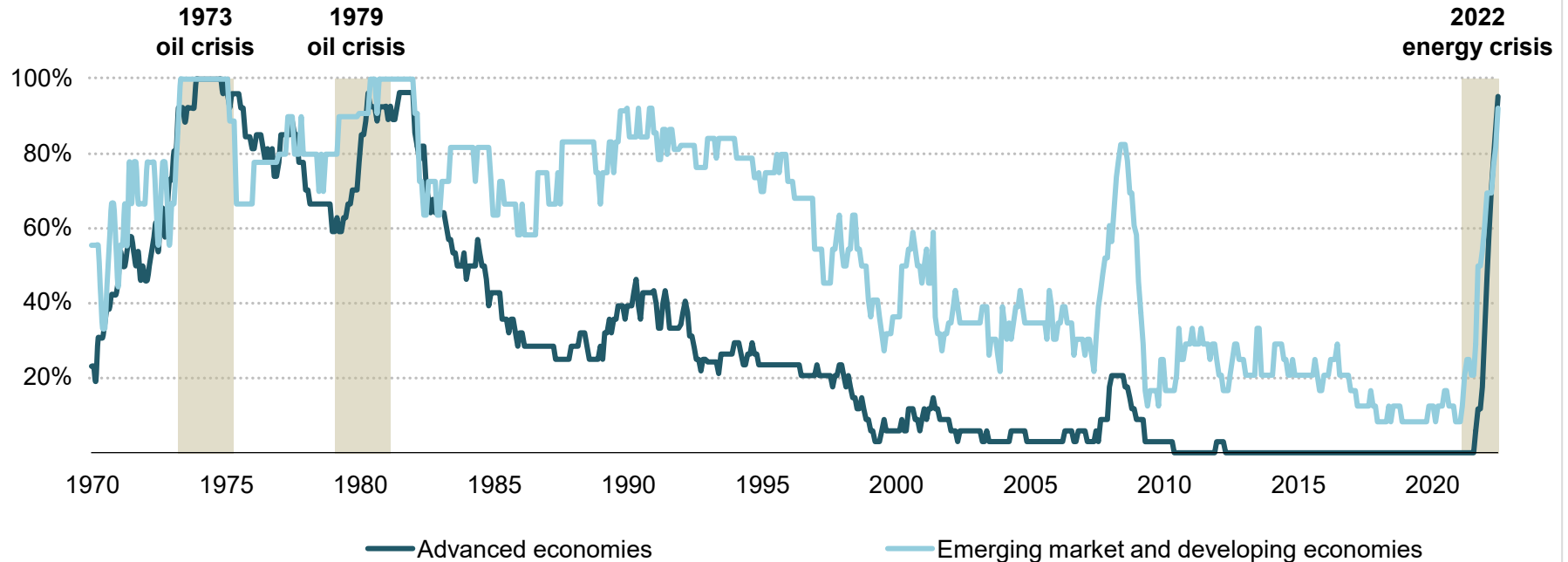


Oportunidades y retos en la nueva economía energética: hacia cero emisiones netas

Araceli Fernández, Head of Technology Innovation Unit, IEA
XIV Mes de la Energía Chile, 8 Junio 2023

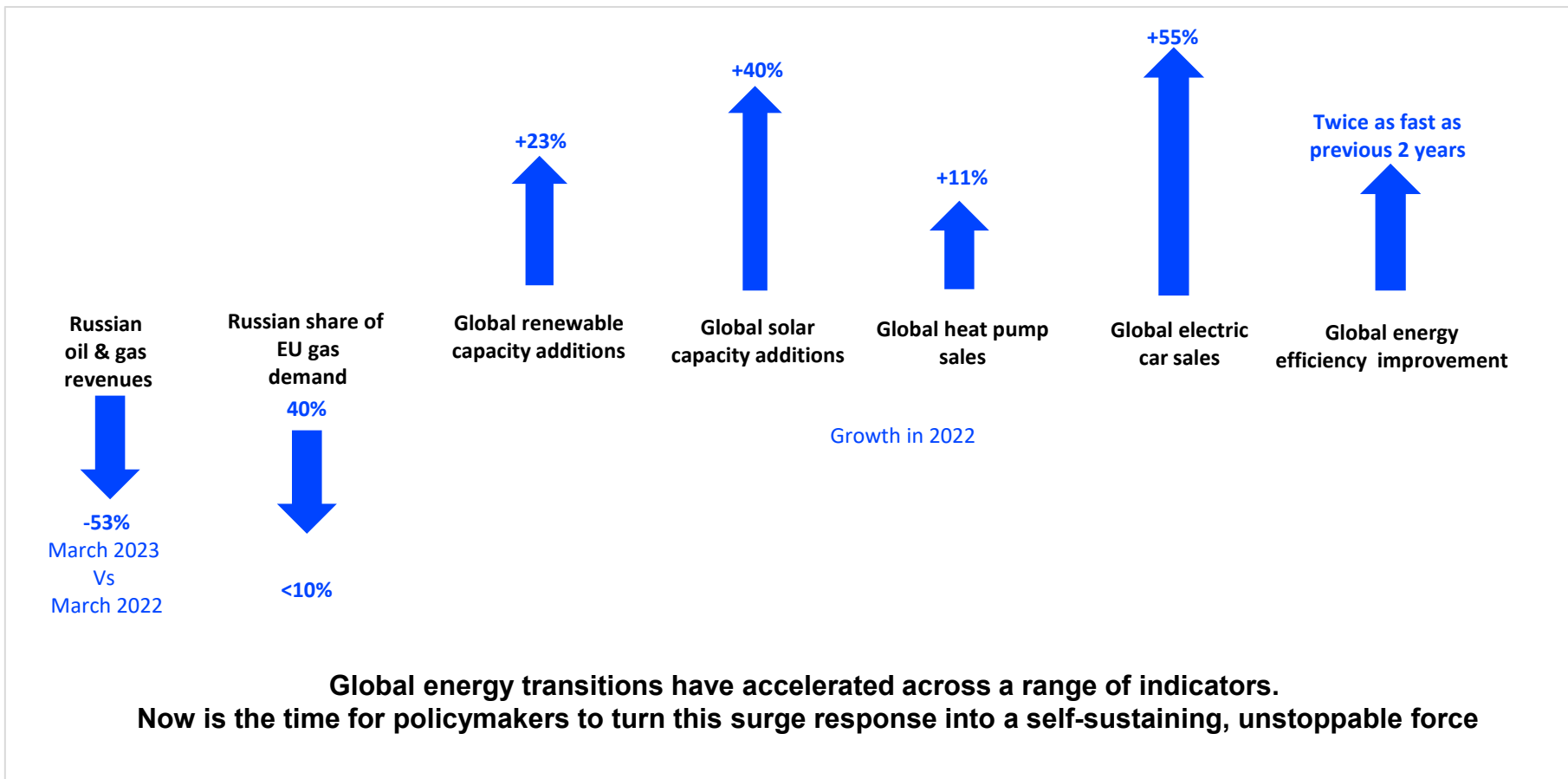
An energy shock of unprecedented breadth and complexity

