Presentation at IENE's 30th National Energy Conference on Energy and Development

"The report of fossil fuels' death is an exaggeration" [paraphrasing Mark Twain]

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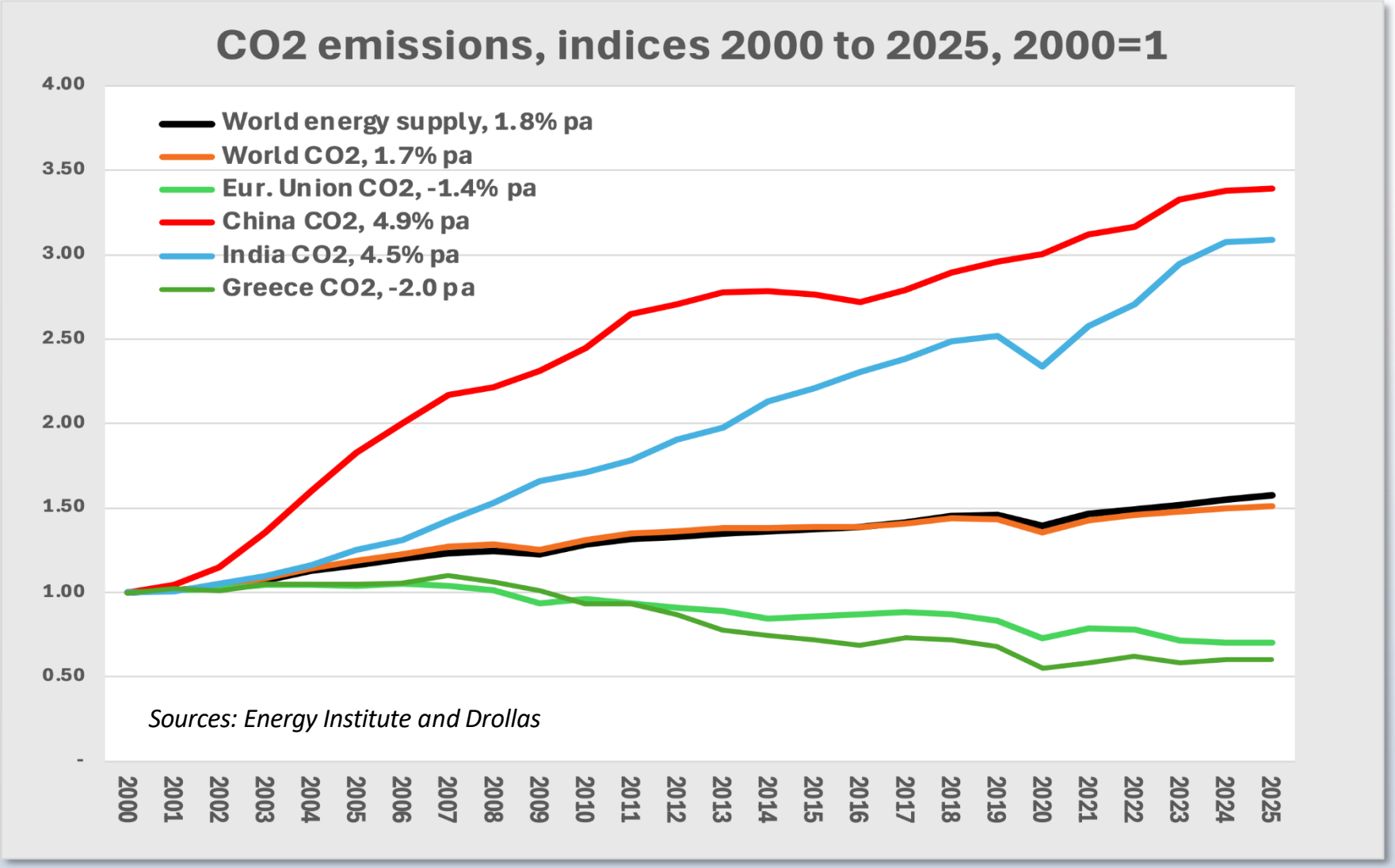
3rd November 2026

