# World Energy Outlook 2025

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International Energy Agency

# Each WEO scenario maps out a distinct energy future

**Exploratory Scenarios**

The **Current Policies Scenario**
Anchored in enacted laws and measures

The **Stated Policies Scenario**
A dynamic reading of today's policy settings

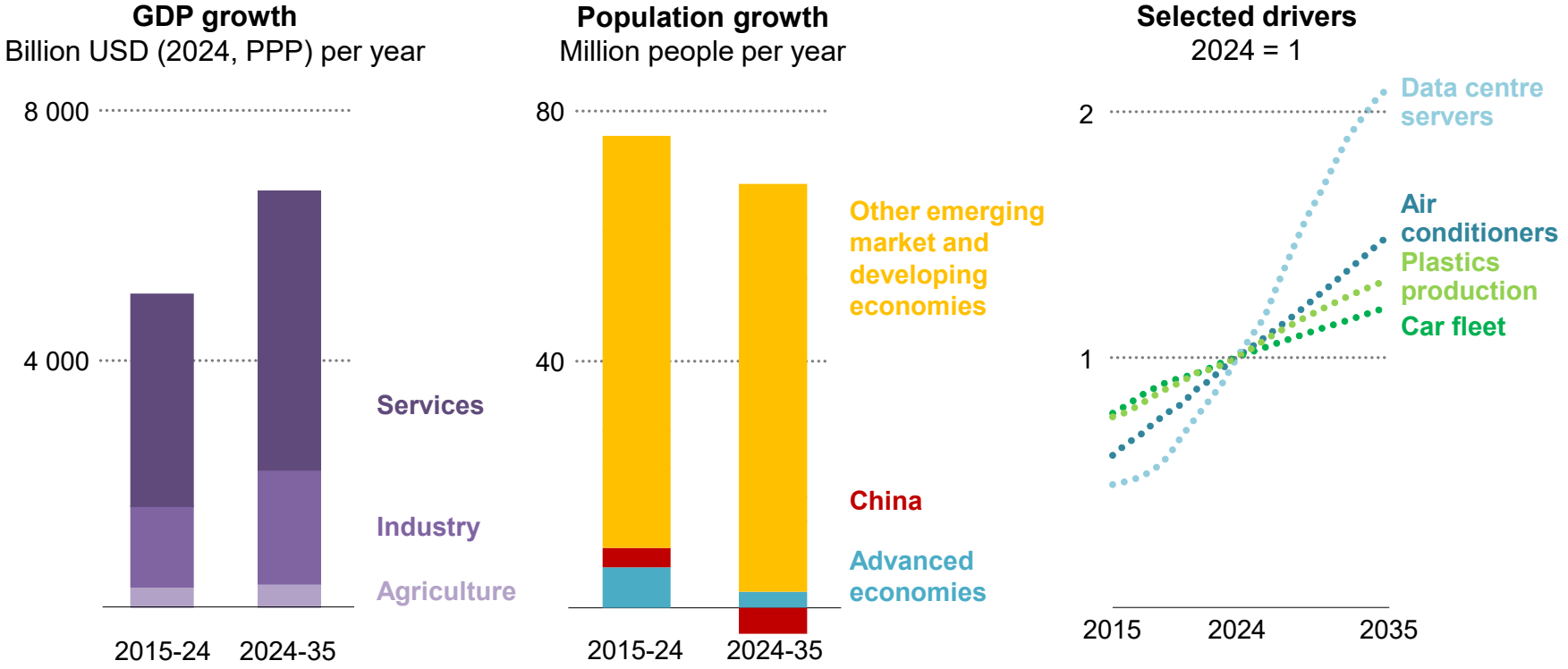
**Normative Scenarios**

The **ACCESS Scenario**
A roadmap for universal energy access to electricity and clean cooking

The **Net Zero Emissions by 2050 Scenario**
A global pathway to limit warming to 1.5°C

