



Update on energy markets and trends

Tim Gould, Chief Energy Economist

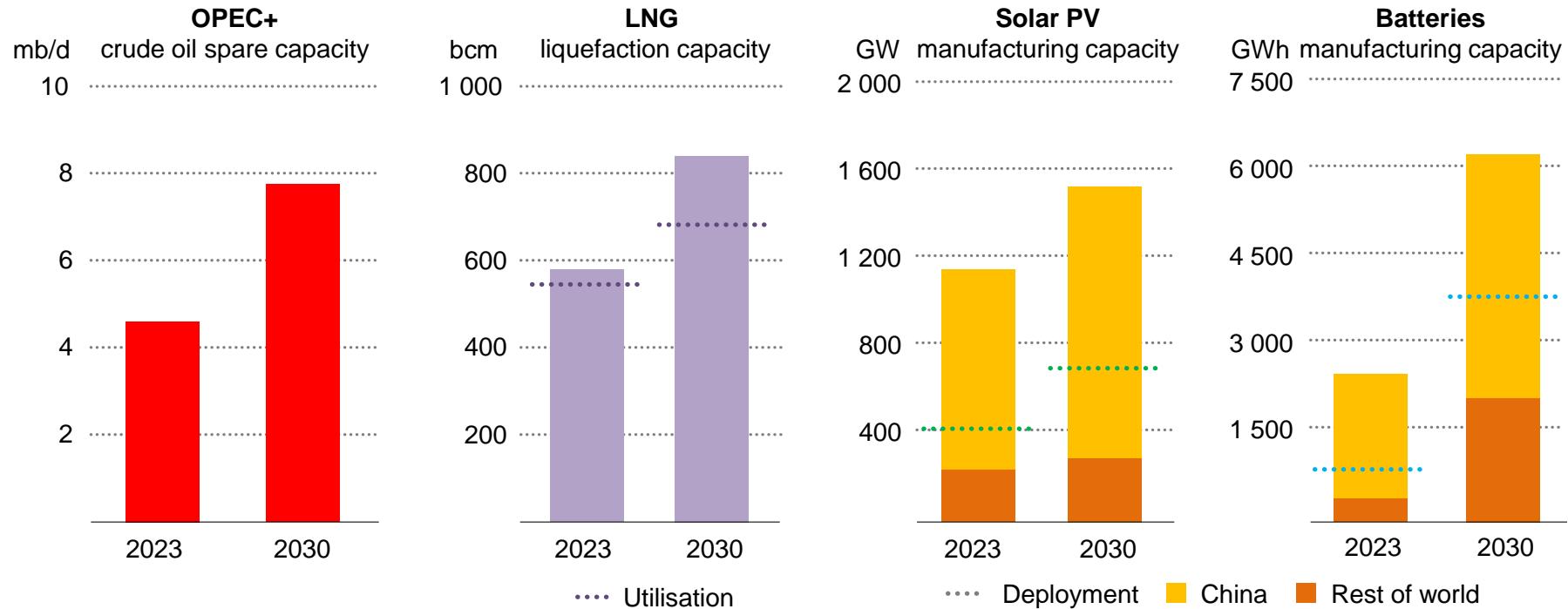
OECD Global Parliamentary Network Plenary Meeting

5-7 February 2025

OECD Conference Centre, Paris, France

Energy security risks remain high even as market balances ease

Capacities and utilisation in the Stated Policies Scenario (STEPS)