Percentage of countries with annual inflation greater than 6%

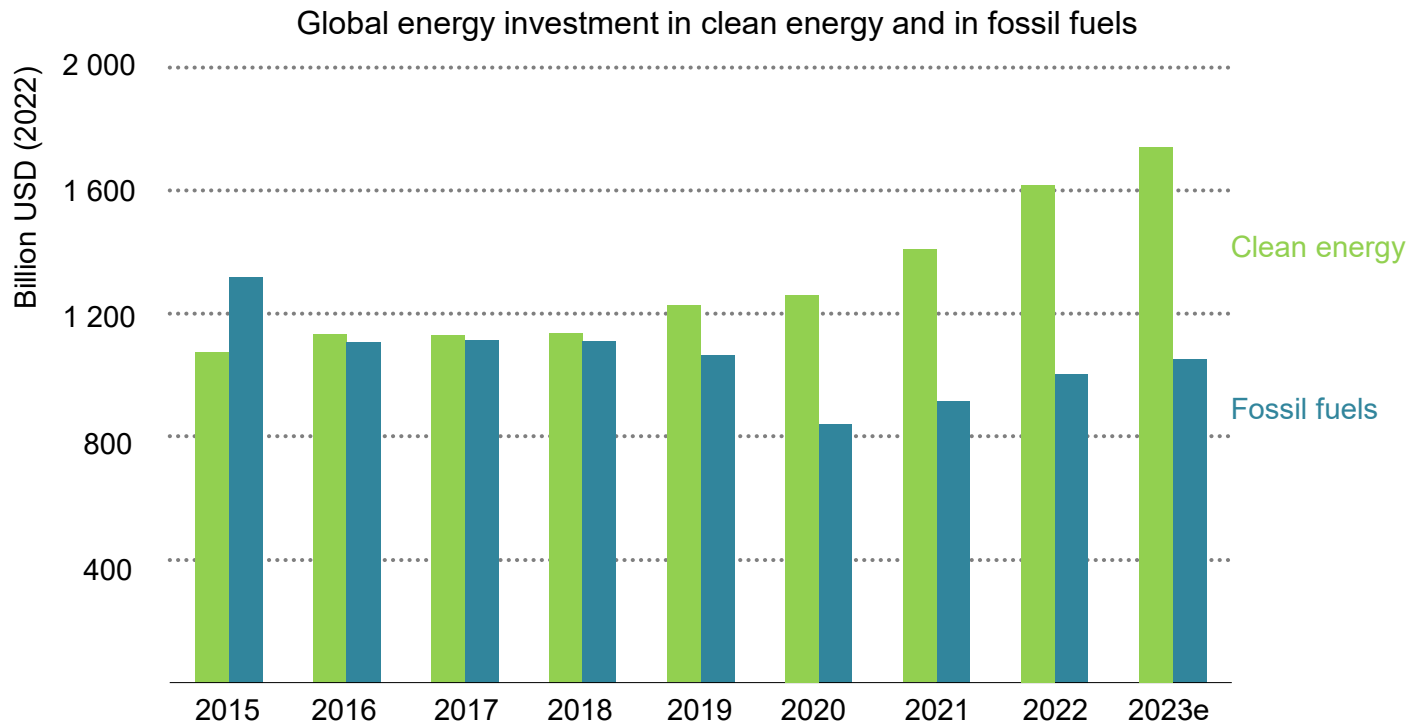


Exacerbating already tight energy markets, the Russian invasion of Ukraine has tipped the world into a global energy crisis of unprecedented breadth and complexity, affecting all countries and the vulnerable in particular