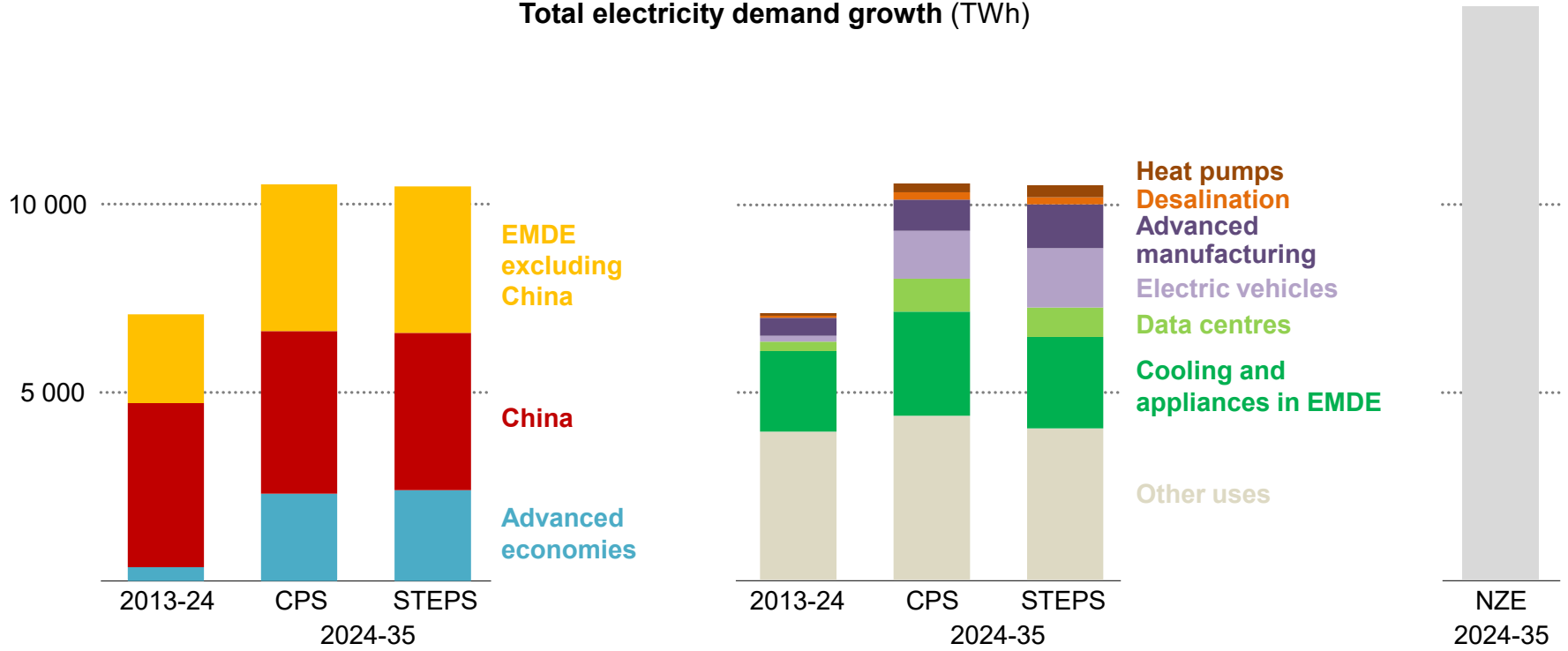
**All scenarios use the latest data on energy supply and demand, markets, projects and technology costs. Exploratory scenarios set starting conditions and see where they lead; normative scenarios work towards specific outcomes.**

