

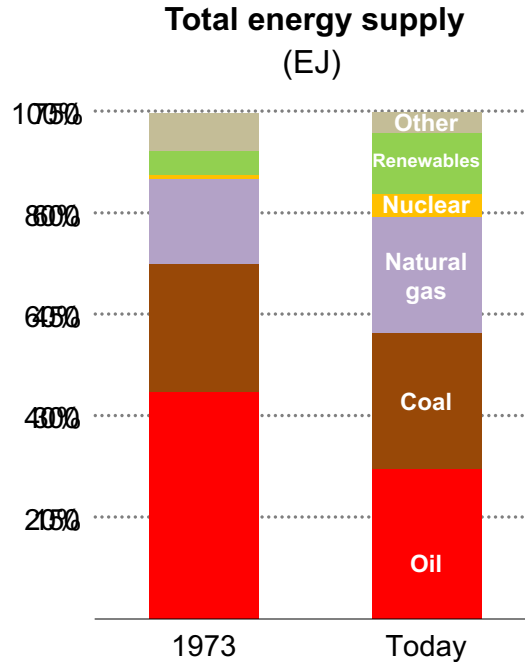


World Energy Outlook 2023

Tanguy de Bienassis - Ryo Yamasaki

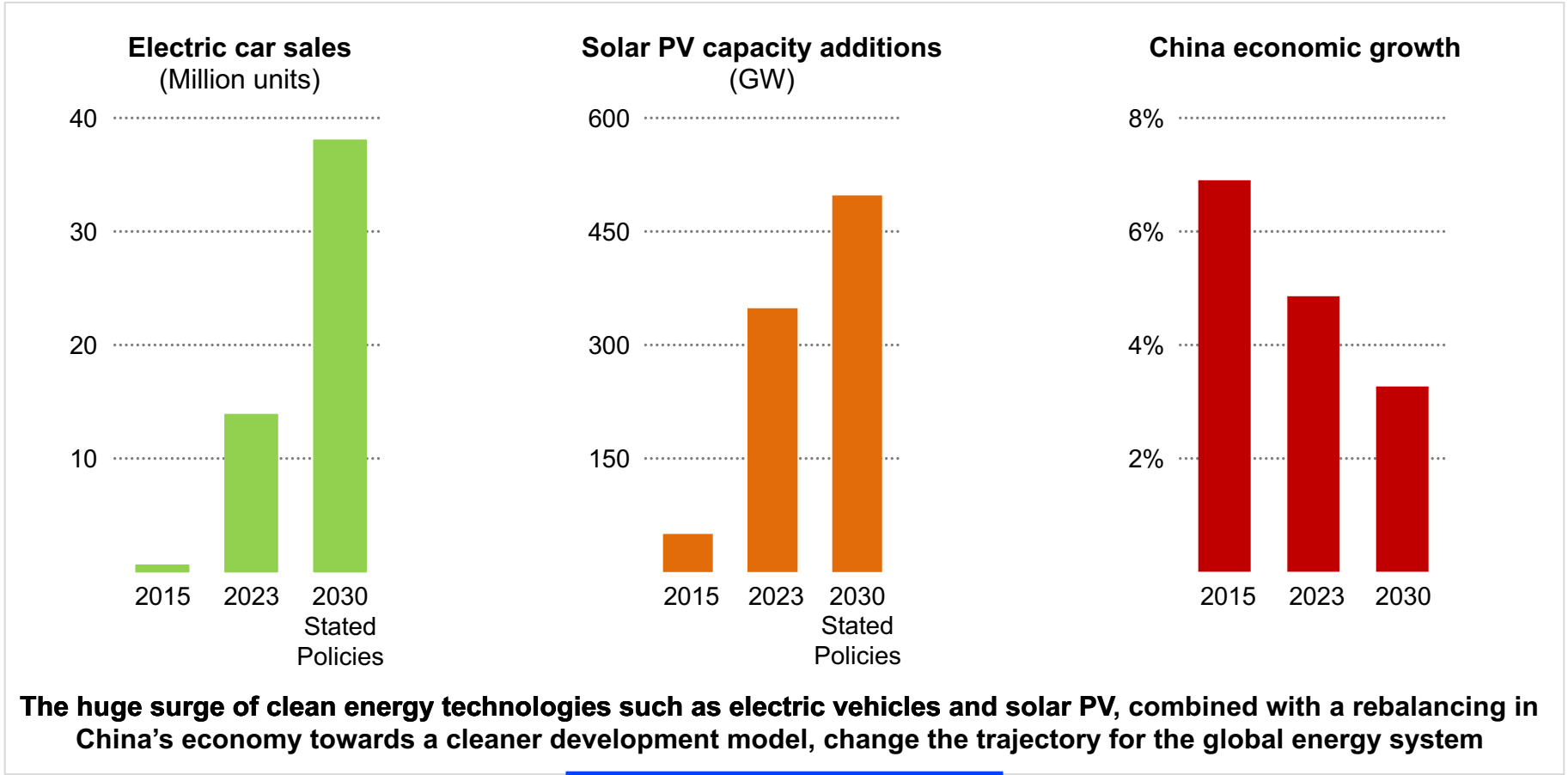
11 December 2023 – Nordic Baltic Energy Conference