Clean energy transitions have accelerated

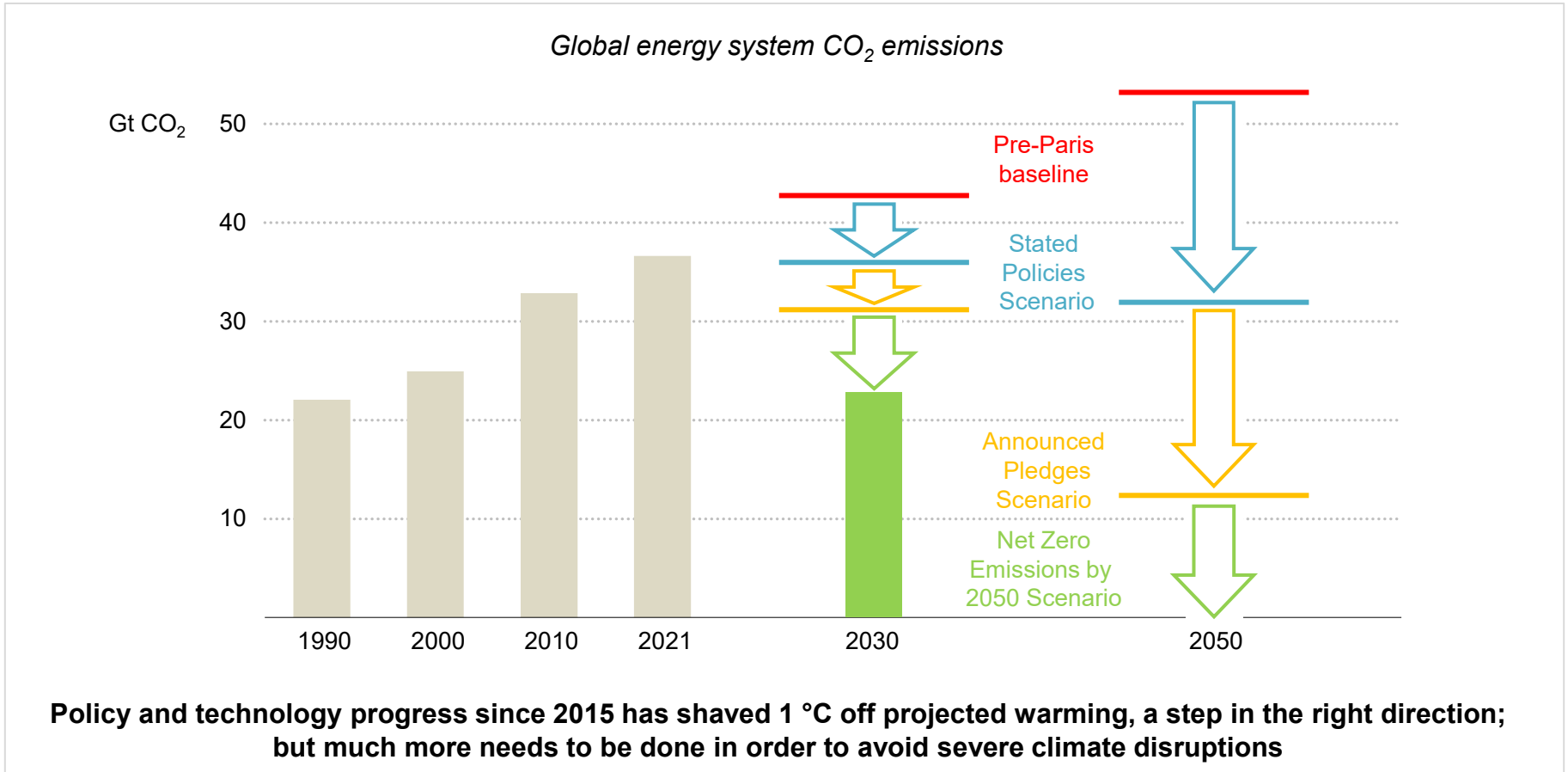


Clean energy investment is widening the gap over fossil fuels

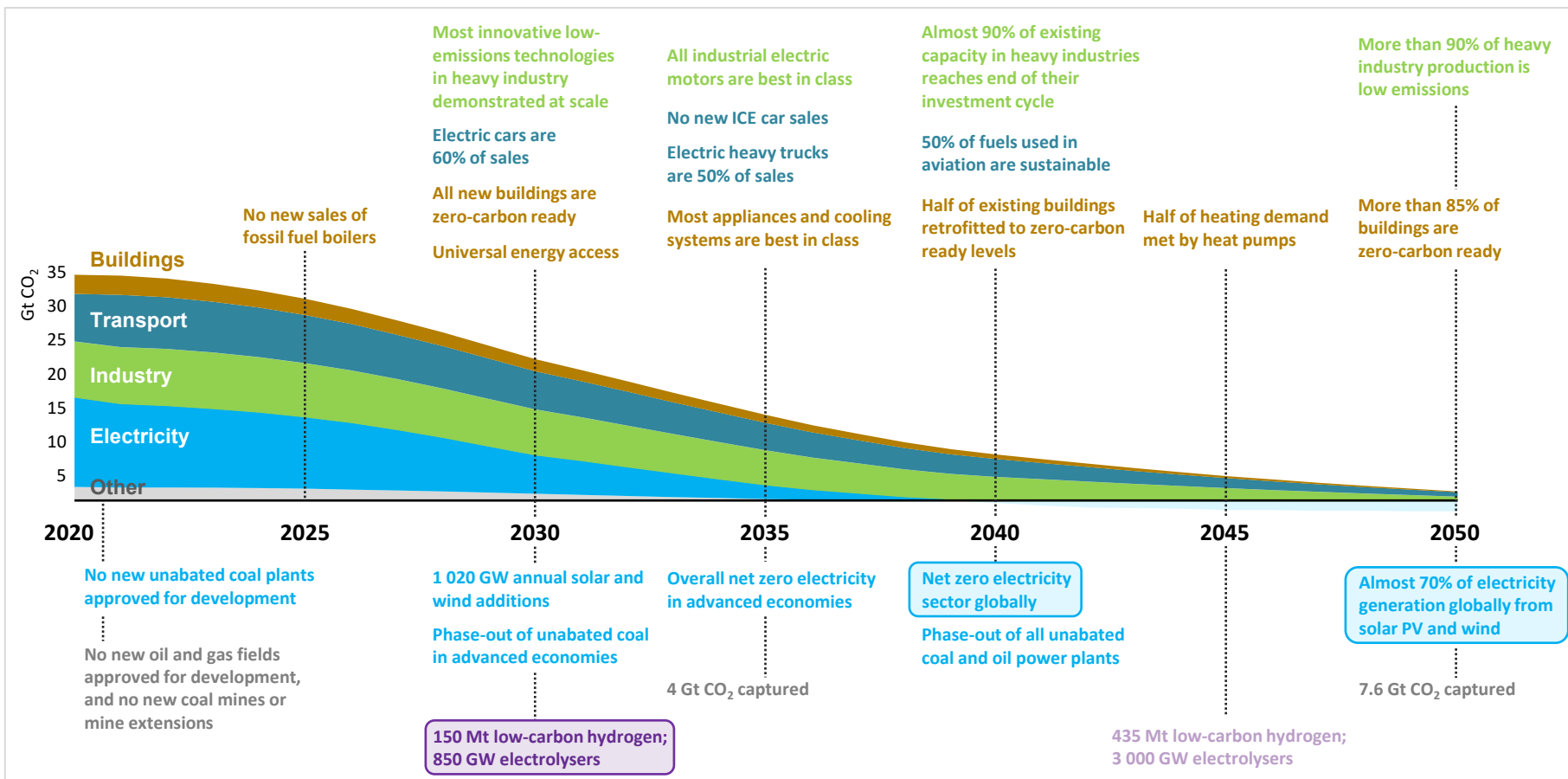


**For every dollar invested in fossil fuels, about 1.7 dollars are now going into clean energy.
Five years ago, this ratio was one-to-one**

