World Energy Outlook 2022

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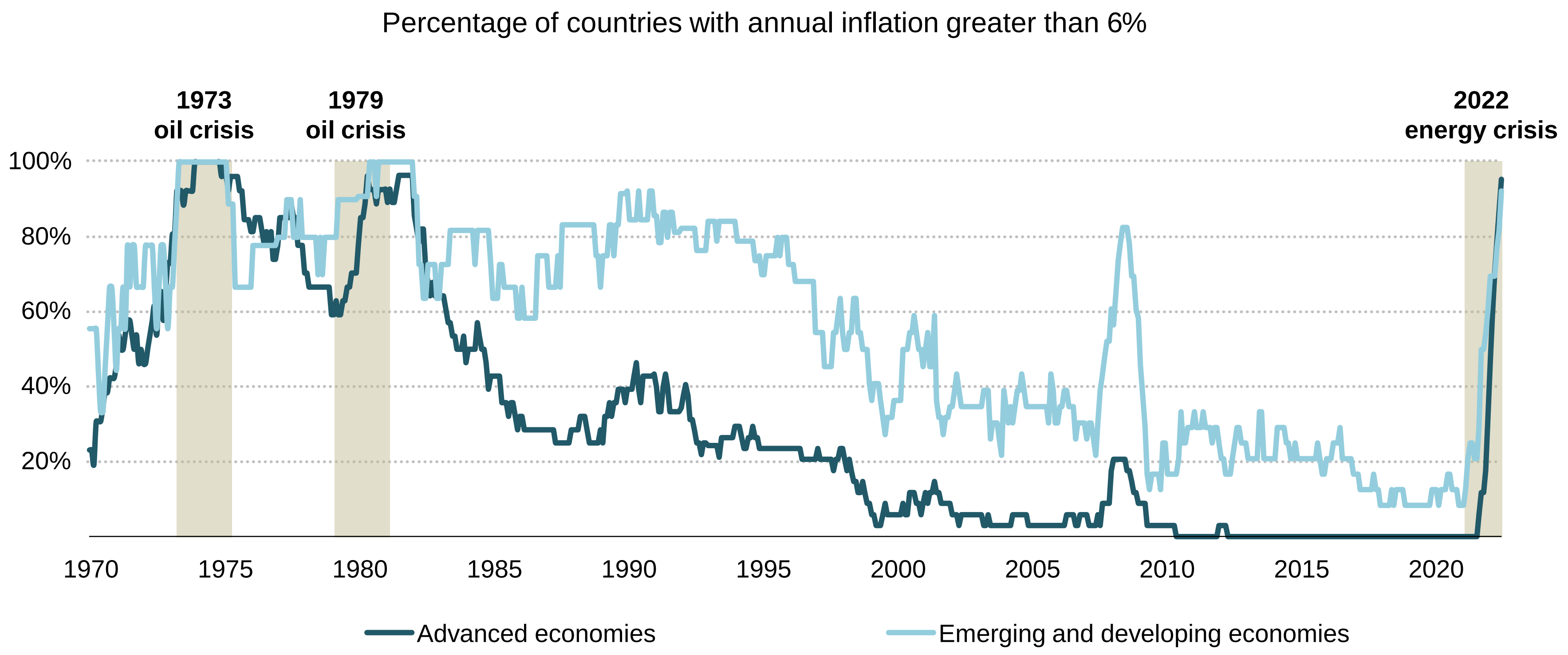