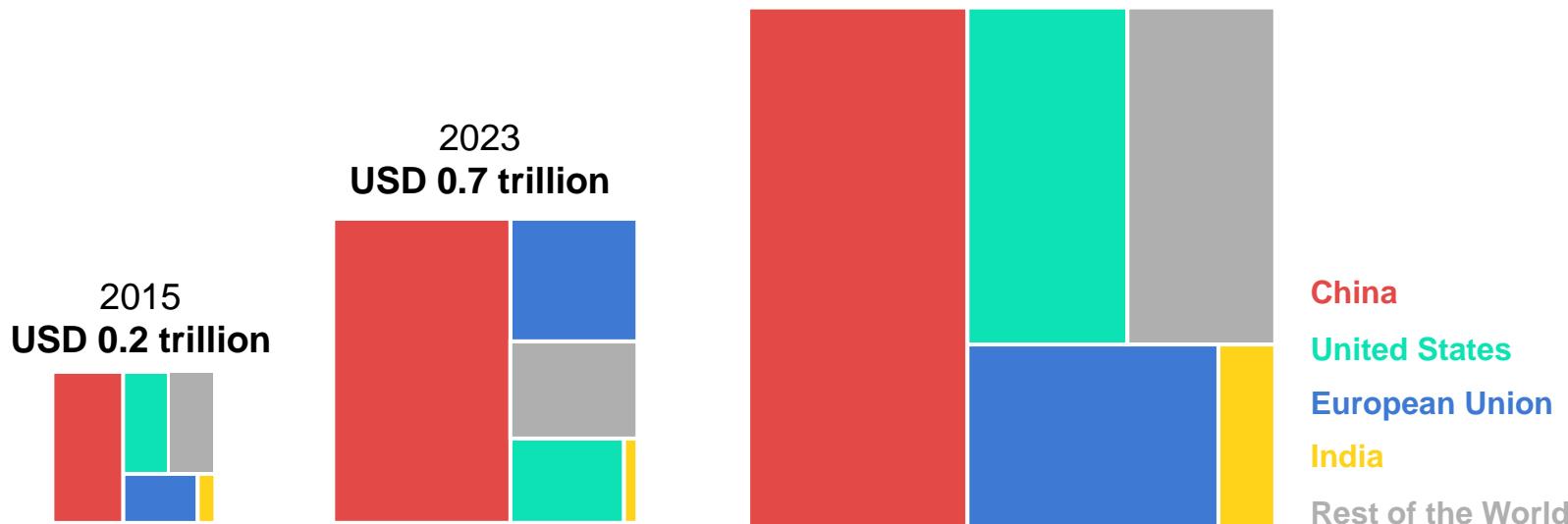


The world is set to enter a new energy market context in the second half of this decade, marked by continued geopolitical hazards but also by relatively abundant supply of multiple fuels and technologies

Clean & modern technologies are a sizeable economic opportunity

Global market value for clean energy technologies

2035 under today's policy settings
USD 2.1 trillion



The market for clean technologies is set to triple to 2035 under current policy settings,
close to value of the global crude oil market in recent years.

