fathom
Independent Thinking

# July round-up: how green tech boosts democracy

4 August 2022

Kevin Loane

**Threat of an uncoordinated green transition**

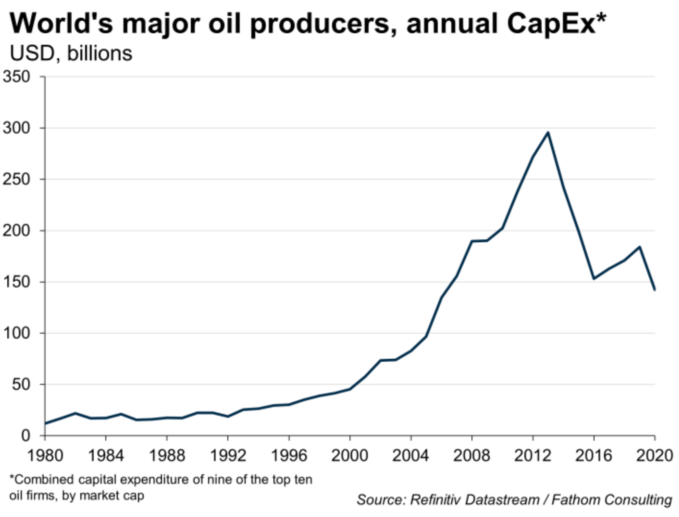
**Debunking degrowth, again**

**Energy transition can bolster global democracy**

**Two cheers for climate research**

## Threat of an uncoordinated green transition (6 July 2022)

- The world's largest oil companies[1] have been investing less and less over the past decade, with total capital expenditure in 2020 around 50% off its all-time high in 2013




- There are different possible explanations: uncertainty about future prices, particularly given the advent of shale; investor preference for immediate pay-outs over investment in future growth; and difficulty getting finance (perhaps due to lender concerns about ESG / stranded assets)

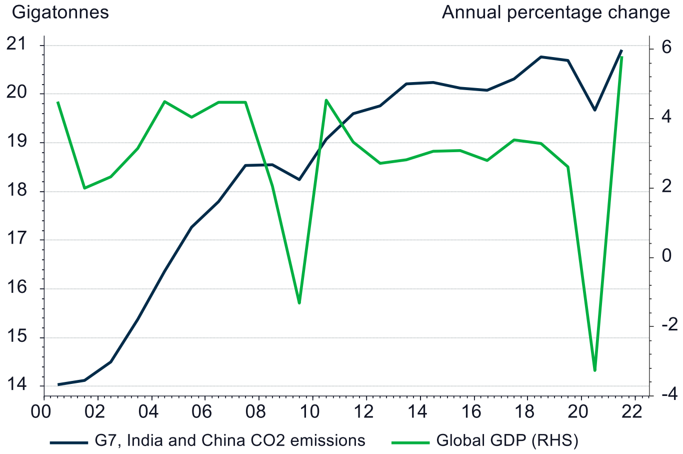
1 Chart shows the sum of annual capital expenditure for nine of the top ten oil companies in 2022. The list of companies is fixed, not dynamic, and doesn't include the world's largest oil producer (Aramco). The nine companies are: BP, Shell, Exxon, Total, Chevron, PetroChina, Gazprom, ConocoPhilips and Rosneft.

- The result is a sustained imbalance between demand and supply, which has kept prices high
- What is true at the micro level is true at the macro, too: the IEA has observed that world investment in fossil fuels is down 30% since the 2015 Paris Agreement
- At the same time, investment in clean energy grew by just 2% per year from 2015 to 2020, and even after rising to 12% in 2021, it remains well short of the figure required to hit international agreements
- Without more coordination and planning the path to net zero risks a chaotic transition, with fossil fuels turned off before there is sufficient clean energy capacity to replace them

**Debunking degrowth, again** (13 July 2022)

- Some continue to make the case that it is impossible to solve climate change without putting a stop to economic growth
- The COVID-19 recession (which caused the largest drop in global GDP since at least 1961) reduced G7 + China and India emissions by 5%; but that drop was temporary, and emissions were higher in 2021 than 2019