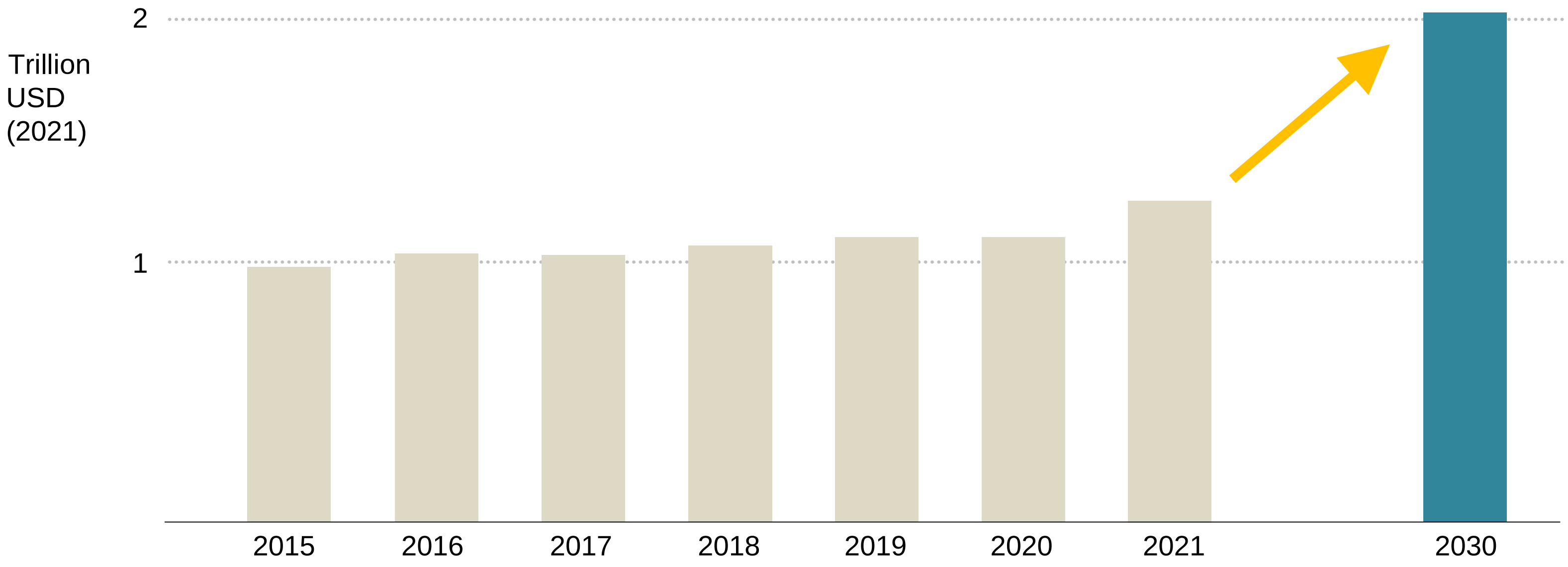
An energy shock of unprecedented breadth and complexity