Keeping the door to 1.5 °C open



Set near-term milestones to get on track for long-term targets

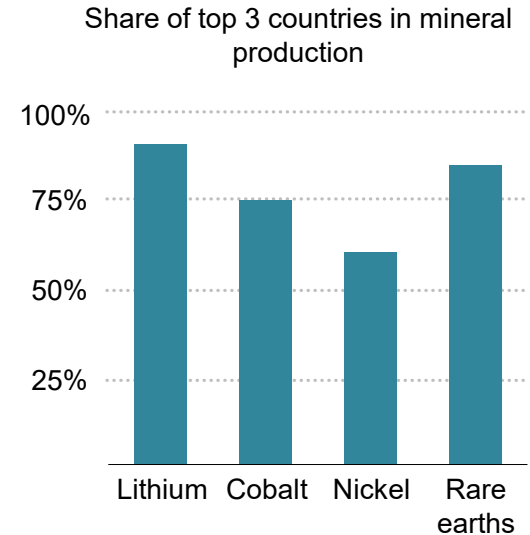
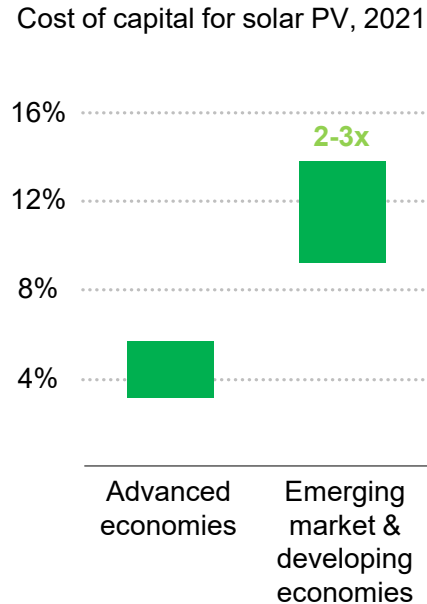
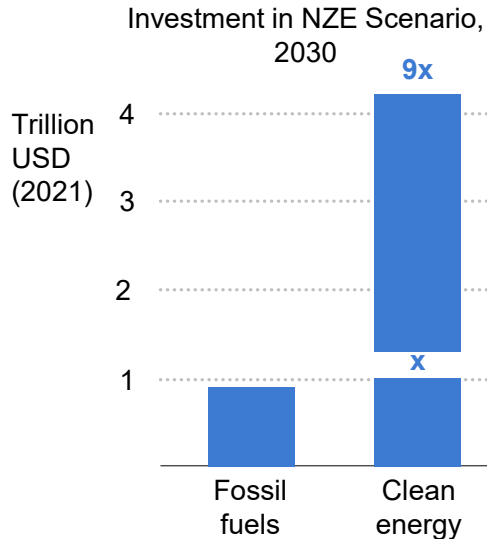


A new energy security paradigm is needed for secure transitions

Scale up clean energy
to scale back fossil fuels

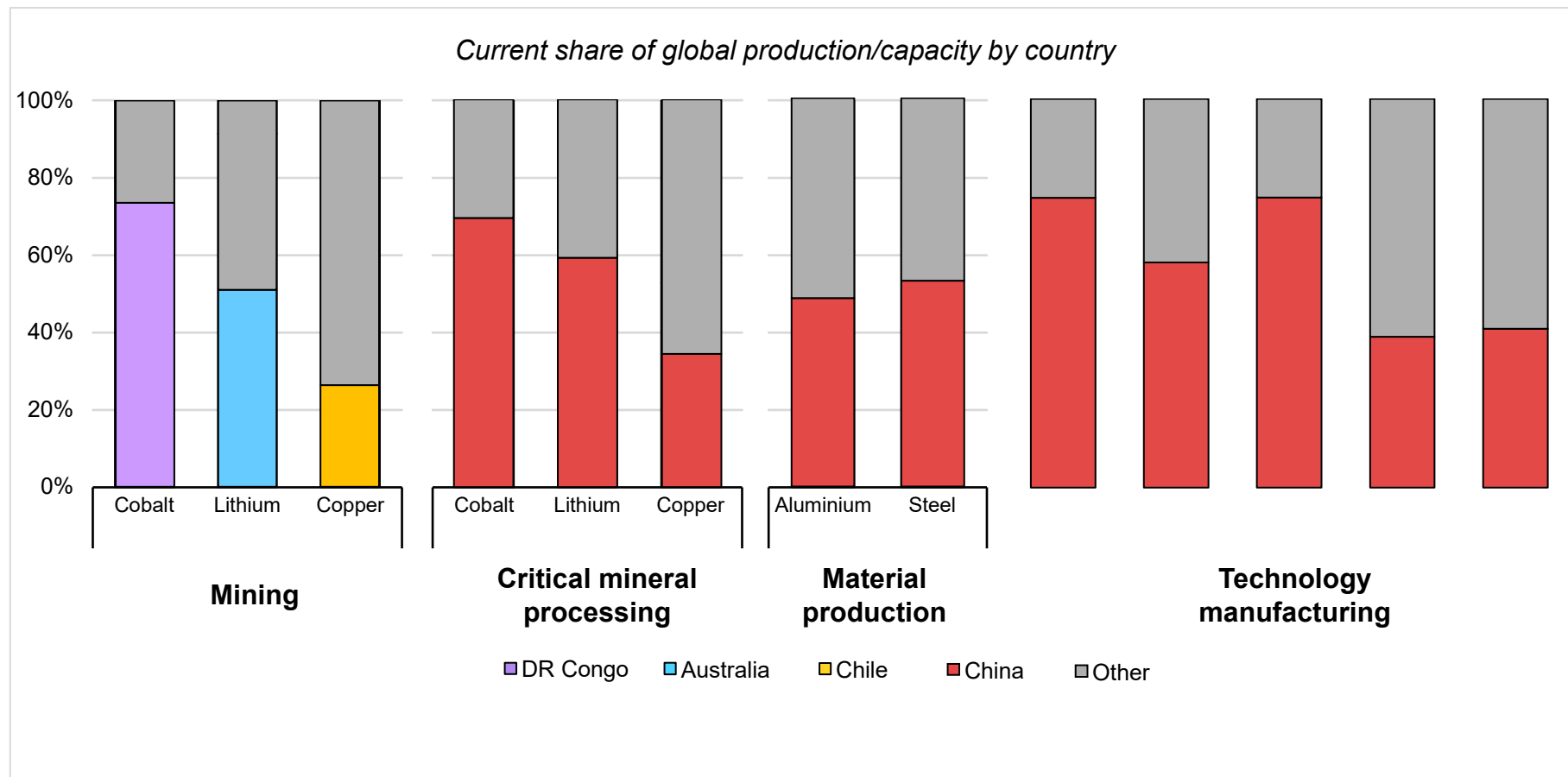
Lift emerging economies into the
new energy economy