Investment in clean technology manufacturing is booming

Clean technology manufacturing facilities in operation, 2023

Solar PV

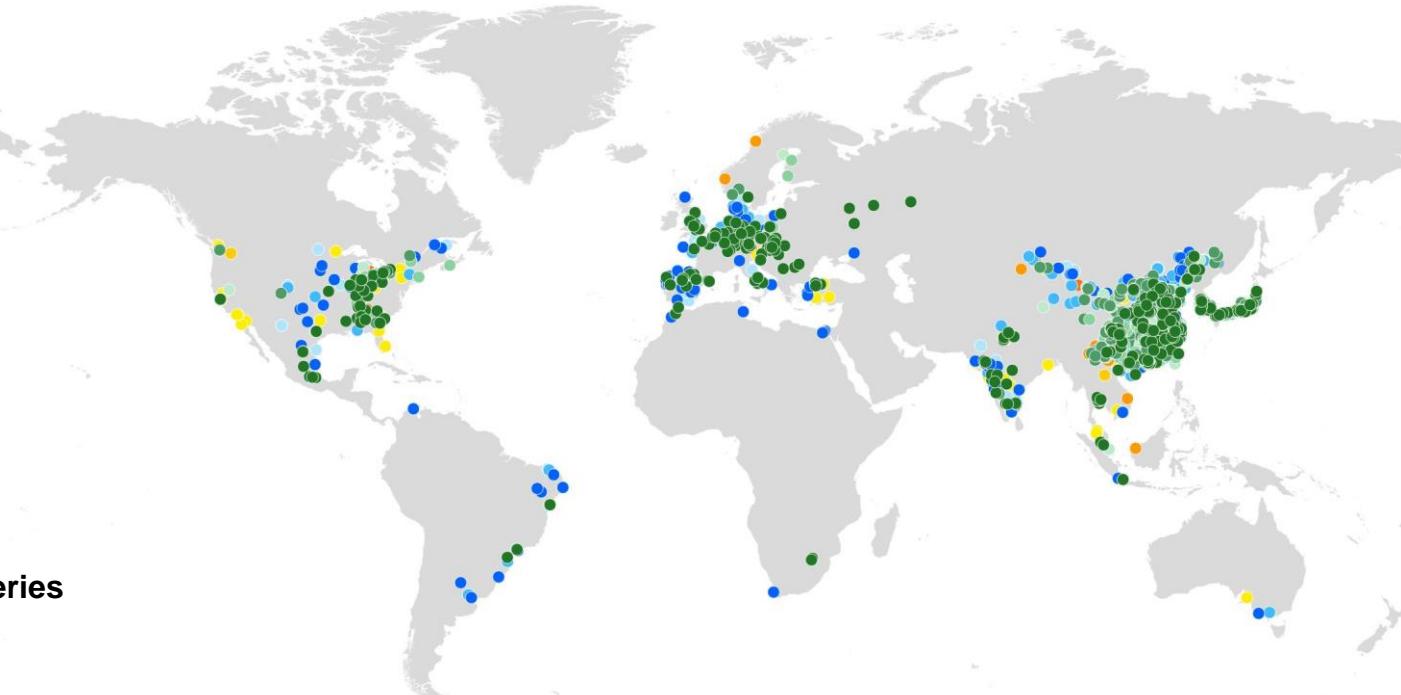
- Polysilicon
- Wafer
- Cell
- Module

Wind

- Blade