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

Government responses are fast-tracking the clean energy economy

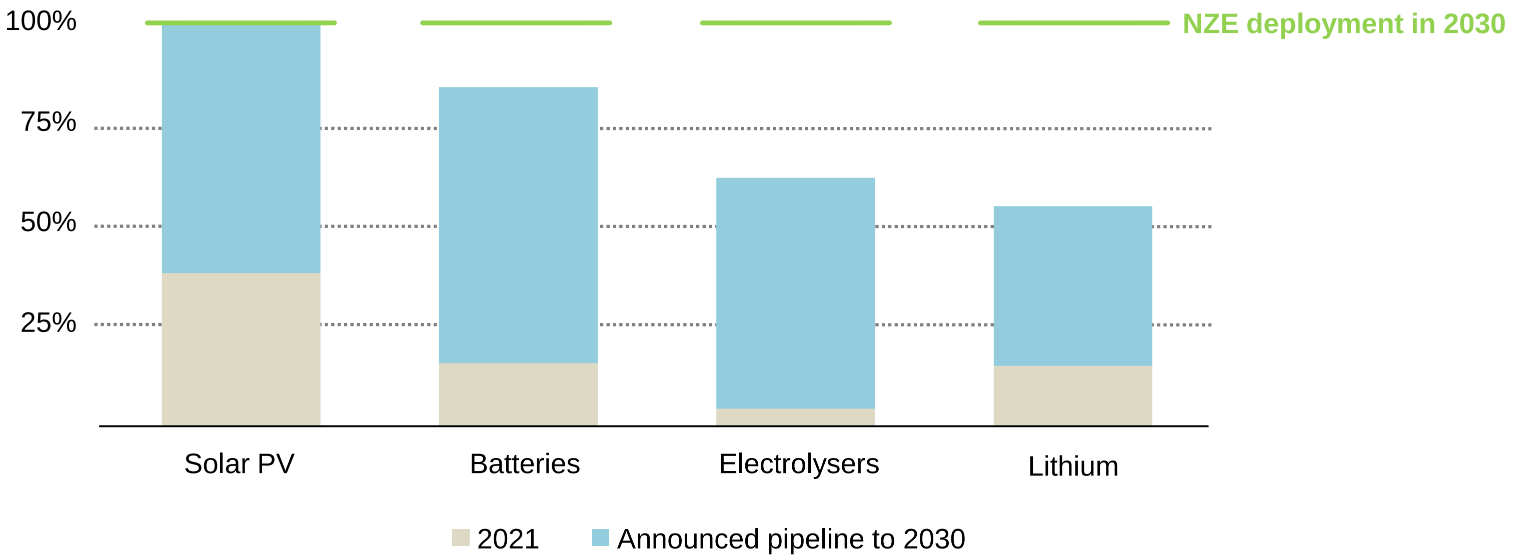
Clean energy investment in the Stated Policies Scenario



The US Inflation Reduction Act, the EU's Fit for 55 package, Japan's GX, China's new clean energy targets and India's solar revolution propel clean energy investment to new highs, but $4 trillion is needed by 2030 to be on track for 1.5 °C

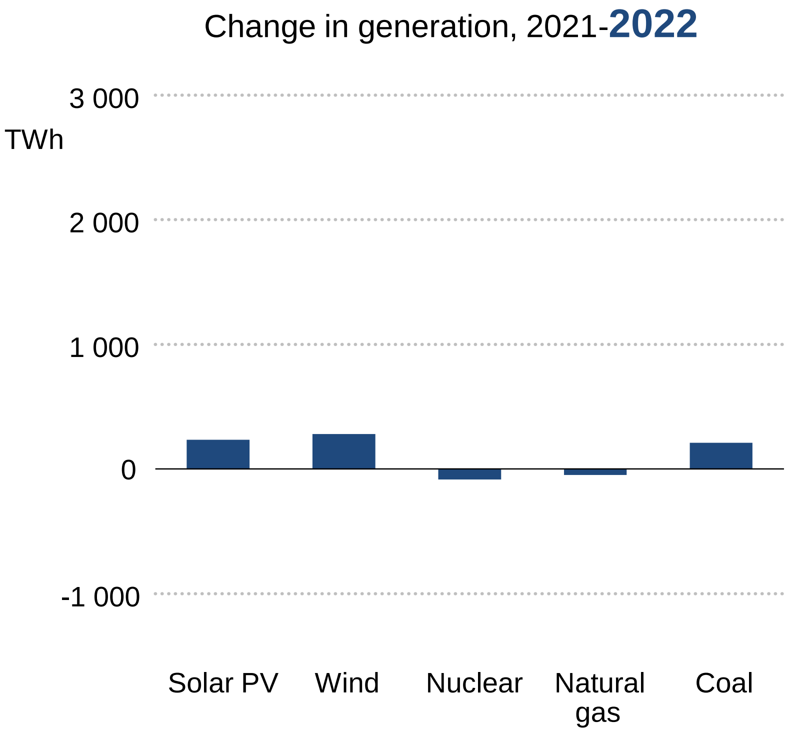
Clean energy manufacturers prepare the ground for faster transitions

Announced manufacturing capacity pipeline compared with NZE Scenario deployment in 2030