# New players set the trends as energy needs rise



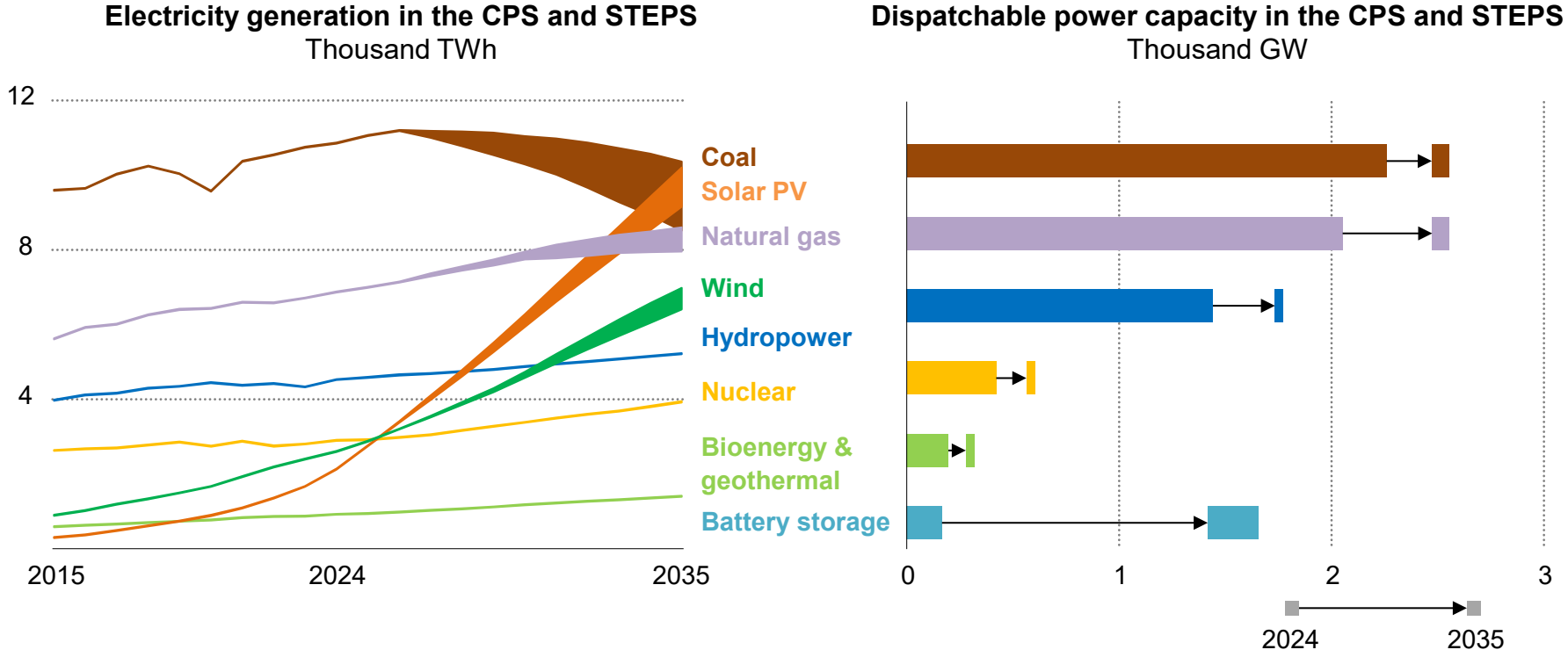

**Energy needs grow but the drivers are changing: the global economy is becoming more focussed on services, population growth slows and concentrates in developing economies outside China,**