- Nacelle
- Tower

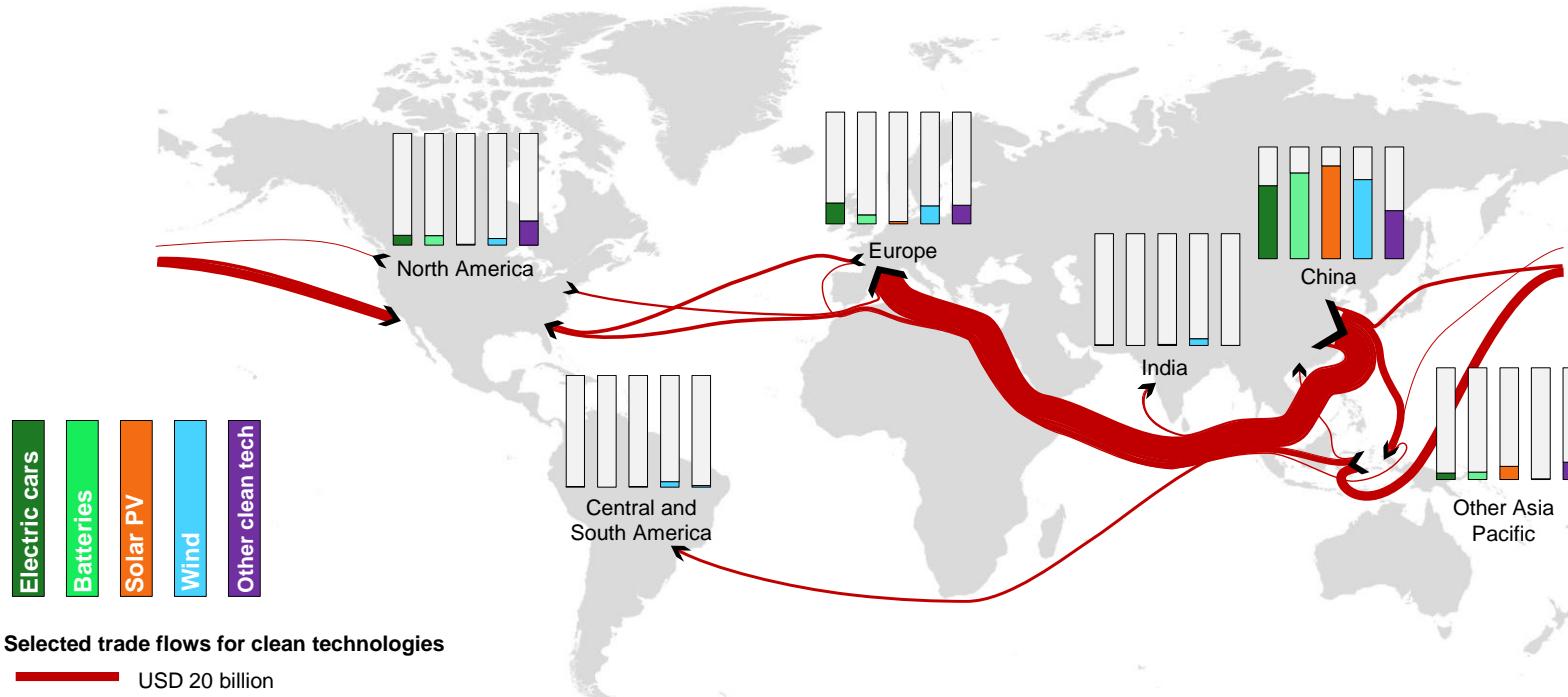
EVs & batteries

- Anode
- Cathode
- Cell
- Electric vehicles



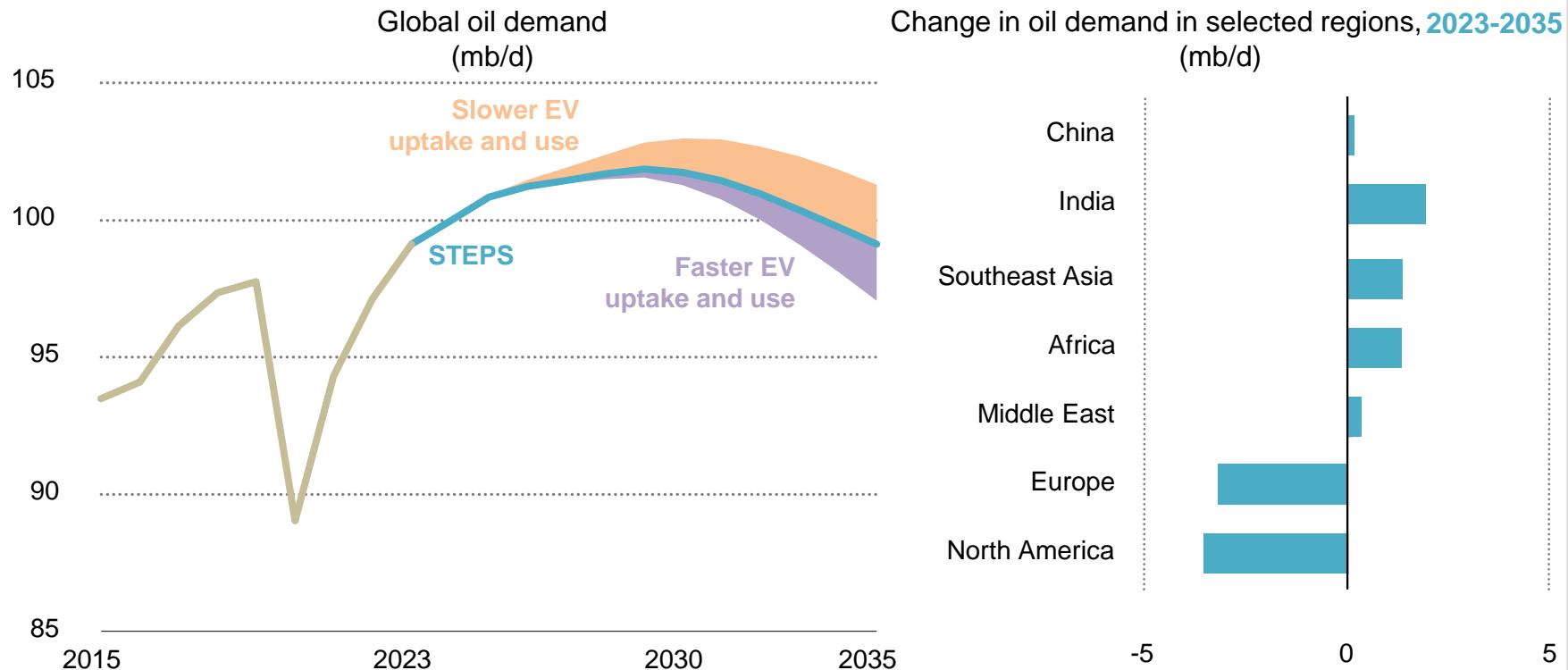
Investment in clean technology manufacturing is booming