Fifty years on from the first oil shock



**The world still faces acute energy security vulnerabilities,
but also has more tools than ever to change the outlook for global energy**

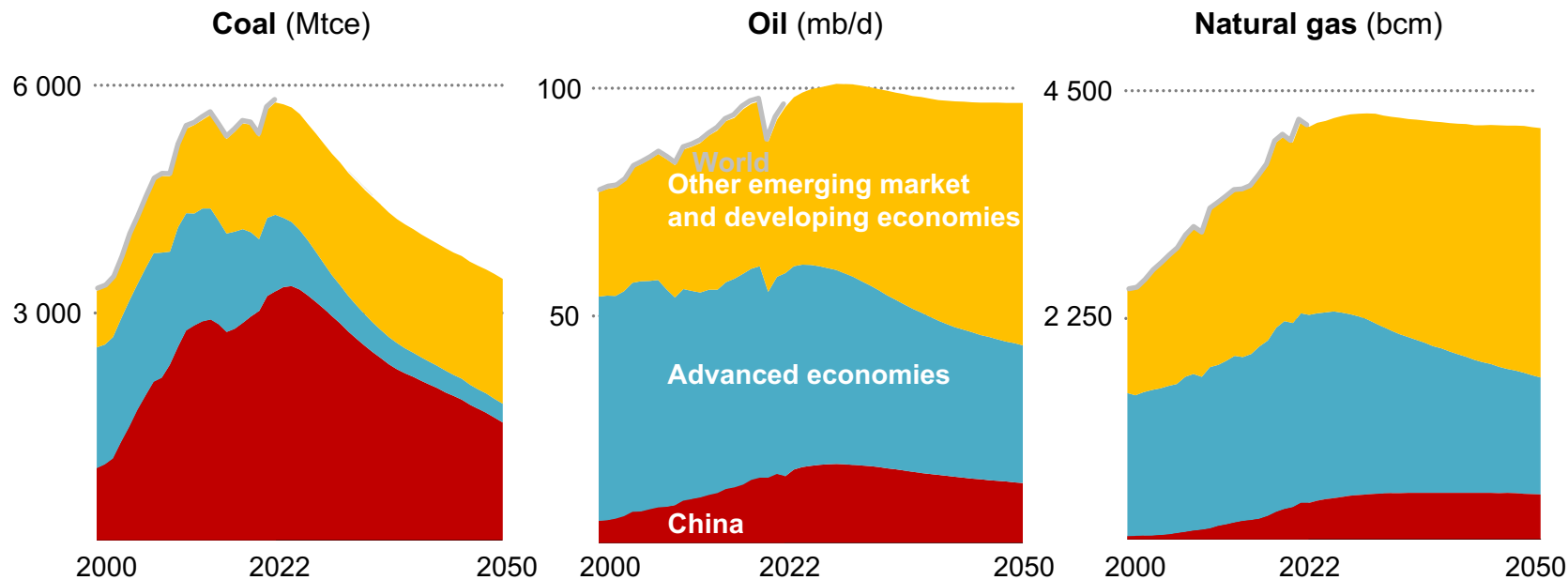
Major structural shifts reshape the new *Outlook*



The huge surge of clean energy technologies such as electric vehicles and solar PV, combined with a rebalancing in China's economy towards a cleaner development model, change the trajectory for the global energy system