Manage new vulnerabilities



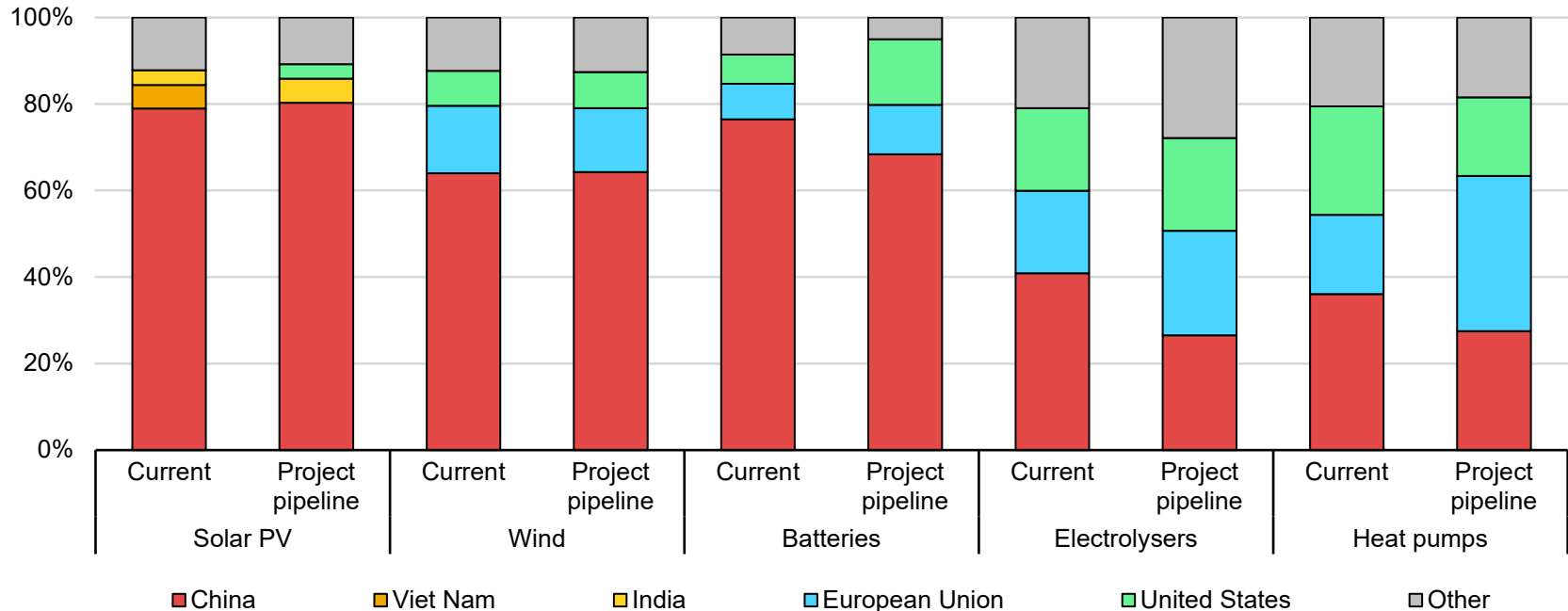
For the duration of energy transitions, the clean energy and fossil fuel systems are *both* required to deliver energy services; assessing & managing the evolving co-existence of both systems is crucial

Clean technology supply chain concentration risks extend beyond mining



Clean technology manufacturing is geographically concentrated

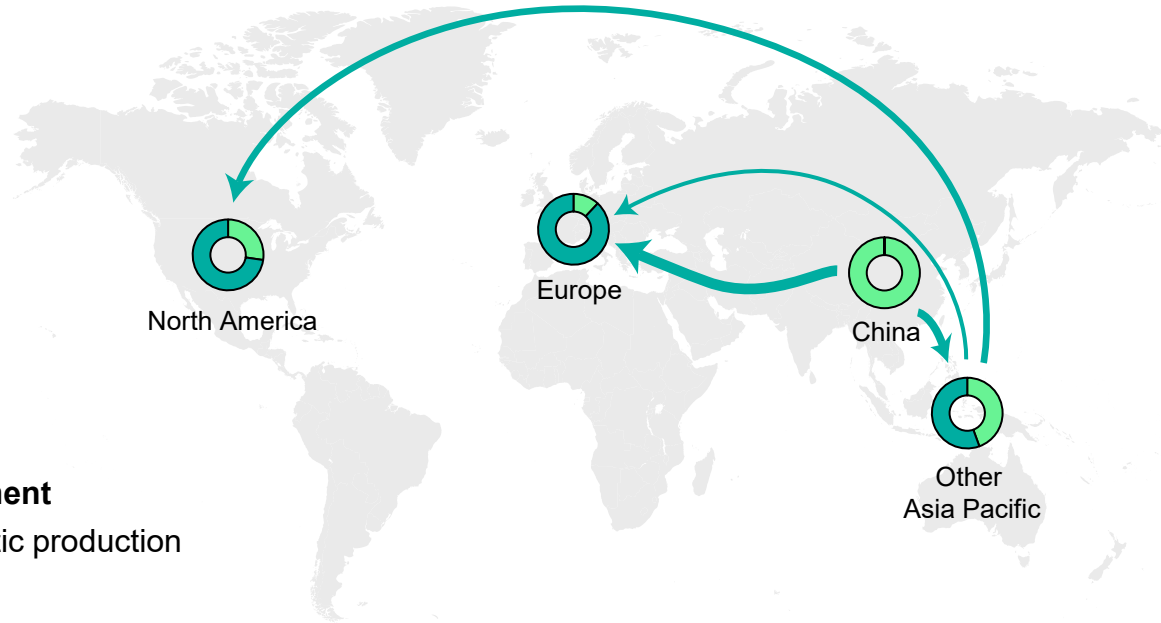
Current and projected geographic concentration for manufacturing operations for key clean technologies



Announced projects – if all realised – will alter the global distribution of manufacturing capacity for batteries, electrolysers and heat pumps.