Share of global clean technology manufacturing output by technology, 2023



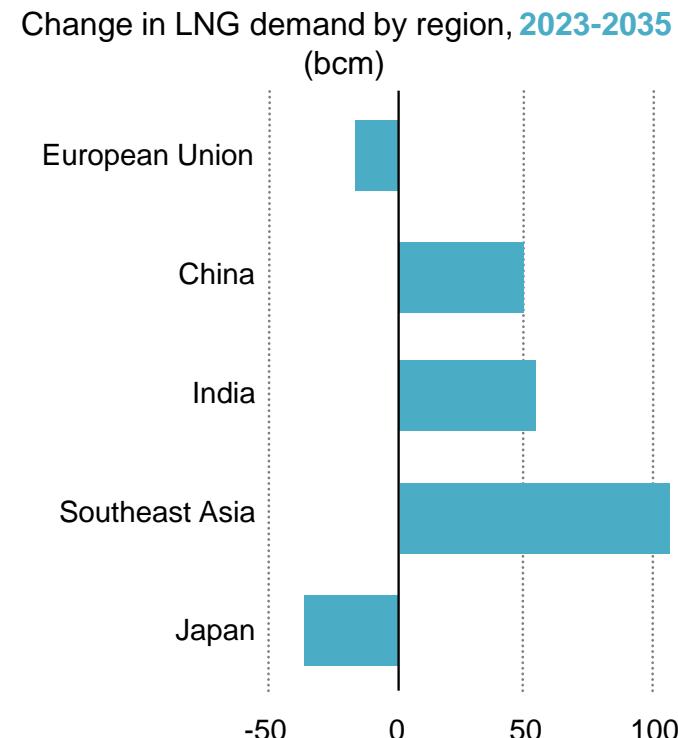
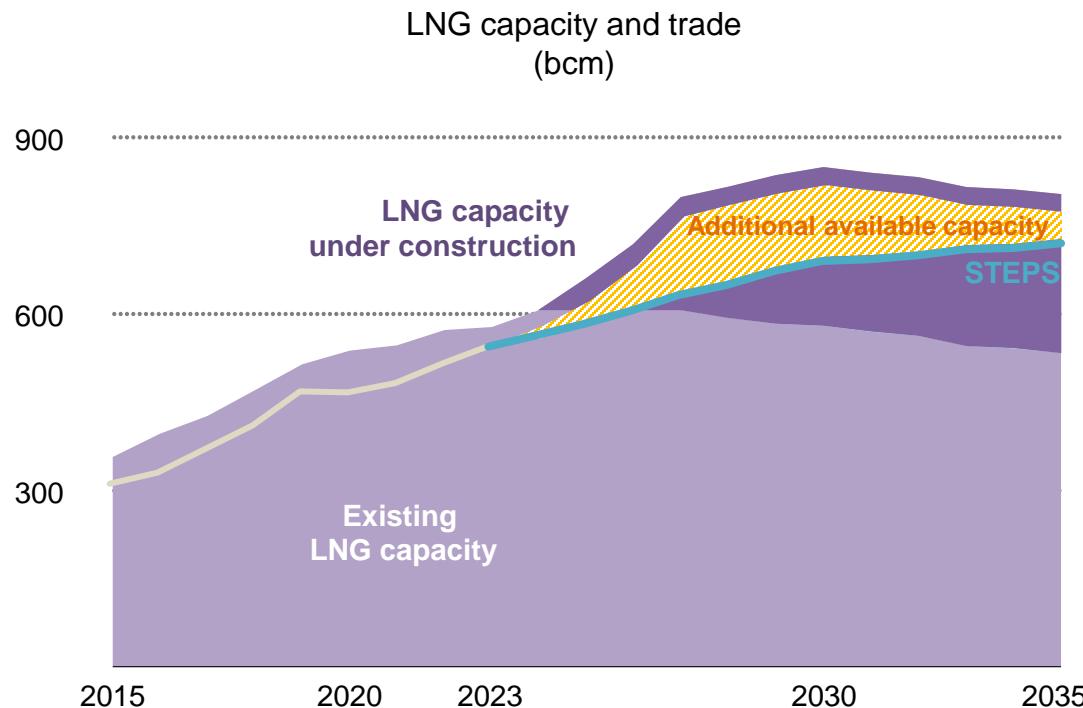
The manufacturing of clean technologies is highly concentrated geographically, with China accounting for around 70% of the global manufacturing output value for the six key clean technologies.