# The Age of Electricity is here



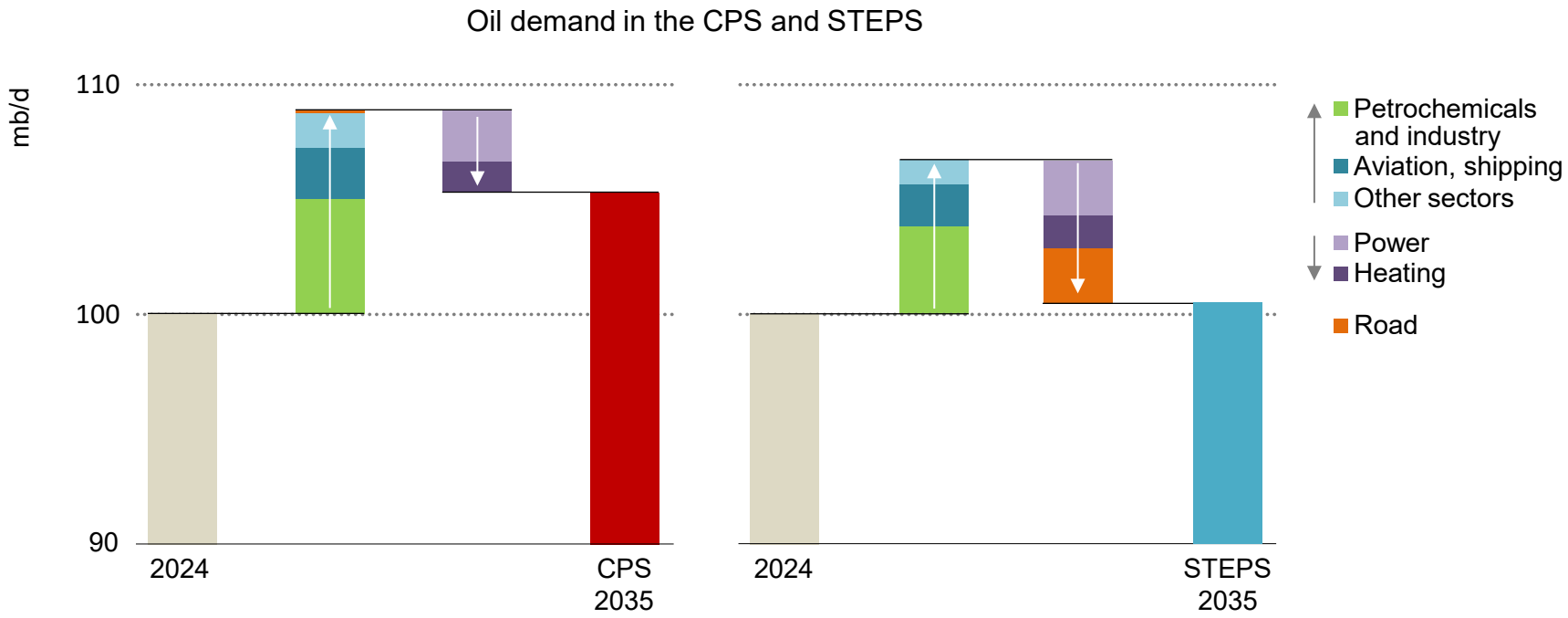

**Electricity demand accelerates in all scenarios as growth resumes in advanced economies and strengthens across emerging markets. Electricity is key to major growth areas for the economy such as advanced manufacturing & AI.**

# Changing power systems are reshaping electricity security



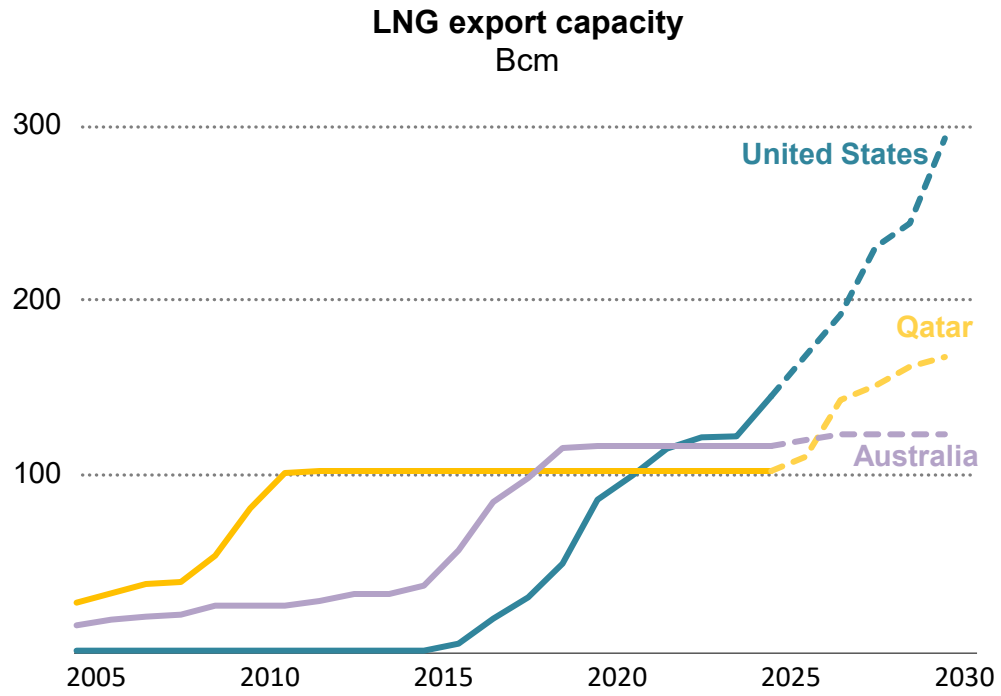

**Renewable energy is on the rise led by solar PV and nuclear makes a comeback, natural gas continues to grow; robust electricity security strategies require dispatchable sources, more flexibility & resilience, and modernised grids**