Key points

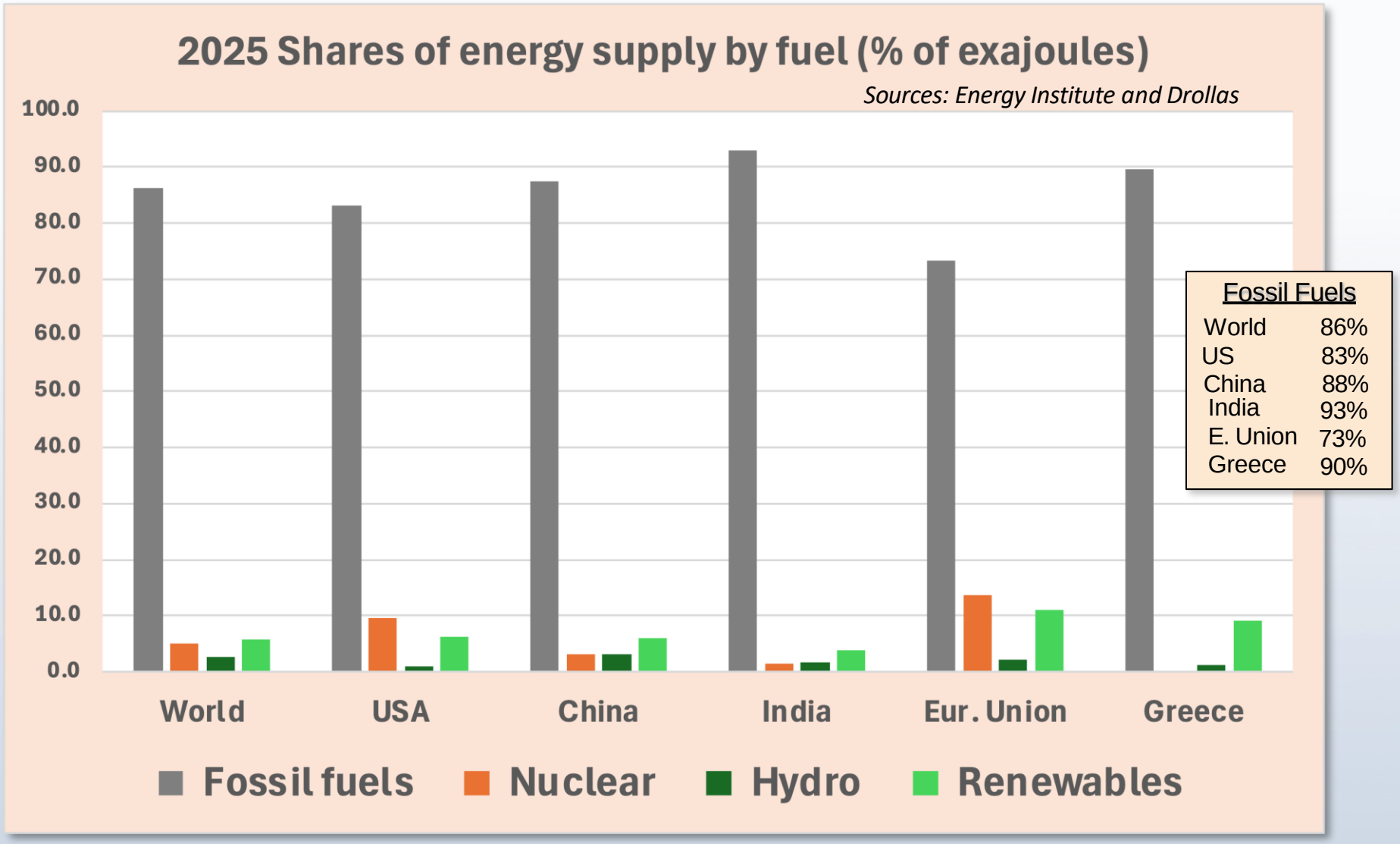
- Fossil fuels remain the world's most important form of energy by far – globally 86% of total energy supplies in 2025.
- The European Union has pledged to reduce CO2 emissions to 90% of 1990 levels by 2040 (in 14 years). Unsurprisingly perhaps, even in the EU fossil fuels still predominate with 73% of energy supplies. In Greece, hydrocarbons represented 90% of energy supplied last year.
- Emissions of CO2 are still growing globally, in line with energy supplies. The dynamic part of the global economy is still emitting increasing amounts of this trace gas.
- Electricity generation from renewables (wind and solar) is good for CO2 reduction, yet globally fossil fuels still dominate electricity output. In 2025, the EU produced 35% of its electricity from renewables and 22% from nuclear power. Why then is electricity so expensive in the EU?
- Oil prices have been volatile, especially since 2000, but they are not naturally so. Oil production is a long-run business and steady prices in real terms should be the order of the day. That they have not over the years is due to oil nationalism, the OPEC cartel and wars just recently.