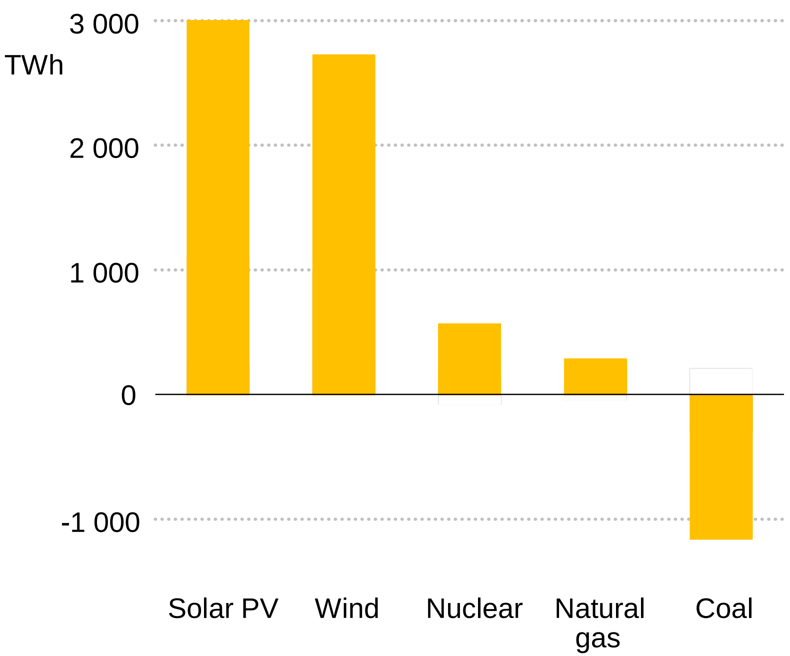
Announced plans to scale up clean energy manufacturing capacity help to accelerate cost reductions and would, in some cases, approach the levels needed to put the world on track with a 1.5 °C pathway