On track for a peak in all fossil fuels before 2030

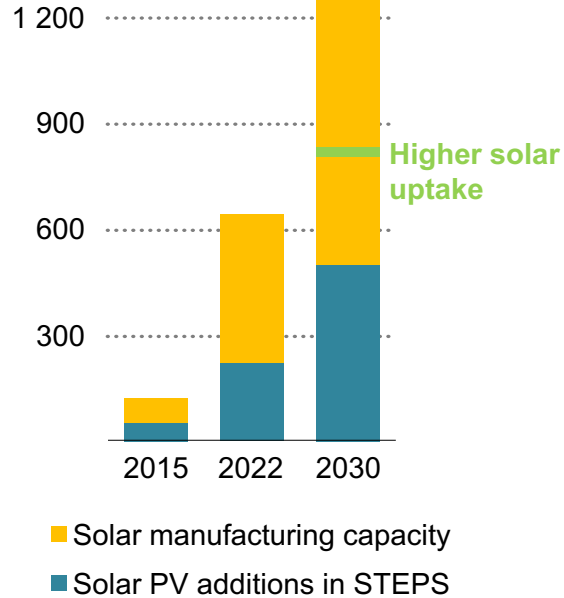
Fossil fuel demand in the Stated Policies Scenario (STEPS)



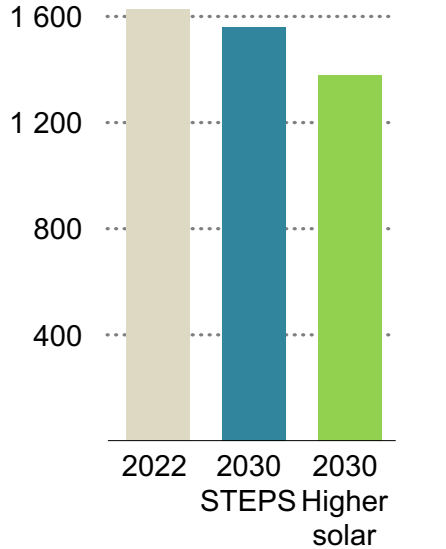
For the first time, today's policy settings are strong enough to generate peaks for coal, oil and natural gas this decade; the share of fossil fuels starts to edge downwards from 80% today to 73% in 2030

A solar boom could accelerate the shift away from fossil fuels

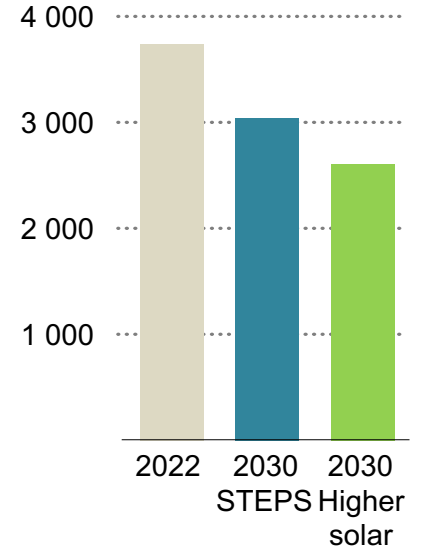
Solar PV (GW)



Natural gas use in power (bcm)