Contributions to ‘anthropogenic’ global warming



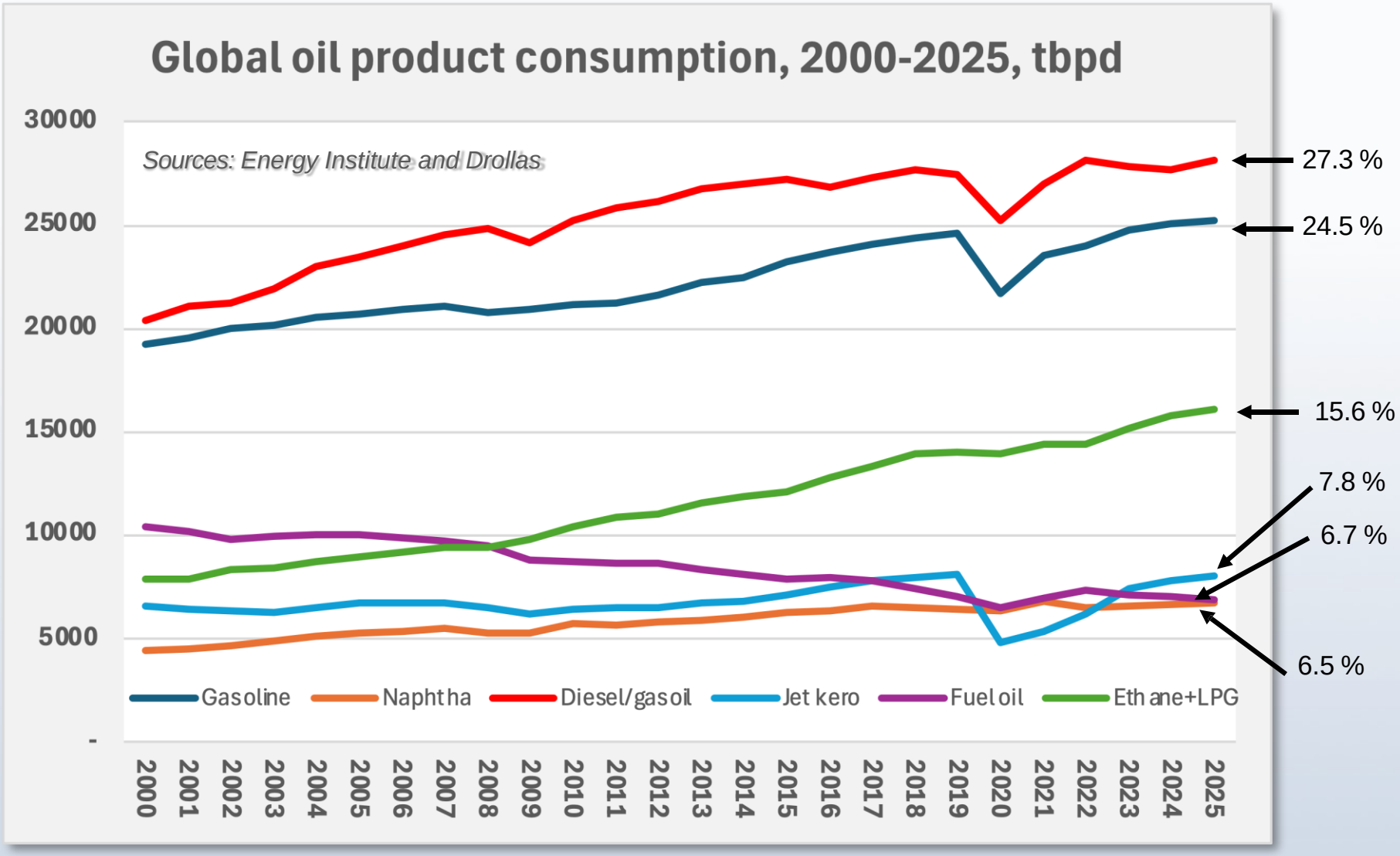
The world’s CO_2 emissions are very closely correlated with global energy supply, both growing at the same rate since 2000. China and India’s emissions have been growing at roughly 2.8 times that of the world. The EU’s CO_2 emissions have been declining, as have those of Greece.

Fossil fuels – are still by far the mainstay of energy



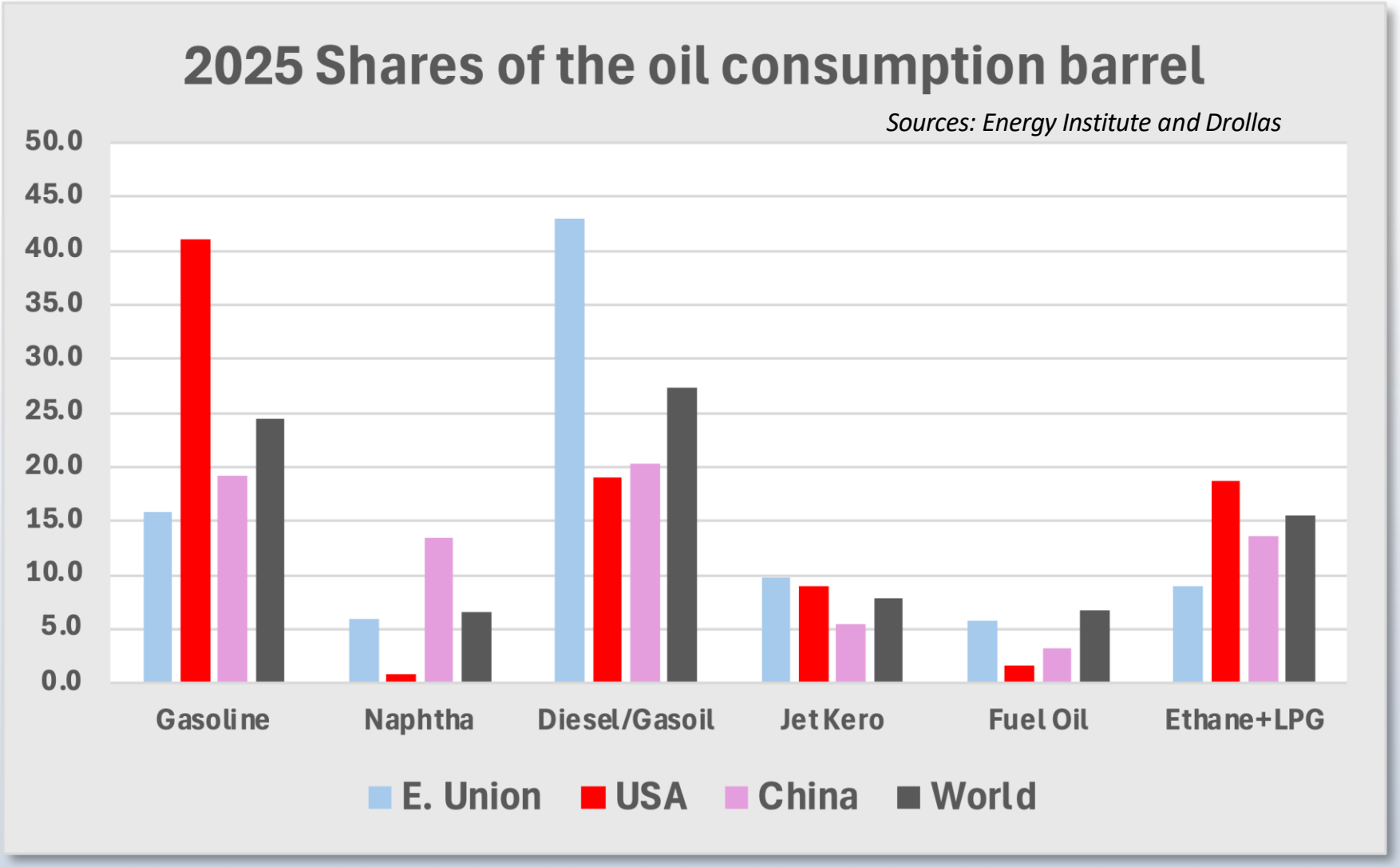
Greece's fossil fuel share at 90% was higher than the US' and China's, and far higher than the European Union's 73%, due to its heavy reliance on heating oil and the slow take-up of EVs. Its total fossil-fuel share was also above the global average.