Electricity is turning the corner

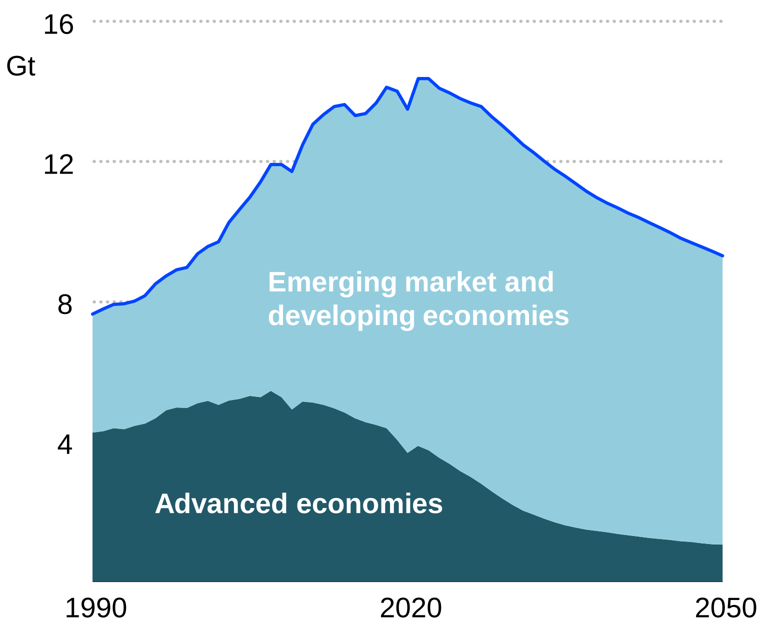


Electricity is turning the corner

Change in generation in the STEPS, 2021-**2030**

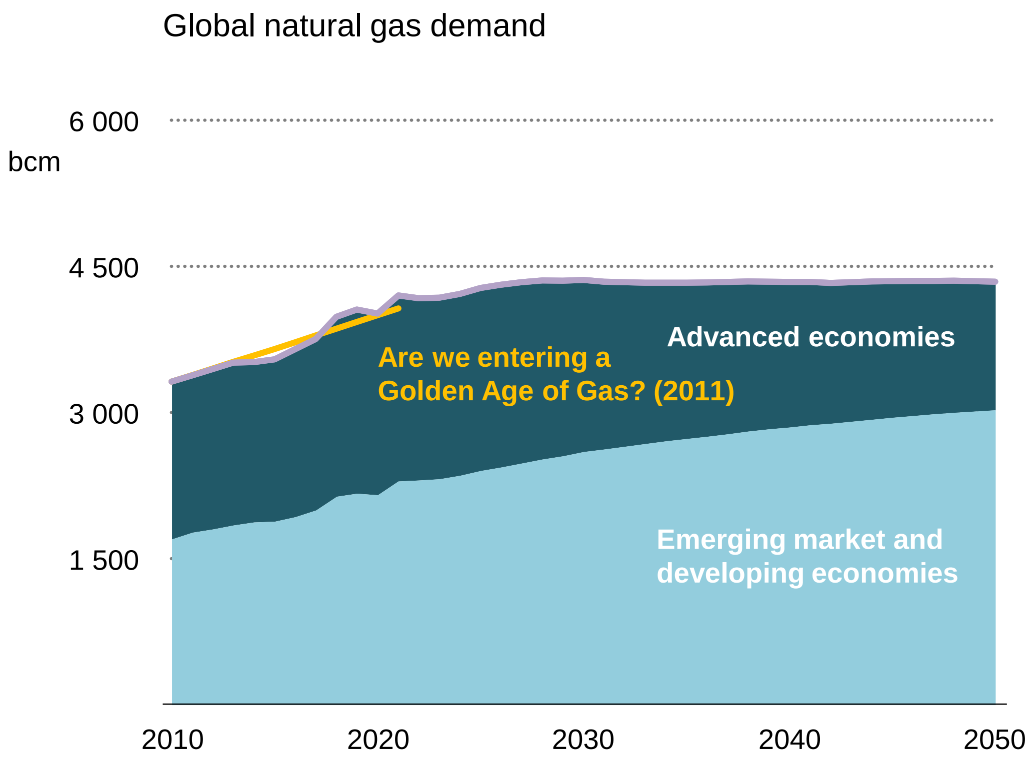


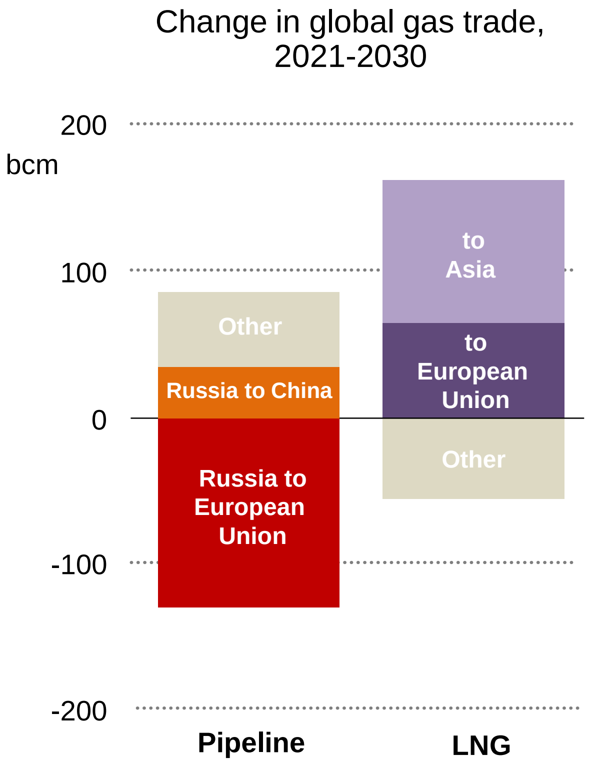
Power sector CO_2 emissions



As markets rebalance, the upside for coal is temporary as renewable generation rises by 90% to 2030; the peak in power sector emissions needs to be followed by a much steeper decline to be consistent with global climate goals