Oil demand's engine is switching to electricity



As China scales up electric mobility, India, Southeast Asia and Africa are the main sources of growth in oil use to 2035. Even if projected uptake of electric vehicles slows in key markets, a peak in oil demand remains on the horizon

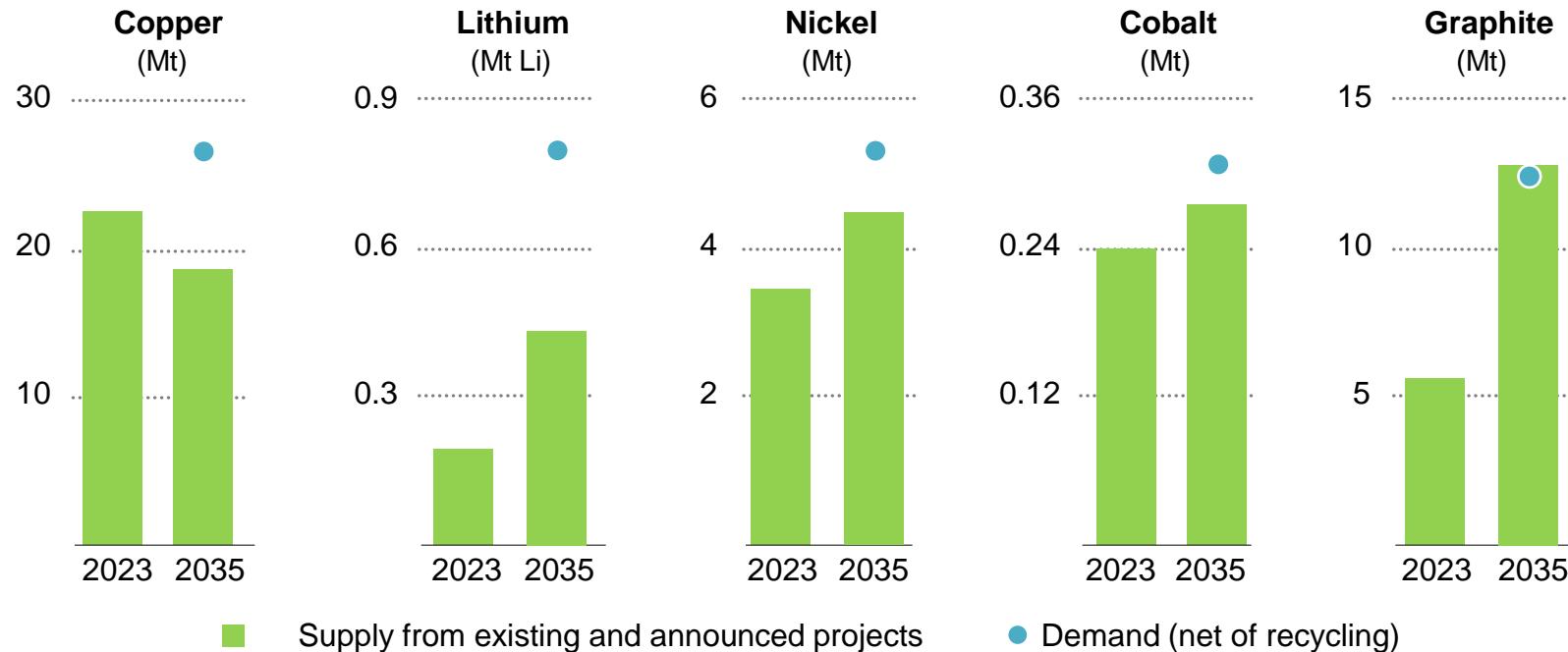
Where will the new wave of LNG go?



An increase of nearly 50% in global LNG export capacity to 2030 brings lower natural gas prices, but imported gas still faces stiff competition from renewables and coal in price-sensitive developing economies