Evolution of the different oil products



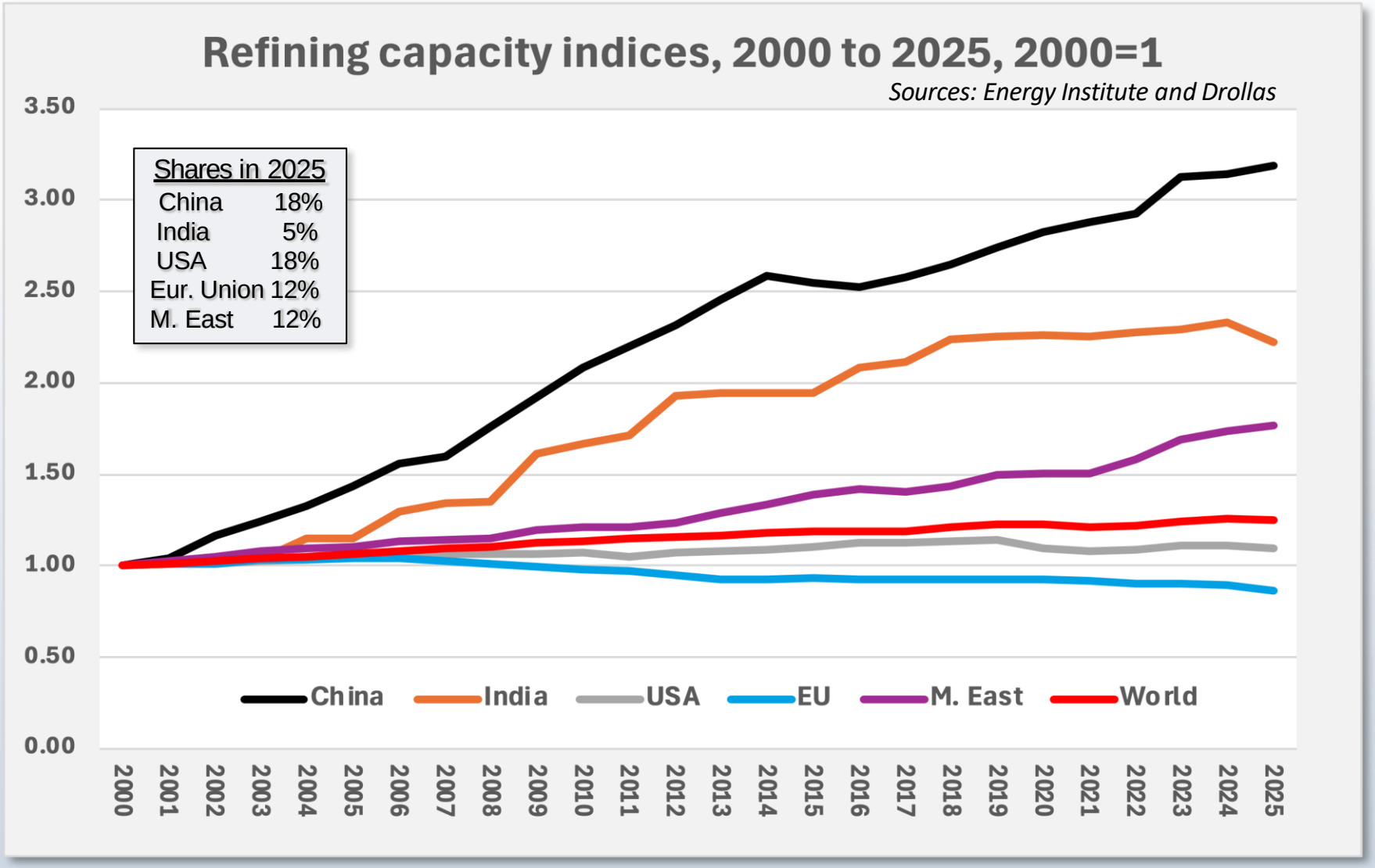
Gasoline and diesel/gasoil dominate the oil product mix (the main transport fuels). Apart from fuel oil, the general oil product trend has been upwards since the year 2000. Jet fuel's use has not grown much due to the vastly improved efficiency of jet engines. Plastics' use has been growing relentlessly (ethane).