The era of natural gas demand growth is coming to an end

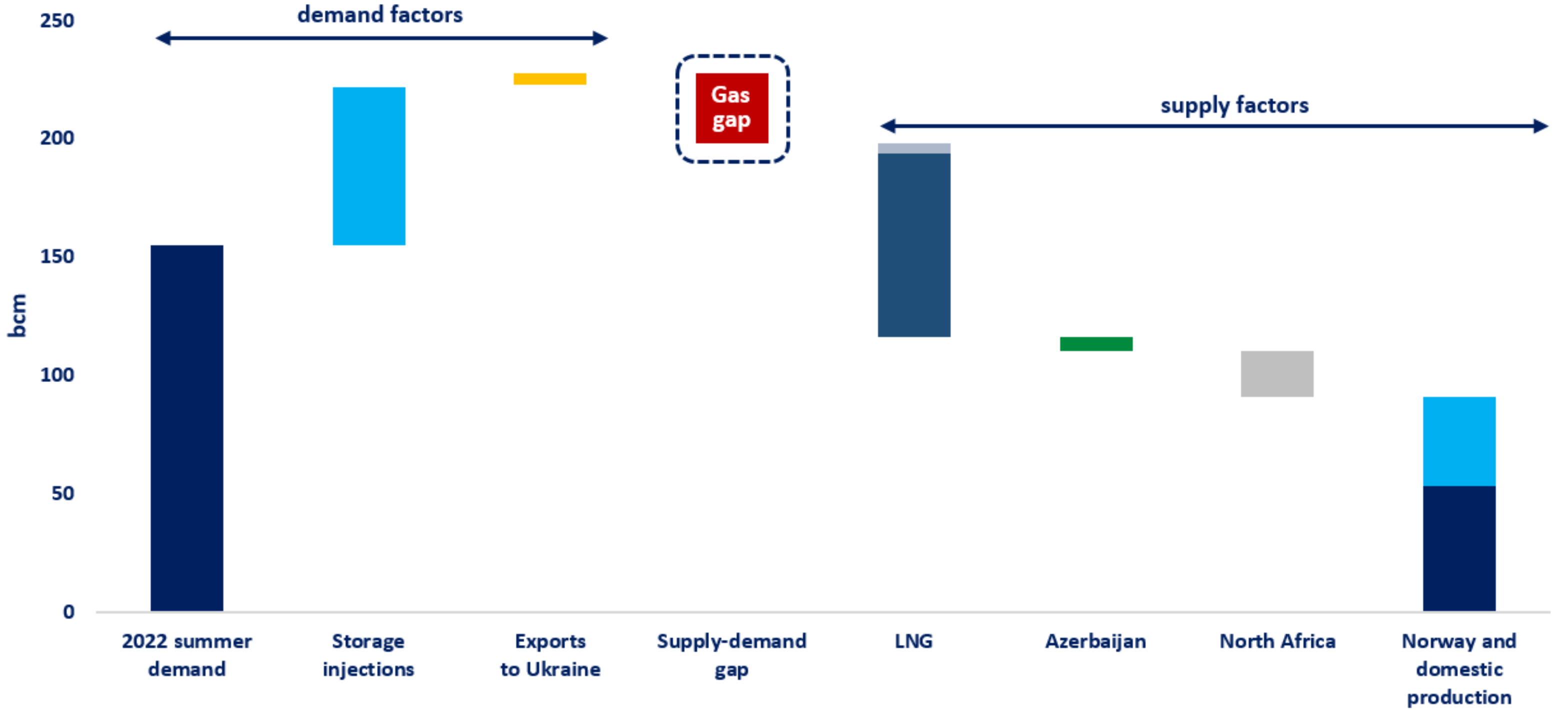




Strengthened policies, high near-term prices & energy security concerns bring the "Golden Age of Gas" to a close