# Turning points for oil markets and EVs

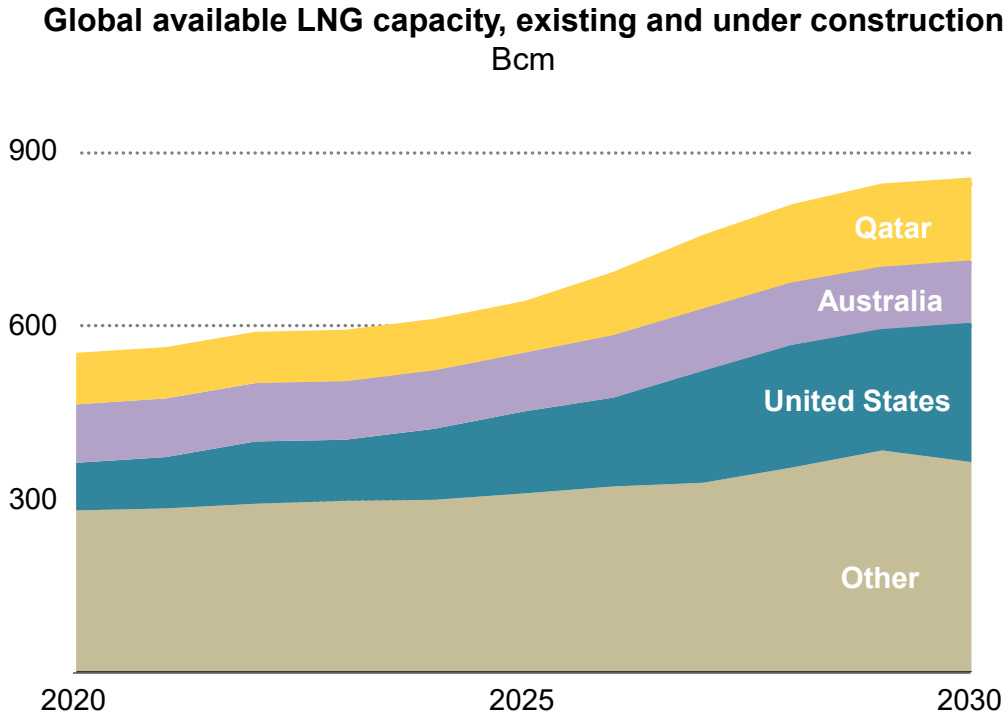


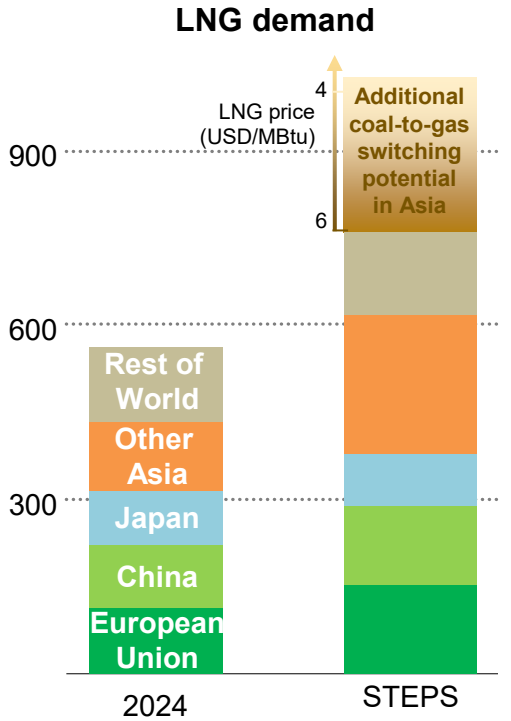

**Road transport is the sector that explains continued oil growth in CPS versus a flattening around 2030 in STEPS; China and Europe deepen electrification in all scenarios, but open questions remain about EV uptake rates elsewhere**