Clean technology supply chains benefit from international trade

Main net trade flows for selected clean technologies, 2021



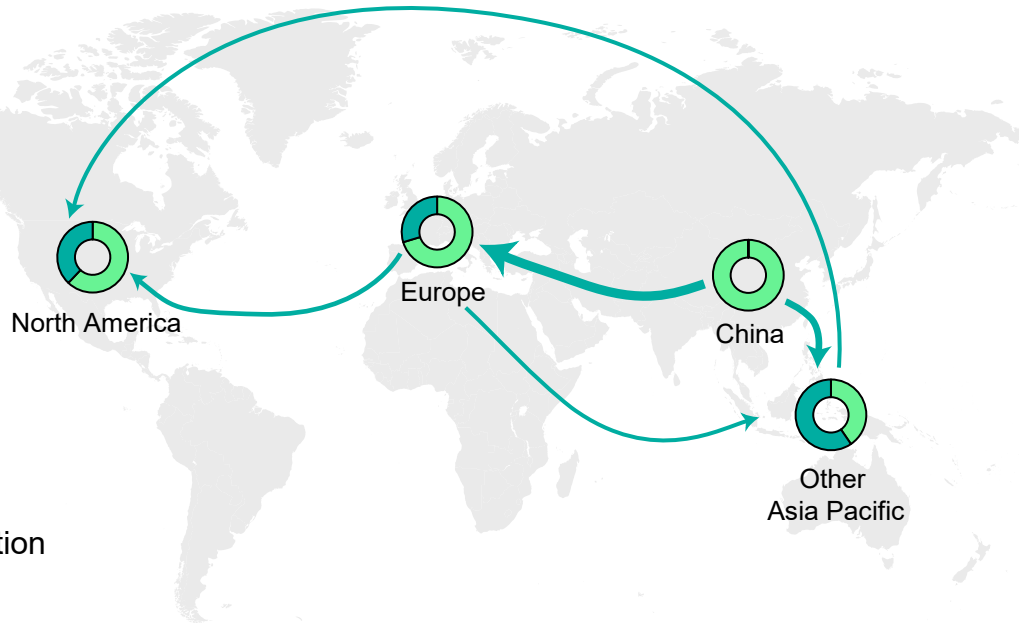
Solar PV modules

Share of trade in global deployment:

~60%

Clean technology supply chains benefit from international trade

Main net trade flows for selected clean technologies, 2021



Deployment

- Domestic production
- Imports

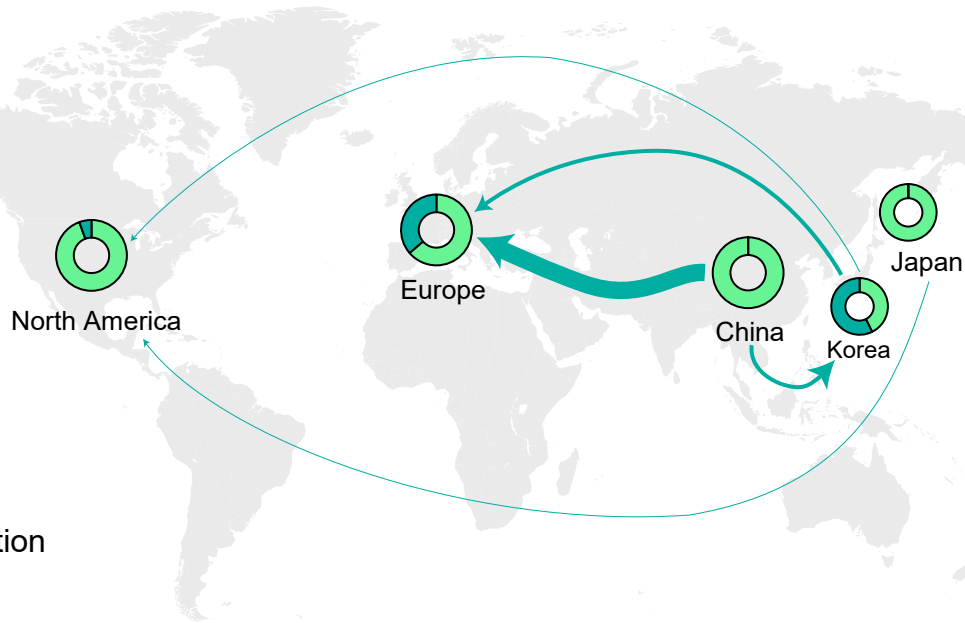
Wind

Share of trade in global deployment:

~20%

Clean technology supply chains benefit from international trade

Main net trade flows for selected clean technologies, 2021



EV batteries

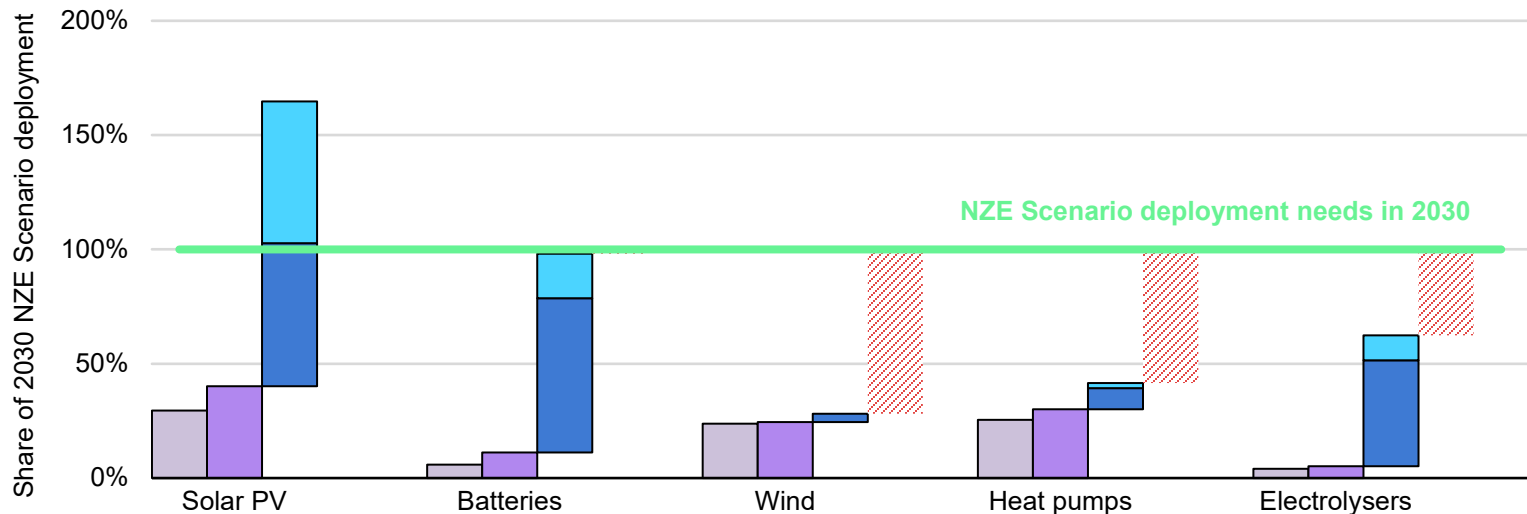
Share of trade in global deployment:

~10%

A large domestic market created by rapid clean technology deployment, combined with concerted industrial policy, have made China the dominant player in global clean technology manufacturing and trade.

The deployment gaps to net zero are closing for some technologies

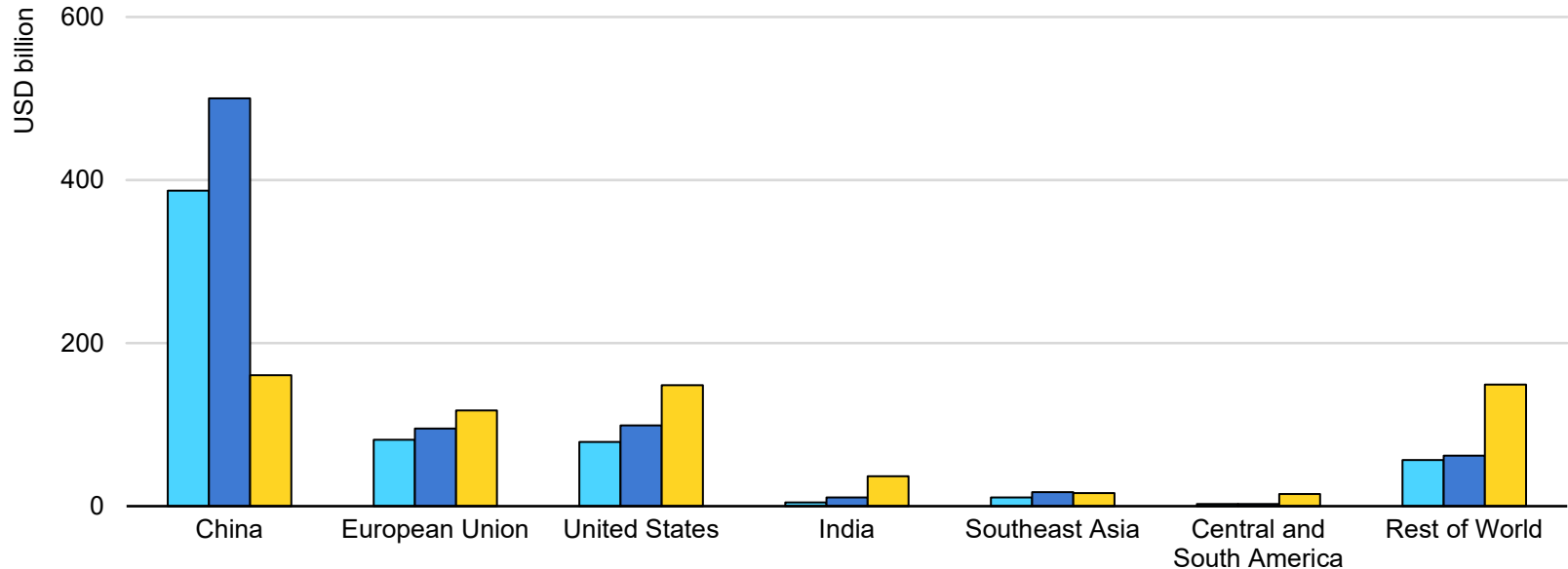
Announced project throughput and deployment for key clean energy technologies in 2030 in the NZE Scenario



For solar PV and batteries, announced projects today already meet and even exceed the deployment levels required in the NZE Scenario in 2030. The gaps remaining for wind, heat pumps and electrolysers are not insurmountable.