Europe could see a supply-demand gap of 30 bcm in summer 2023

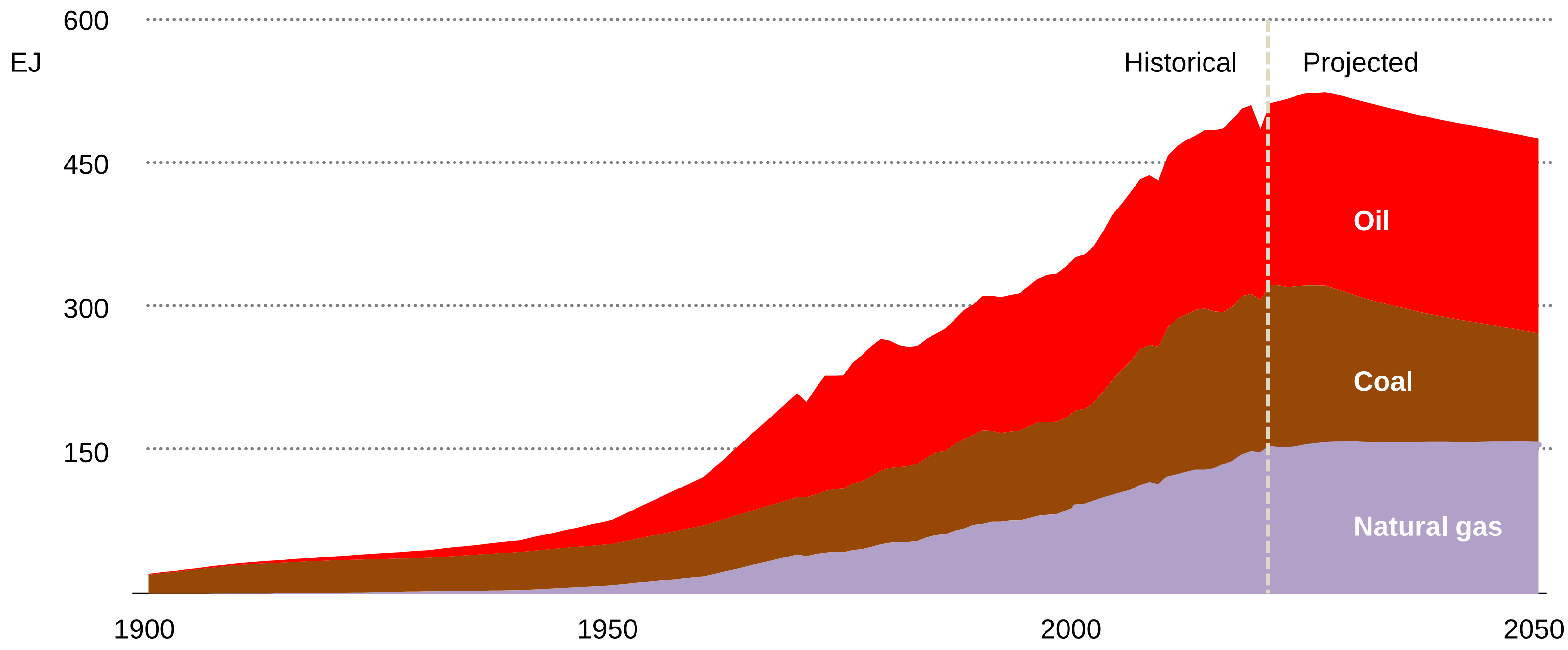
Potential summer 2023 balance of the European Union and the United Kingdom



Assuming a full stop of Russian piped gas supplies to the EU, combined with a strong recovery in China's LNG imports and injection needs at 68 bcm, the European gas balance could be 30 bcm short.