# New US project approvals add to the wave of LNG



# Where will all the LNG go?



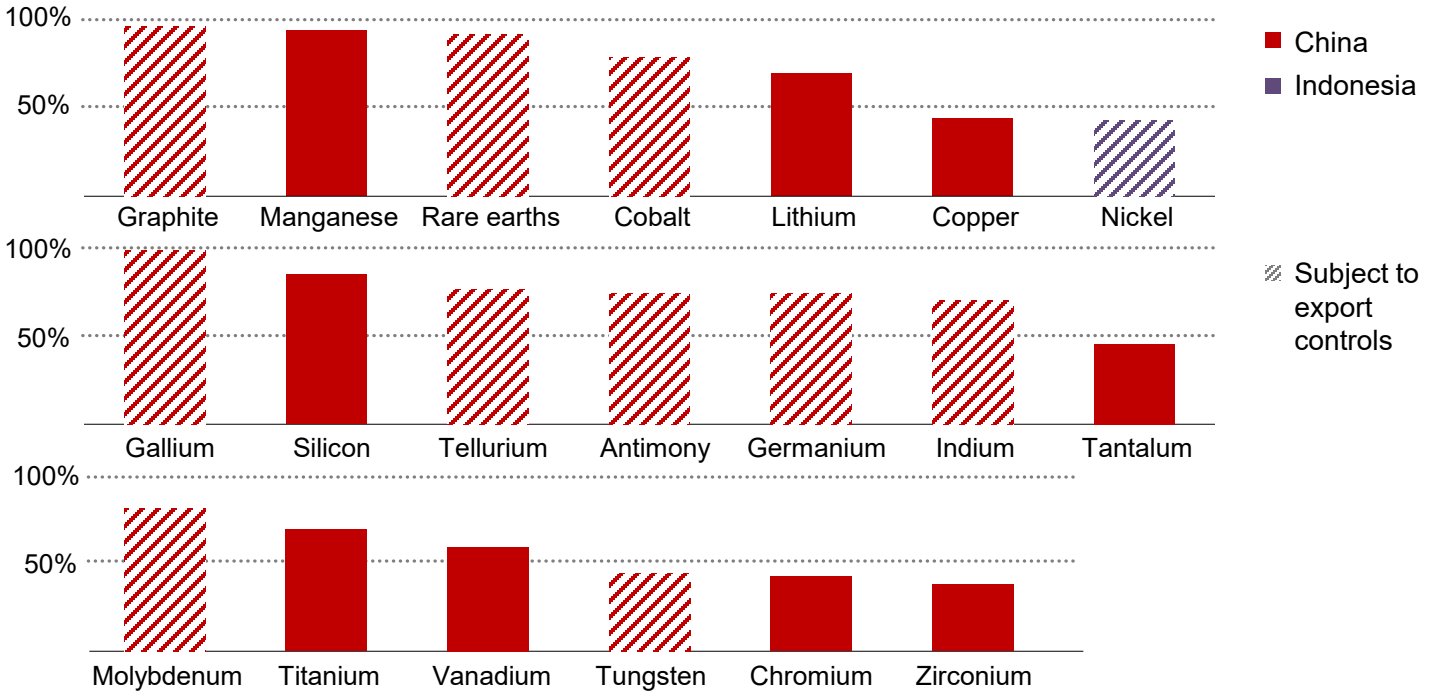

**The LNG supply wave supports strong demand growth. A surplus emerges in STEPS in 2030, but this is cleared in the CPS due to a slower pace of transition. Much lower LNG prices could stimulate additional coal-to-gas switching.**