Gasoline and diesel dominate the global oil barrel



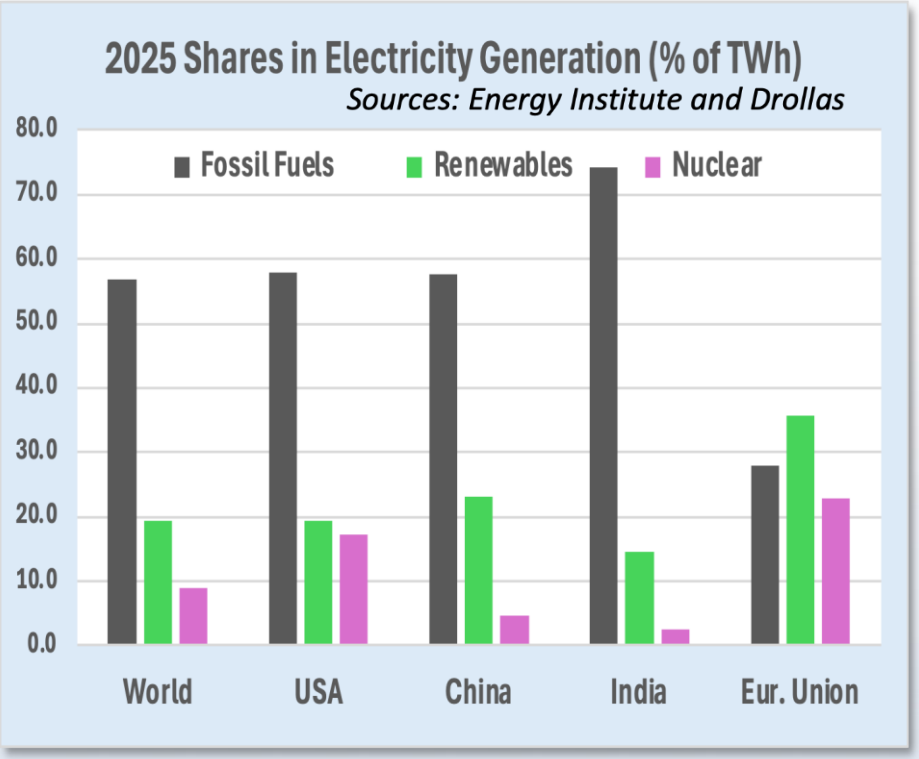
Unsurprisingly, the key transport fuels gasoline and diesel/gasoil dominate global oil product consumption, with ethane (plastics) and LPGs following them. The EU's heavy reliance on diesel has been costly for the Union, especially after Russia's invasion of the Ukraine in 2022 and Iran's 2026 blockage of the Straits of Hormuz. The EU's loss of refining capacity since 2000 has not helped either.