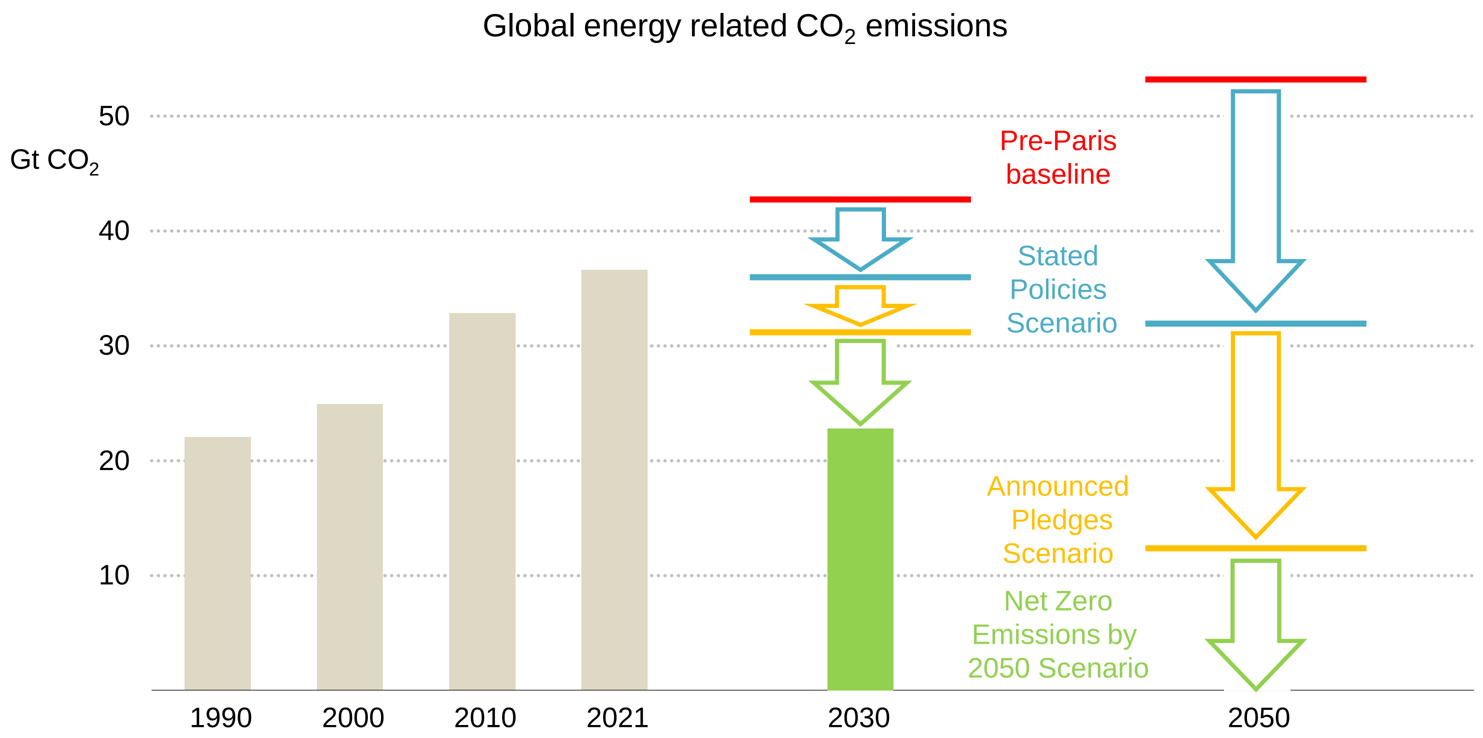
Peak fossil fuel demand is coming this decade

Fossil fuel demand in the Stated Policies Scenario, 1900-2050



Today's policy settings are now sufficiently strong that they produce a distinct peak in fossil fuel use before 2030

Keeping the door to 1.5 °C open



Policy and technology progress since 2015 has shaved 1 °C off projected warming, a step in the right direction; but much more needs to be done in order to avoid severe climate disruptions