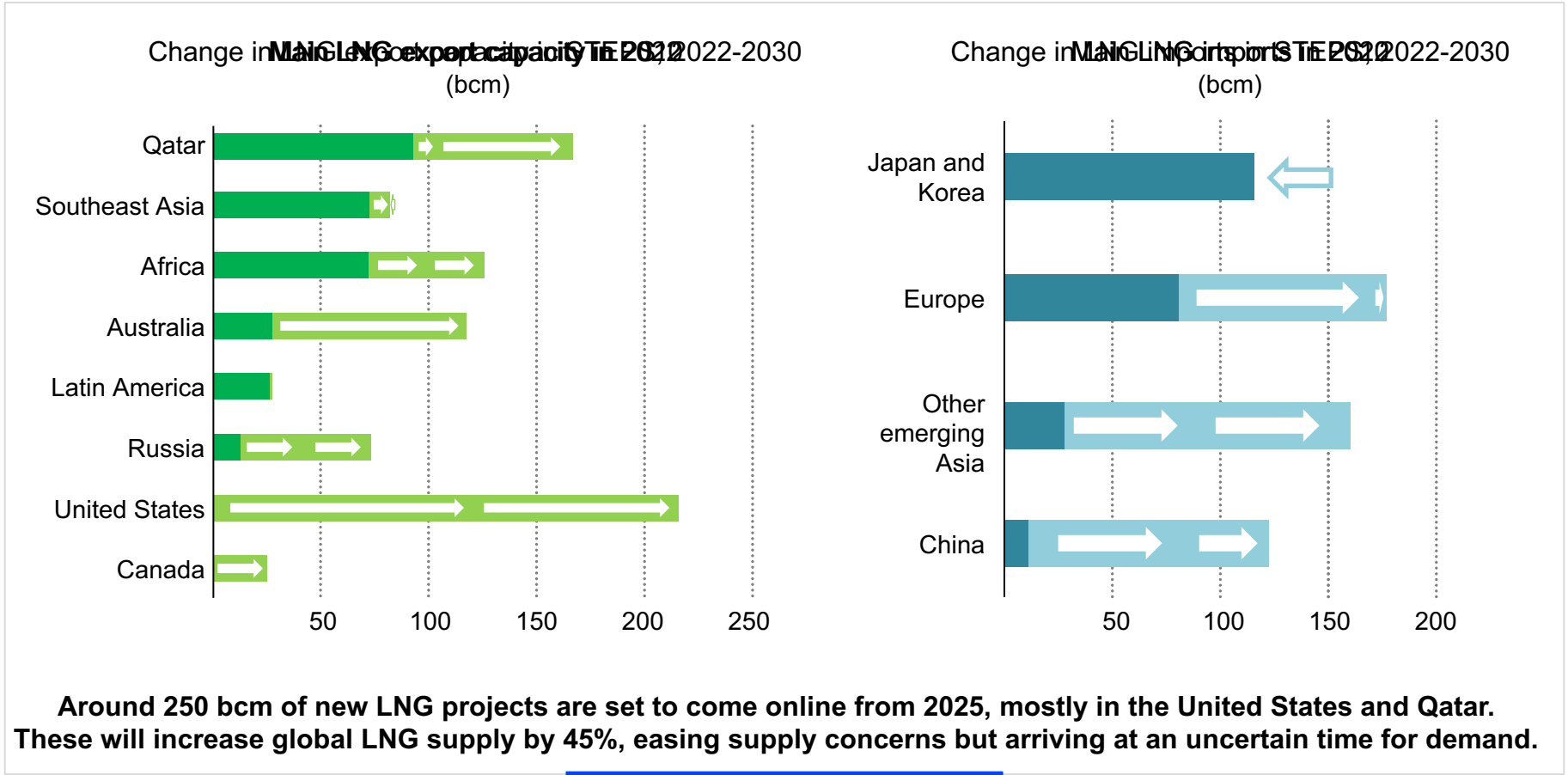


Coal use in power (Mtce)