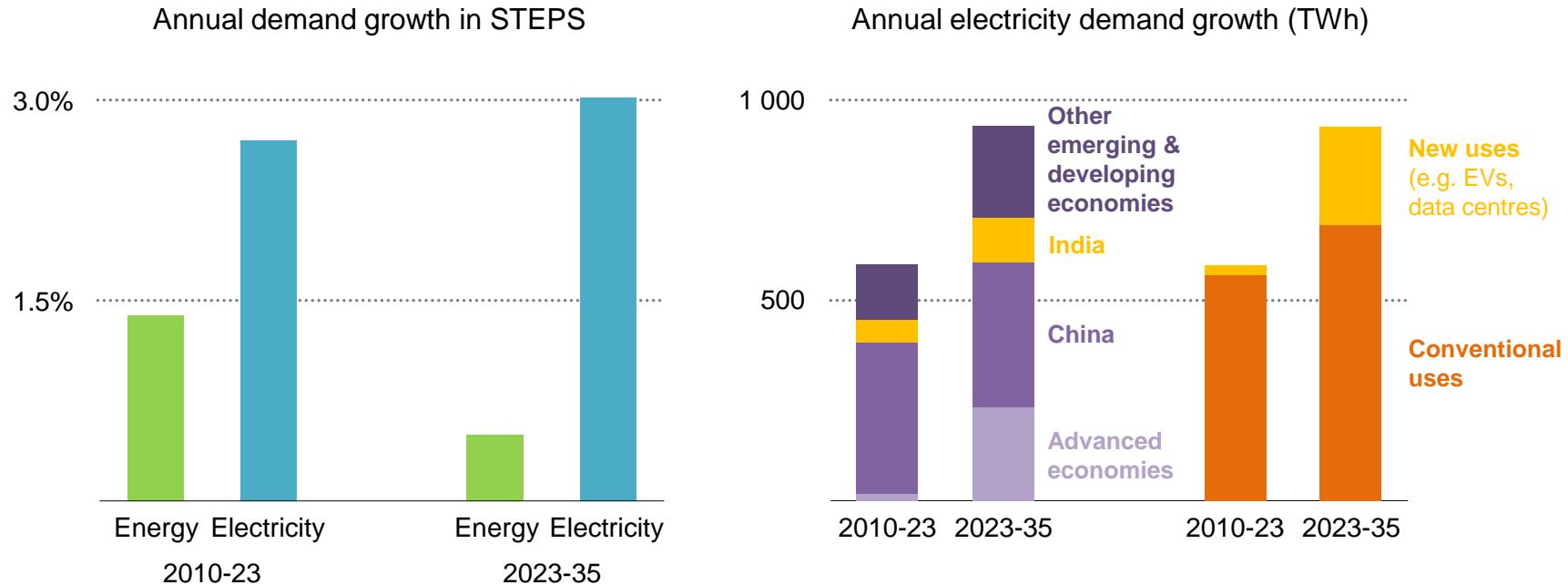
Not all projected supplies are abundant

Mineral supply requirements and expected supply from existing and announced projects



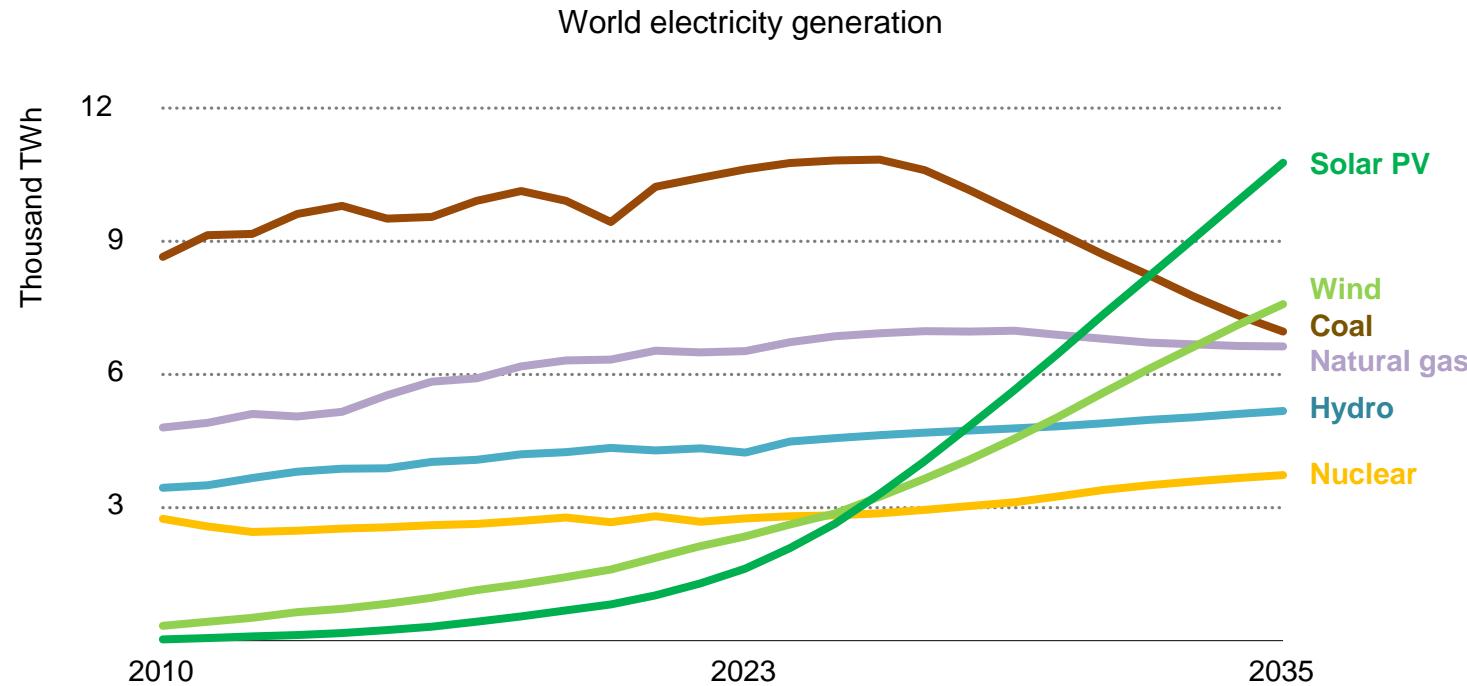
Supply from existing and announced projects falls short of 2035 requirements for some key minerals, notably copper and lithium: additional efforts on recycling and new project development are needed to close the gap