# Critical minerals: high concentration raises supply risks

**Batteries, grids, renewables**

**AI, data centres, high-techs**

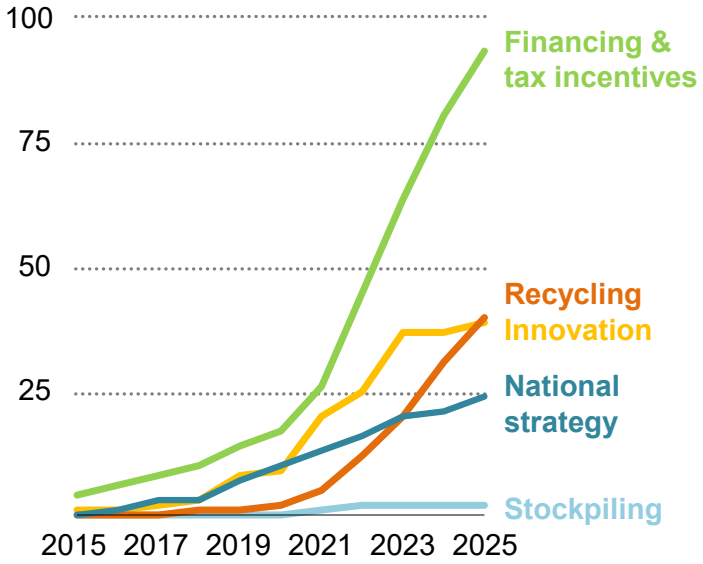
**Aerospace, industry, defence**



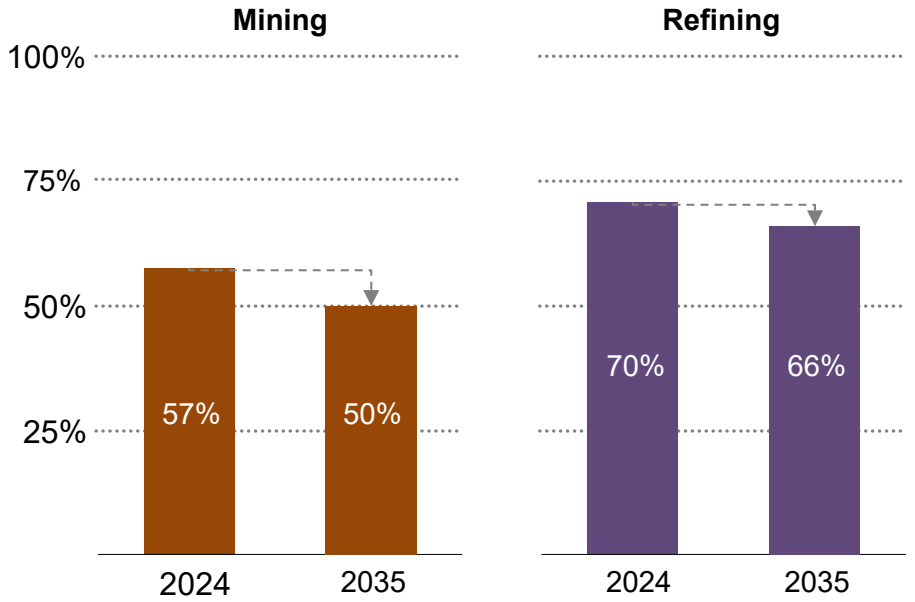

**Critical minerals are vital not only for energy security but also for broader economic resilience, but the remarkably high level of market concentration leaves global supply chains vulnerable to disruptions**