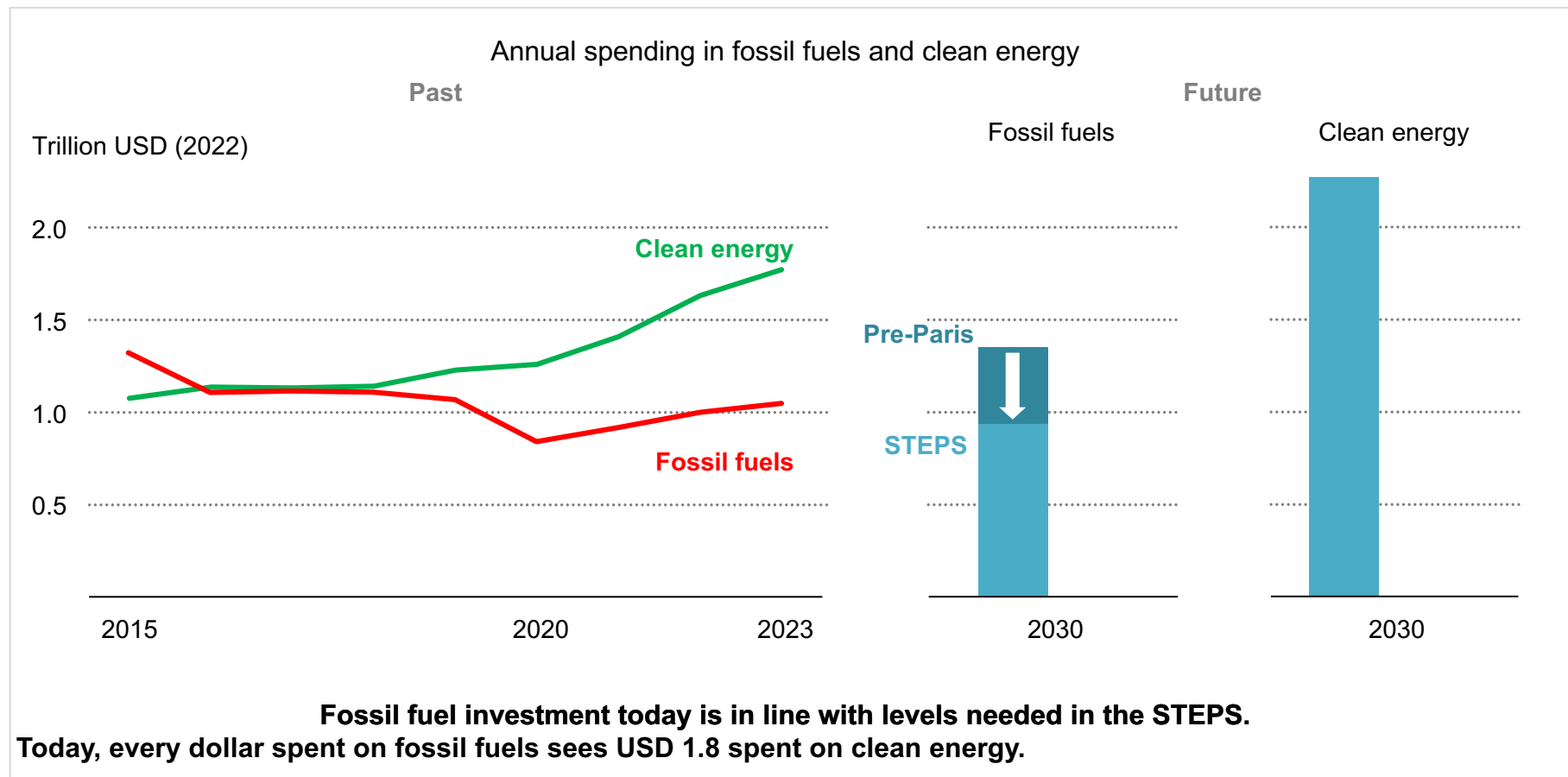


Ample global manufacturing offers considerable upside for solar. Effectively integrated, this would further cut natural gas and coal use, making the declines steeper.