Refining capacity growth 2000-2025

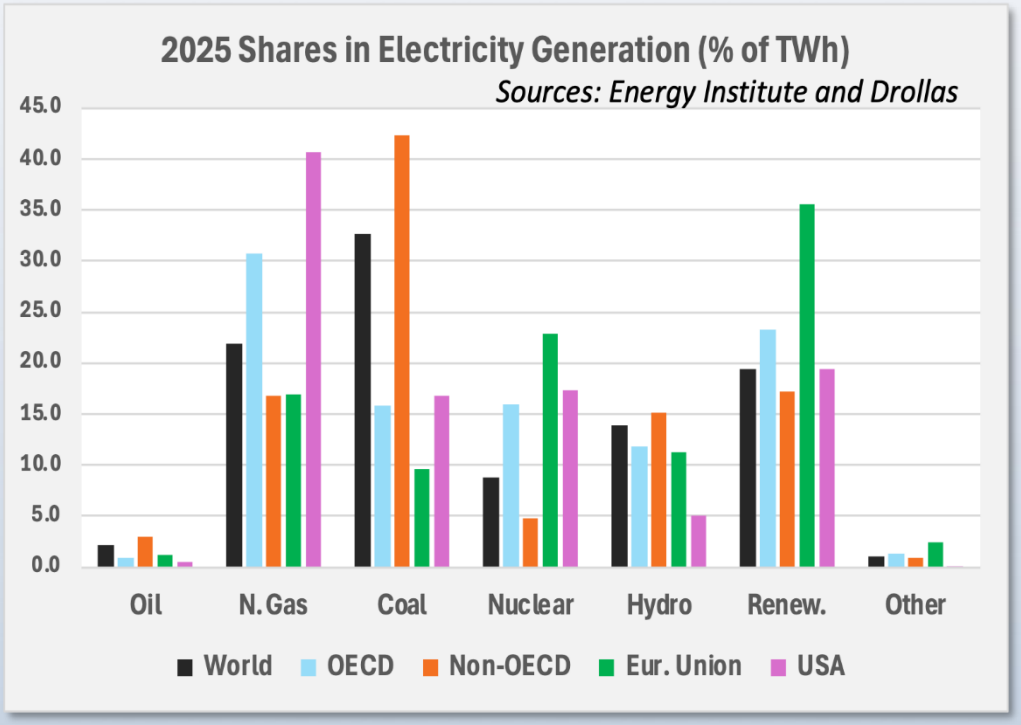


The world's refining capacity has grown since 2000 thanks to rapid increases in China, India and the Middle East's capacity. The US, China and the M. East account for almost half of global refining capacity. The current energy crisis has been worsened by the decline in the EU's refining capacity.

Electricity generation by fuel - 2025

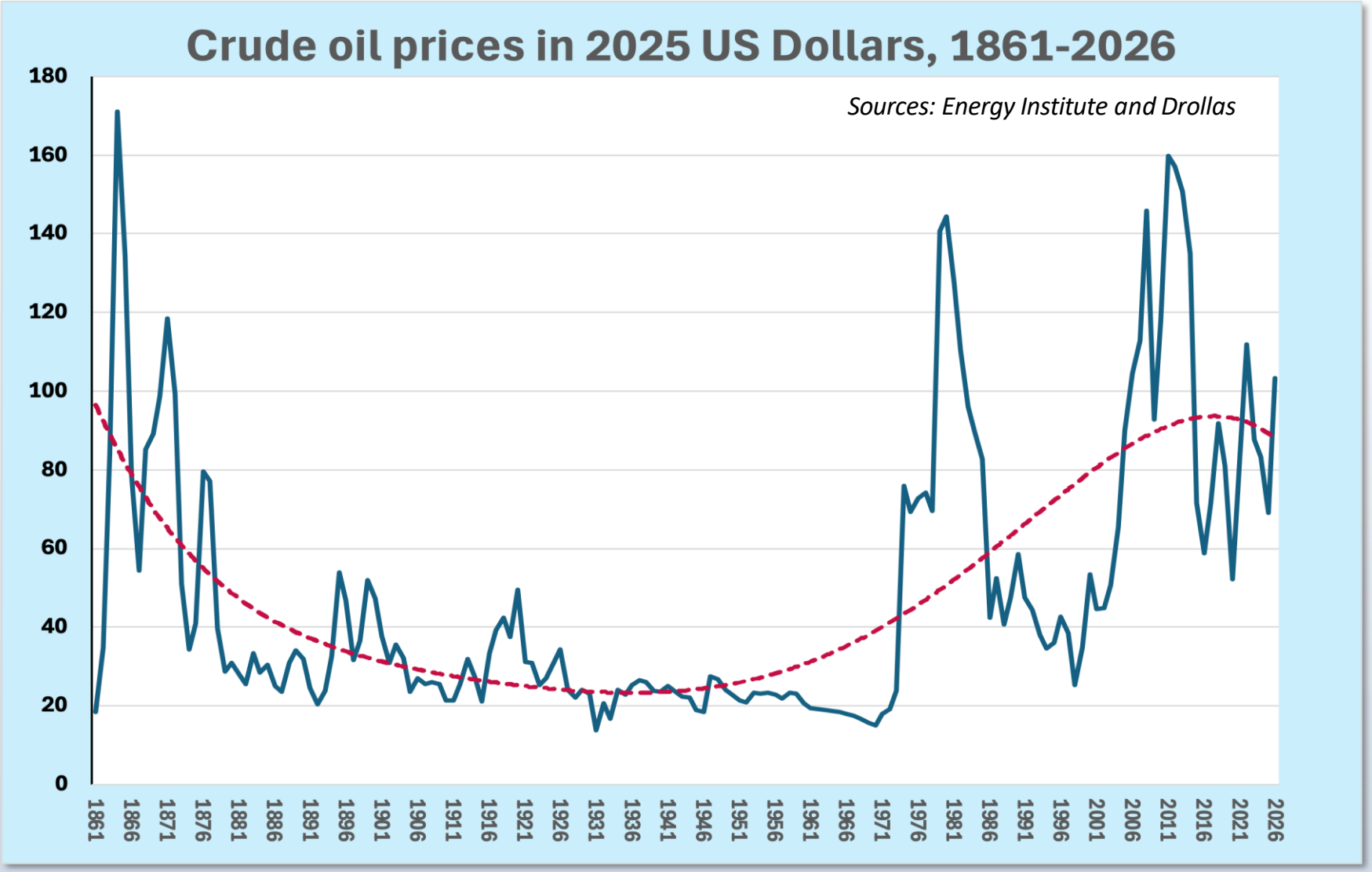


Natural gas and coal account for over 55% of US electricity production, while renewables are less than 20% of US output. Coal use in the EU is under 10% of electricity output, while renewables are at 35%; nuclear power is around 22% of EU electricity generation. Oil has almost disappeared from electricity production in Europe and is under 2.5% in the world.