# Diversification efforts need to look beyond mining

**Number of critical mineral policies**
(since 2015)



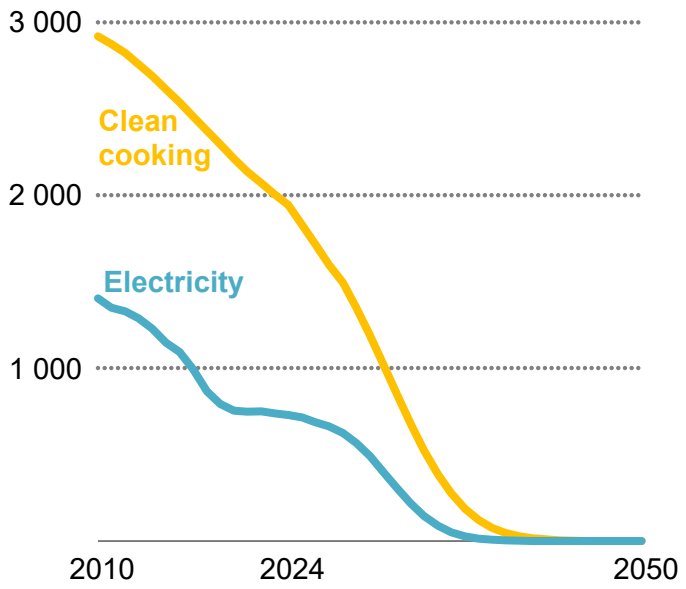

**Average share of top producing country for key energy minerals**



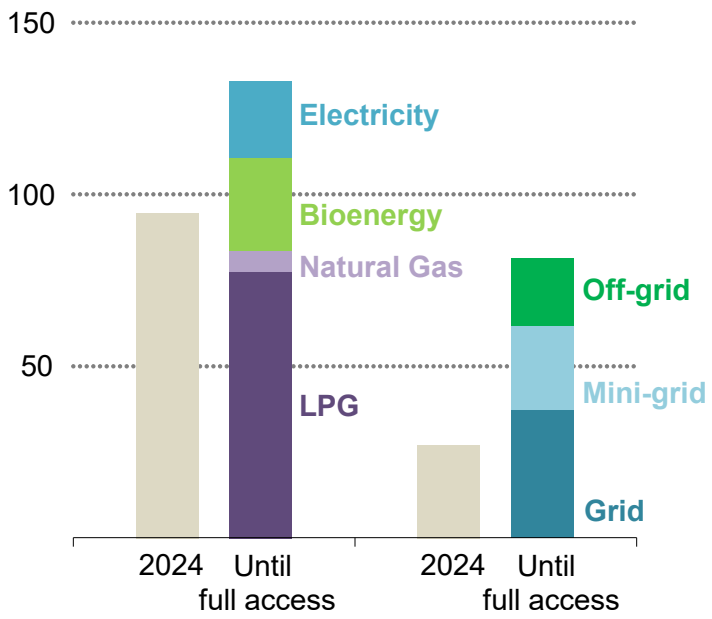

**Governments have woken up to the risks of high concentration, but accelerated efforts are needed to underpin more resilient and diversified supply chains, especially in processing and refining**

# Shifting gears to achieve access for all

**Population lacking access**
Million people

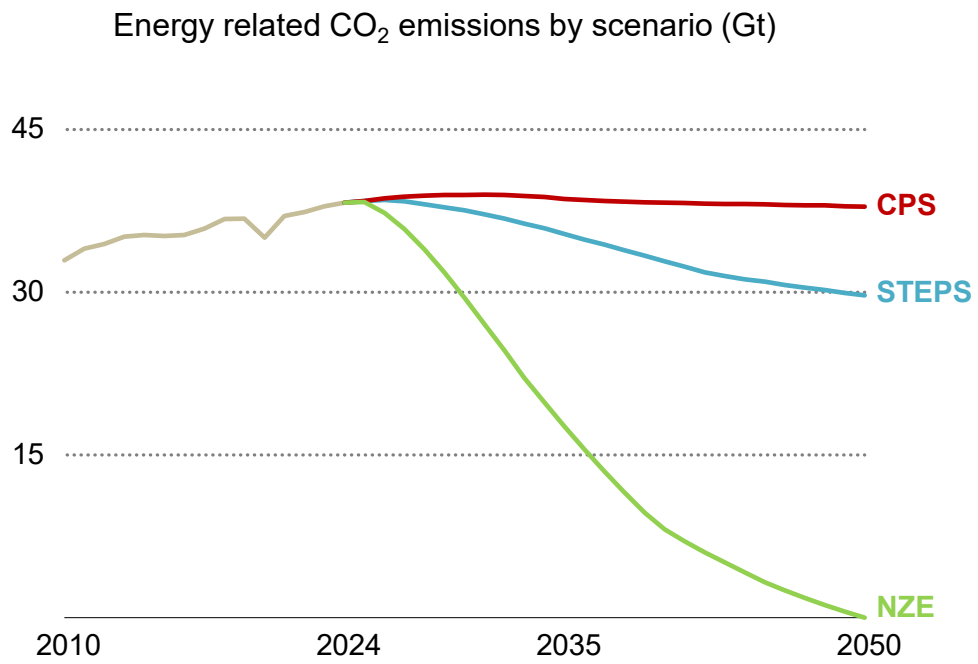



**Annual average population gaining access**
Million people




**Hundreds of millions will still lack energy access by 2030 at the current pace of progress, largely in Africa. Replicating best historical rates of progress would close the electricity access gap by 2035 and clean cooking by 2040**

# Diverging futures for global emissions and climate change




**All scenarios exceed 1.5 °C of warming on a regular basis by 2030; tried and tested technologies & policies are available to accelerate transitions, but returning below 1.5 °C will now also require large-scale carbon removal**