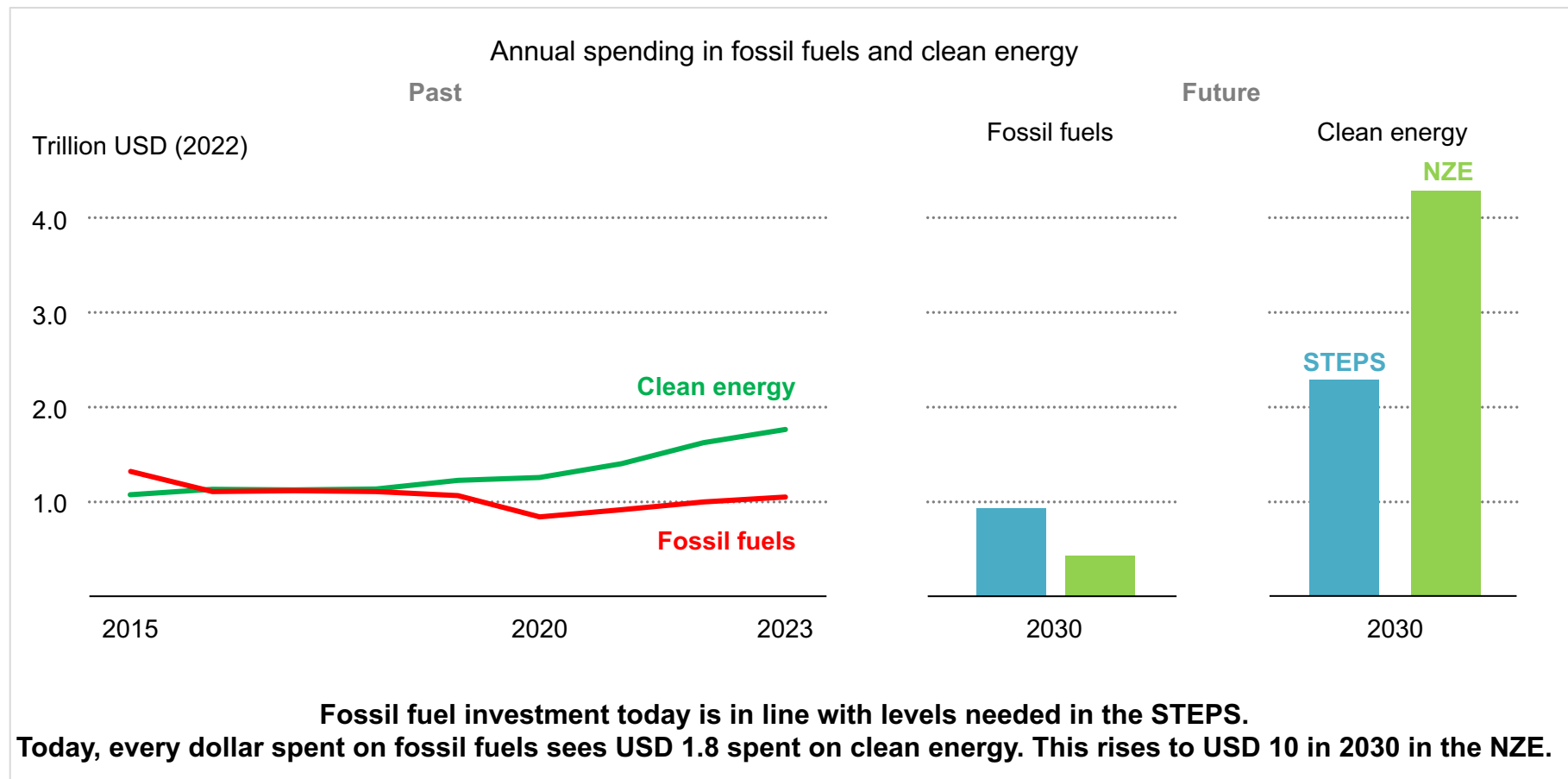
A wave of LNG export projects is set to overturn gas markets