Moving at speed into the Age of Electricity



Electricity is growing faster than all other energy sources and it's growing across a wide range of economies, as conventional drivers of growth are supplemented by new ones like EVs, data centres and heat pumps

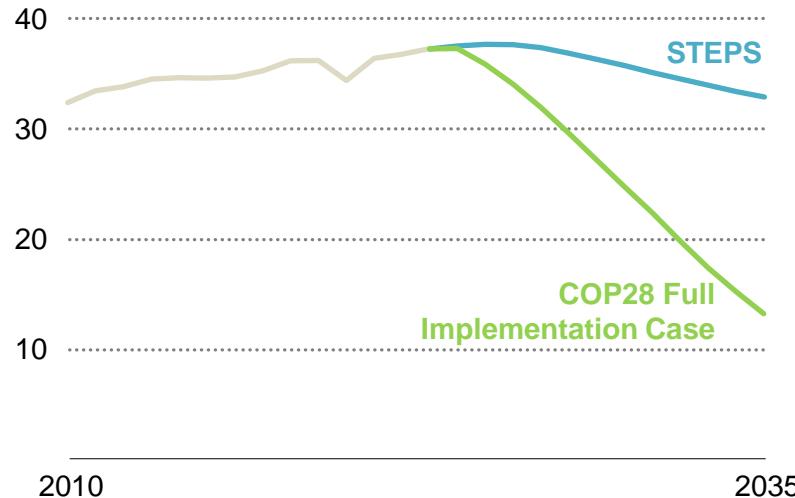
Electricity use is growing fast, clean power is rising even faster



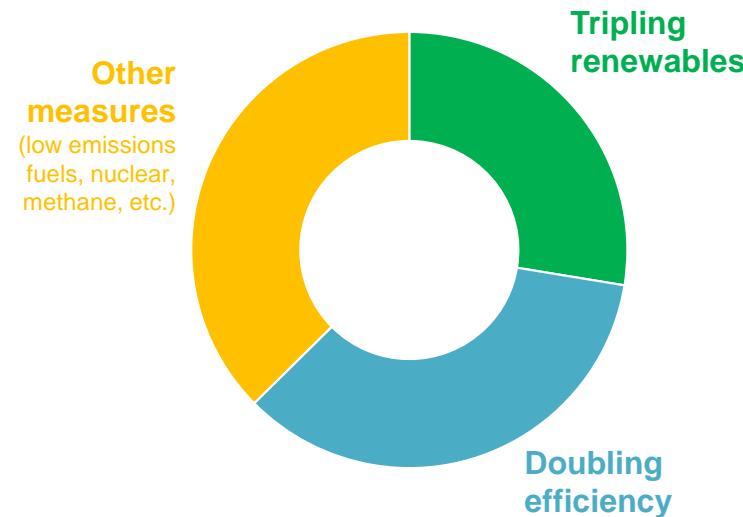
Solar PV and wind hit their stride and become the largest sources of electricity before 2035 in STEPS, complementing other clean sources like hydro and nuclear, and pushing coal into decline

An imminent peak in global emissions, but not yet a rapid decline

Global energy related CO₂ emissions
(Gt CO₂)



Share of emissions reductions to 2035 between STEPS and the COP28 Full Implementation Case



Policies and market trends are strong enough to deliver an imminent peak in global emissions, but full implementation of the COP28 energy goals is needed to accelerate their decline towards net zero emissions by 2050

iea