Fossil fuels still dominate global electricity production, with almost 60% of total usage, due to the US (natural gas), China (coal) and India (also coal). Renewables (35%) are ahead of fossil fuels in the European Union as a result of the mandated increases in wind and solar elec-gen capacity.

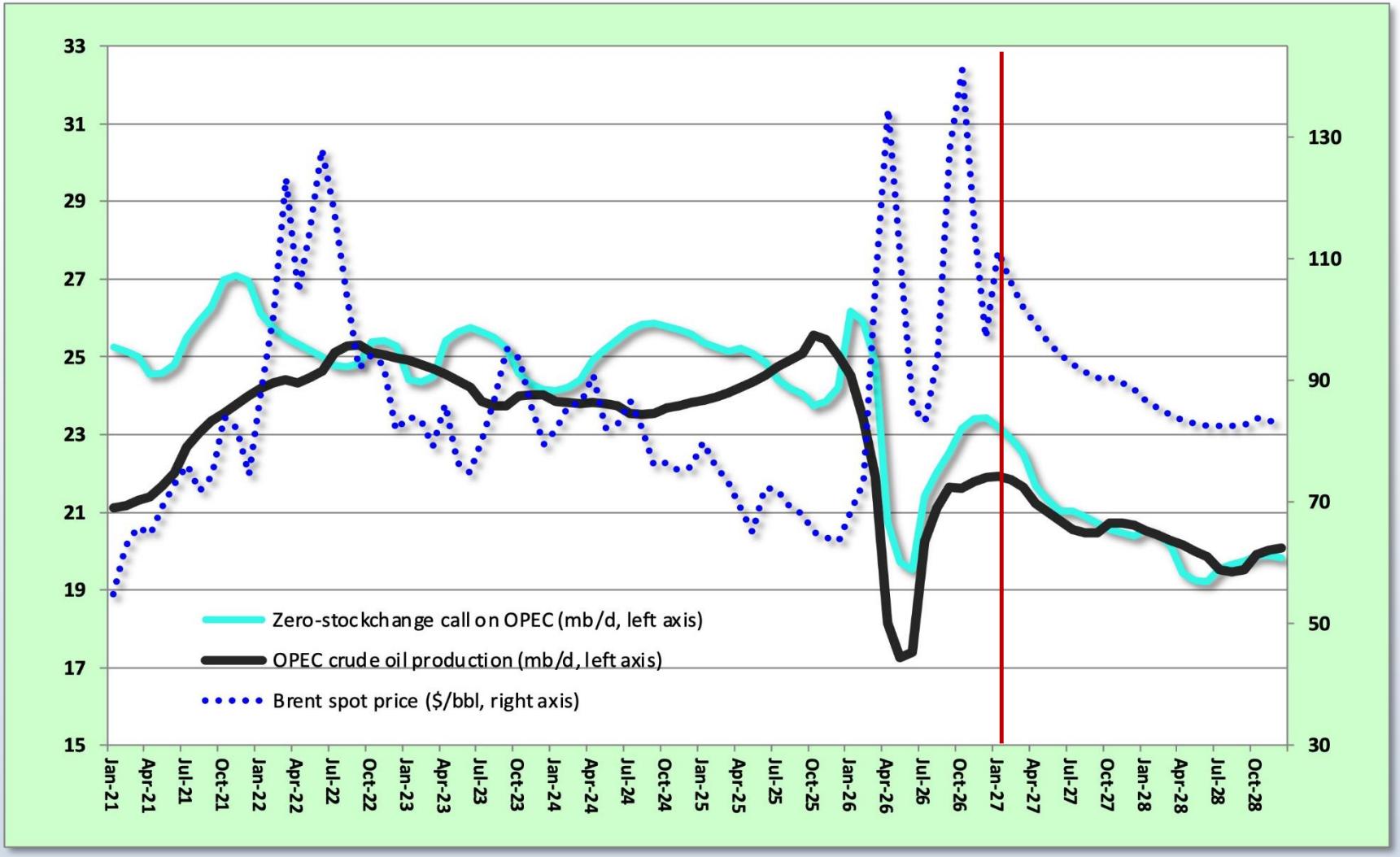
The path of ‘real’ oil prices since 1861



From wild volatility in the early years of oil, the real price of oil followed a downward path till 1973 and the first politically-driven crises of the 1970s and early 1980s. The OPEC cartel’s erratic policies, in combination with endemic instability in the Middle East, have kept real oil prices high despite the push in Europe to encourage use of renewables in electricity generation and EVs.