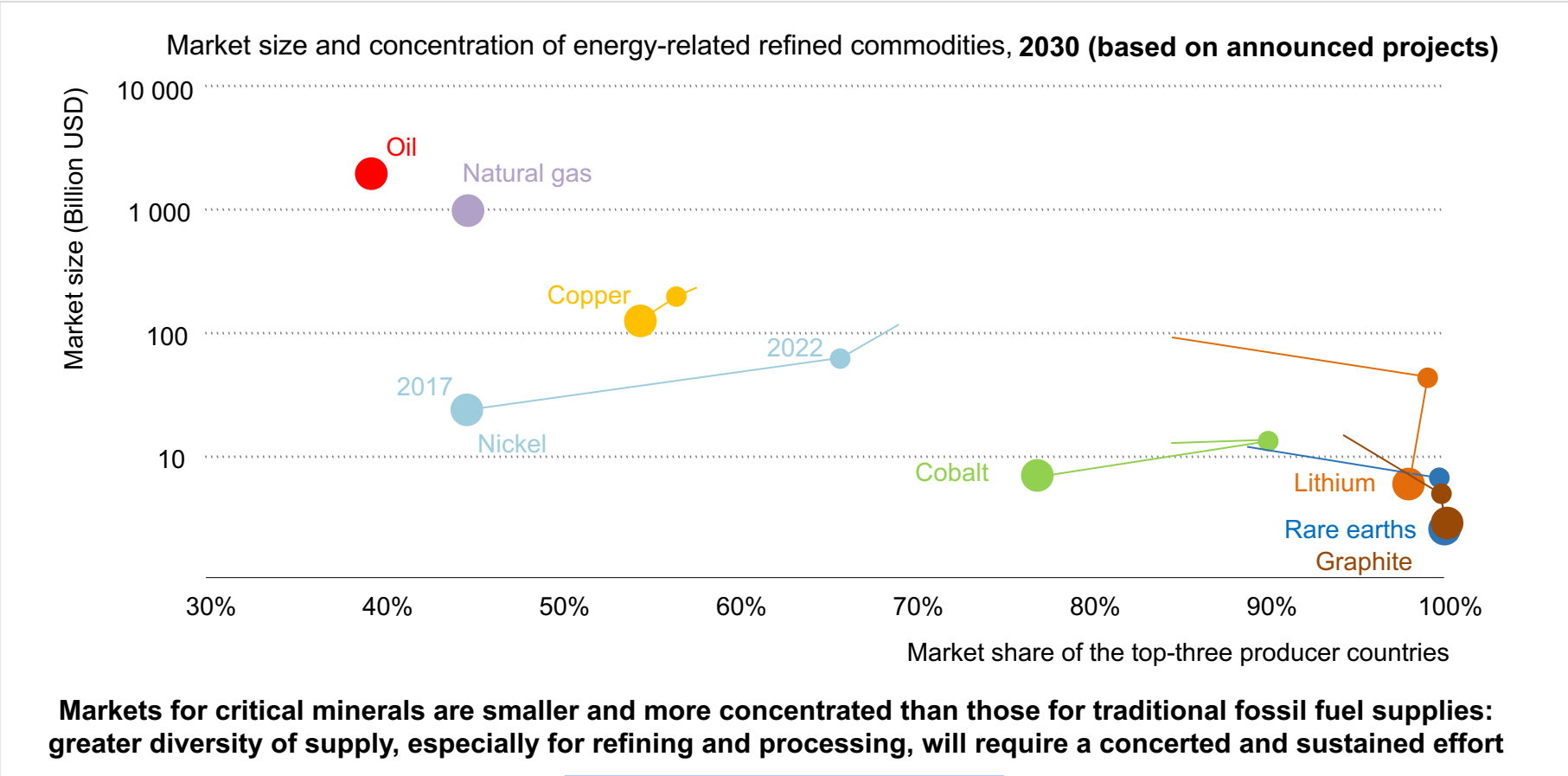
New dynamics for energy investment



New dynamics for energy investment

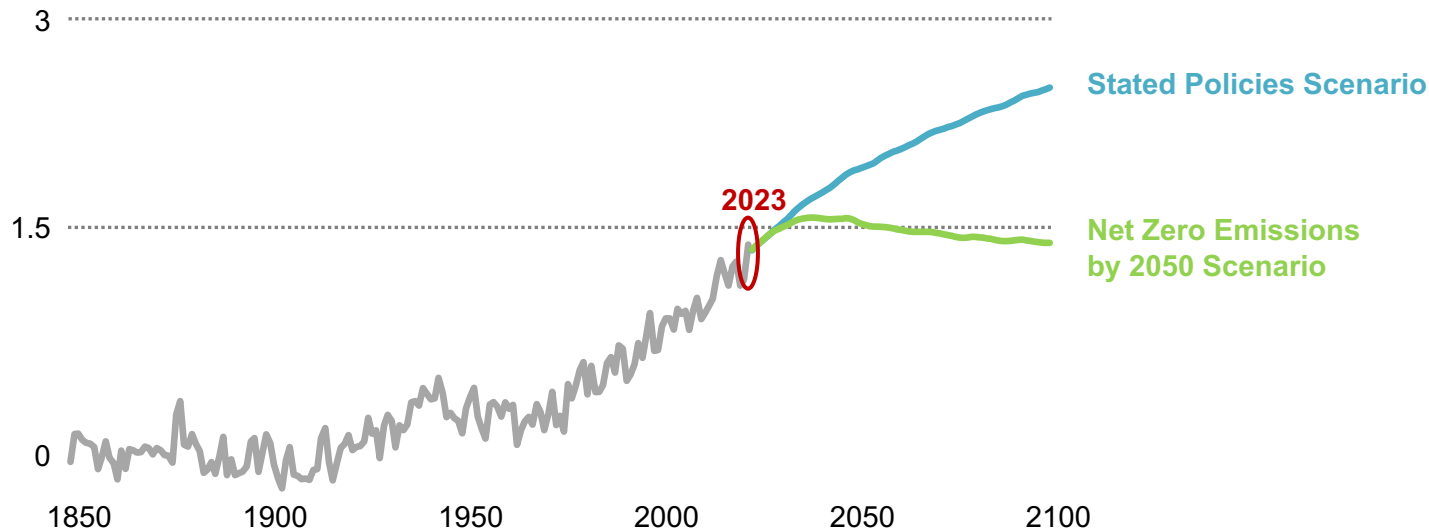


Resilience in transitions requires greater diversity



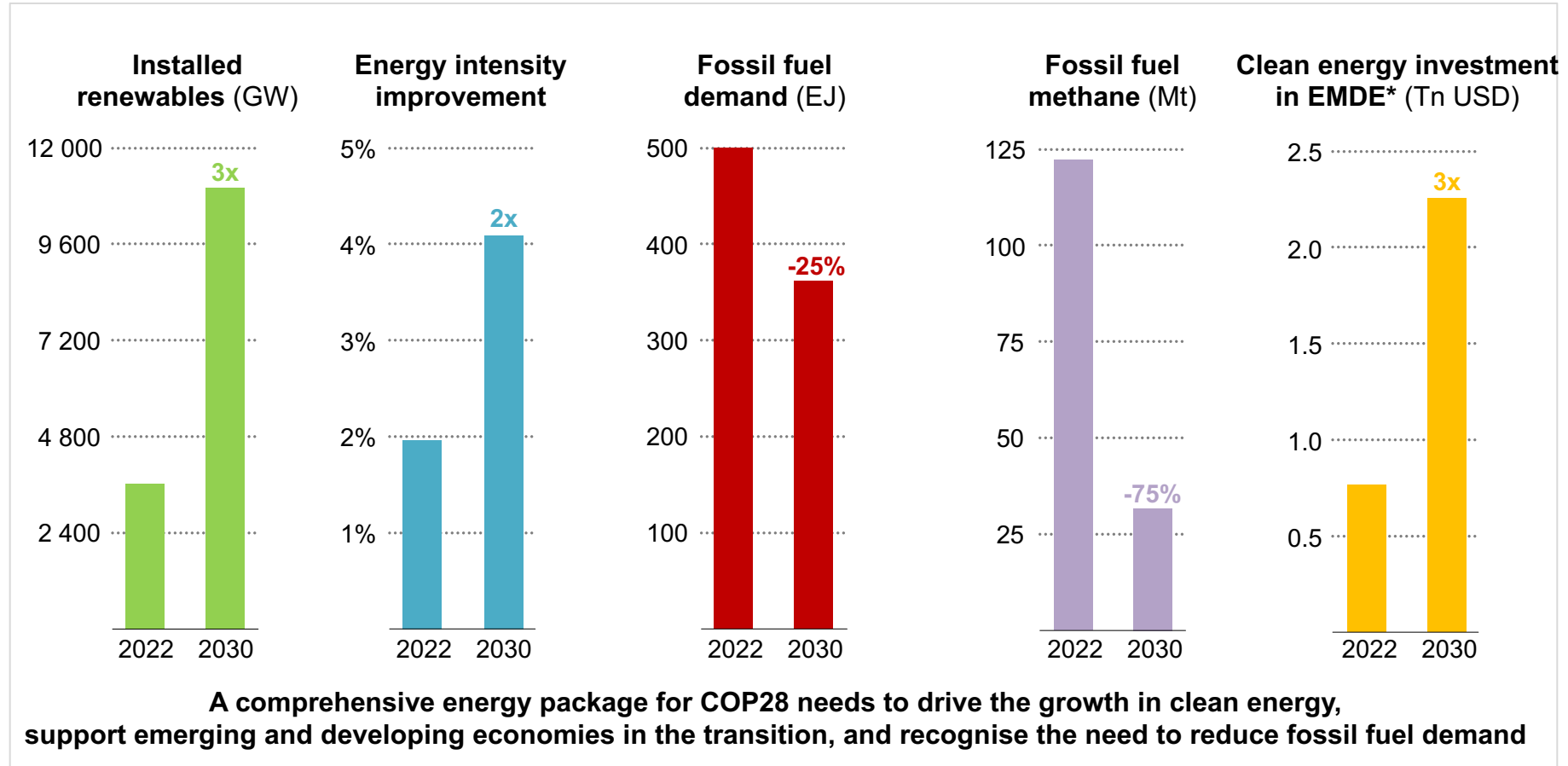
Today's choices will determine future warming

Change in global average surface temperature from pre-industrial levels (°C)



Emissions are set to peak by 2025 under today's policy settings, but temperatures would continue to rise; proven policies and technologies are available to keep the door to 1.5 °C open

Five pillars to keep 1.5 °C alive



A comprehensive energy package for COP28 needs to drive the growth in clean energy, support emerging and developing economies in the transition, and recognise the need to reduce fossil fuel demand

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