Markets for clean technologies constitute a major opportunity

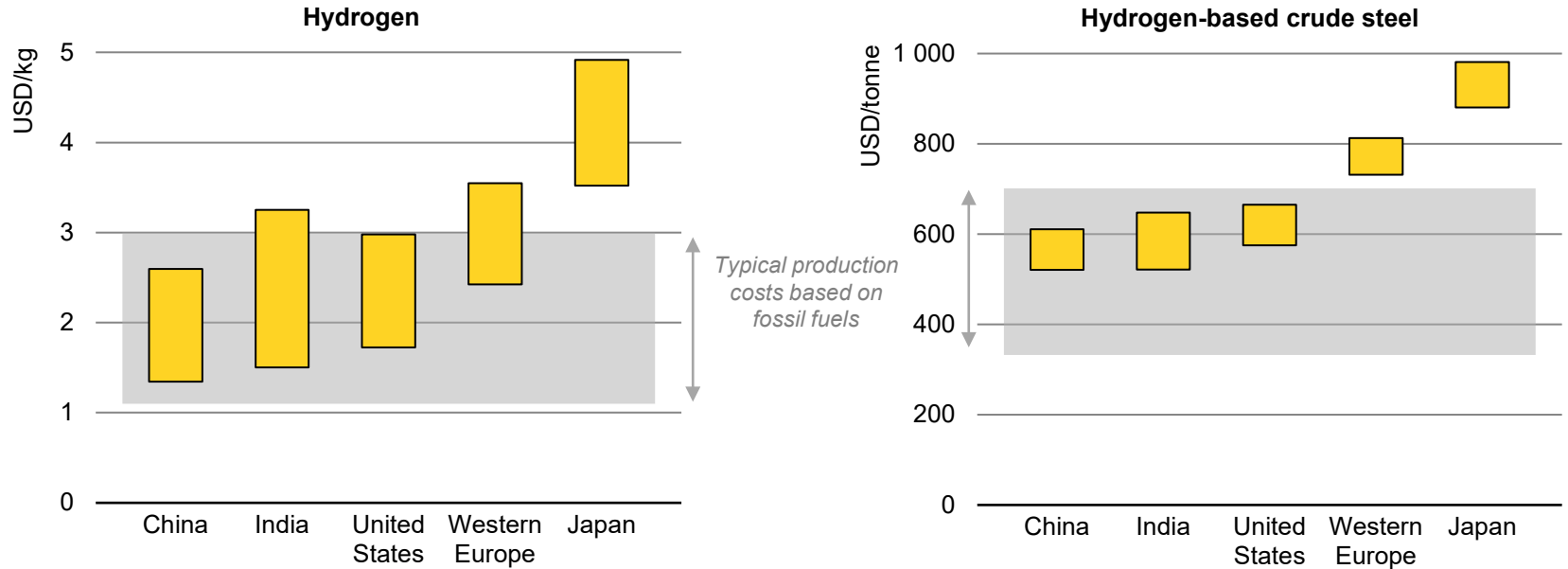
Market sizes for key clean energy technologies in 2030



The combined market value of the outputs from existing and announced projects looks set to reach USD 790 billion per year by 2030, relative to a combined market size in the APS of USD 630 billion for the same clean technologies.

Competitiveness is a key consideration for industrial strategies

Production costs using electrolysis and variable renewables under announced climate pledges, 2030



1. Co-ordinate efforts across supply chains
2. Identify and build strategic partnerships
3. Facilitate investment in emerging market and developing economies
4. Develop a platform to inform the process of identifying strategic partnerships
5. Share best practice and domestic experience
6. Promote manufacturing technologies and strategies to enhance resource efficiency

A bit about the IEA

The IEA family = 80% of global energy demand (and emissions)

31 Member countries



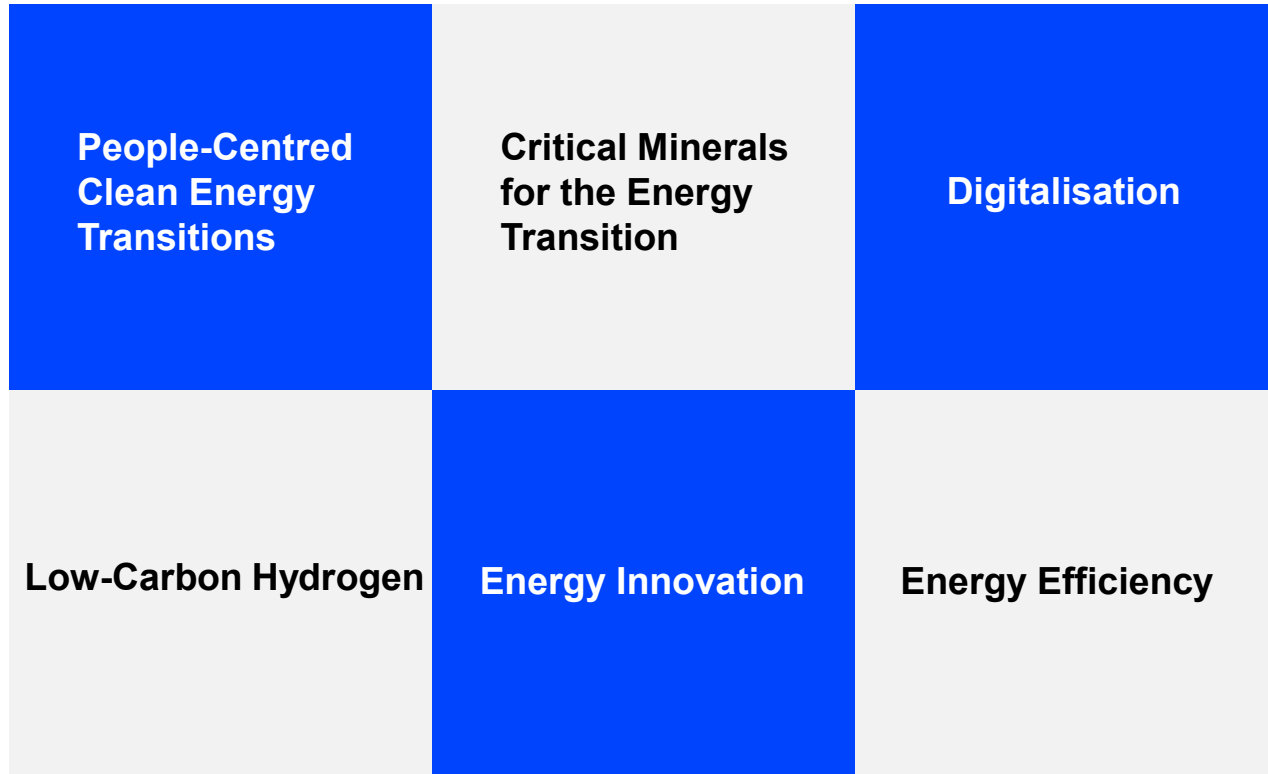
Accession countries



Association countries (since 2015)



Latin America – Main areas of IEA work



High-level Engagement with Latin America



Upcoming 2023 Latin America Energy Outlook Special Report

iea