The driving force of crude oil : Jan21 to Dec28

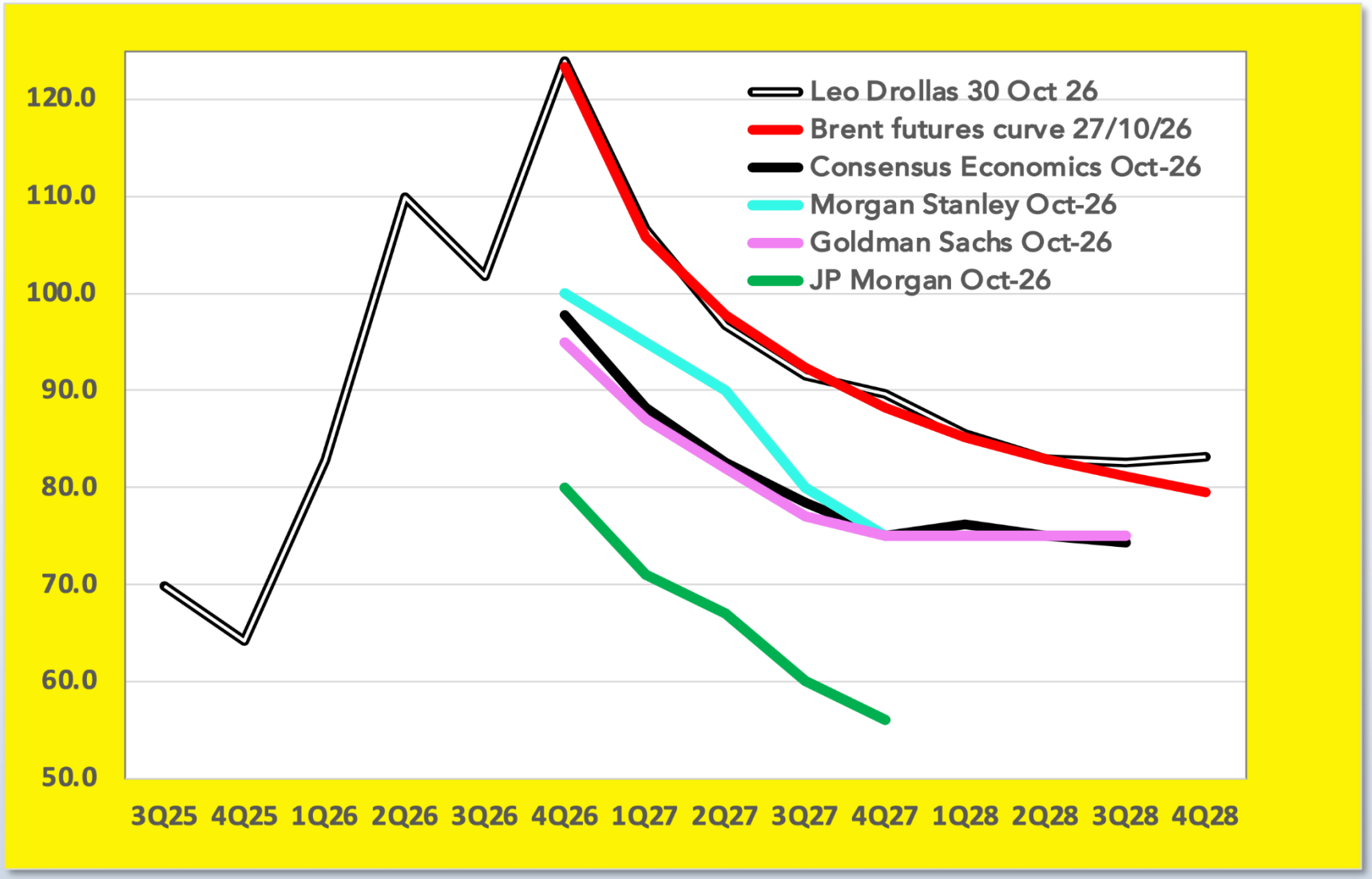
Sources: Argus and Drollas



Movements in the spot price of crude oil (Brent) depend on the difference between the zero-stock-change need for the OPEC-11's crude oil and the OPEC-11's oil production.

Brent spot price forecasts ($/bbl) : 4Q26 to 4Q28

Sources: Consensus Economics, IPE and Drollas



Note how much more pessimistic are the Brent price forecasts by the three investment banks and the Consensus Economics view.

Additional remarks

- For the EU to achieve net zero emissions of CO_2 by 2050 key current areas of fossil fuel usage need to be replaced with renewable energy —motor transport, space heating, process heat for industrial applications, and liquid fuels for air and sea transport.
- To use wind power to supply electricity for large EV fleets - for example - tens of thousands of additional wind turbines will be needed, costing many billions of Euros and needing a lot of space, and infrastructure spending (for access roads, transmission lines, substations, etc…). The UK's National Grid reckons it needs £240bn to meet the challenge of transmitting by 2030 all-green electricity where it is needed.
- The main problem with wind turbines is that wind is an unreliable source of low-density energy. Because of this, gas-fired or other power systems need to be available as back-up and/or extensive storage systems developed, increasing considerably the cost of wind power. It would be cheaper in the long run to develop nuclear power more extensively (preferably with SMRs, i.e. small modular reactors) and to retain considerable gas-fired generating capacity.