**CO2 emissions and GDP**

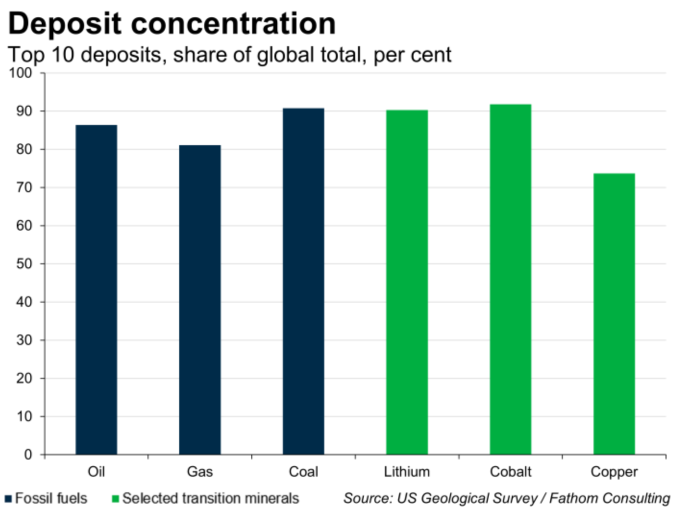



*Source: Refinitiv Datastream / Fathom Consulting*

- An implication is that getting to net zero via weaker growth would require a COVID-19-sized recession year after year: a pathway likely to prove politically unpalatable at best
- The route to net zero is through investment and technological innovation, not crashing the economy — if achieved, net zero should eventually result in higher, rather than lower growth

**Energy transition can bolster global democracy** (20 July 2022)

- Many of the world's fossil fuel deposits are concentrated in a small number of relatively undemocratic countries and autocracies
- Deposits of lithium, cobalt and copper – three of the key minerals used in the energy transition – are also found in fairly high concentrations



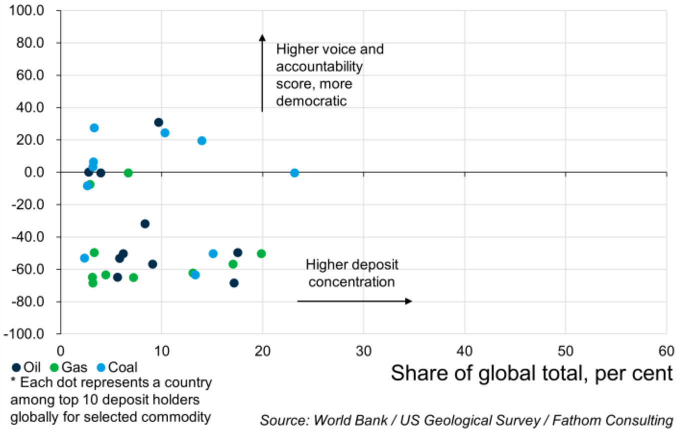

- But on the whole, deposits of transition minerals tend to be situated in more democratic countries, as per the World Bank's voice and accountability indicator
- This implies that the energy transition will shift demand away from autocracies towards democracies
- Moreover, the democratic credentials of renewable power are bolstered when the inputs (e.g., wind and sunshine) are freely available and cannot be monopolised
- Policymakers in democracies might therefore consider the potential geopolitical benefits of the energy transition, in addition to the goal of avoiding climate breakdown
- Meanwhile, countries rich in transition minerals should remain alert to avoid the so-called resource curse, which may have stifled innovation and democracy in some of those countries endowed with fossil fuels



Continued

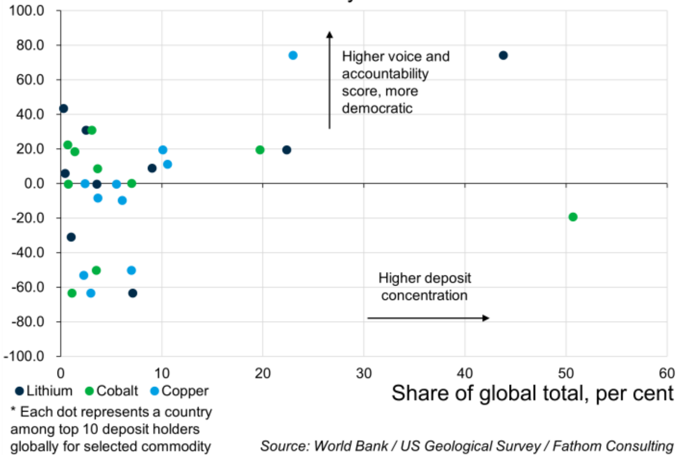
**Commodity reserves and governance, fossil fuels***

World Bank voice and accountability indicator score



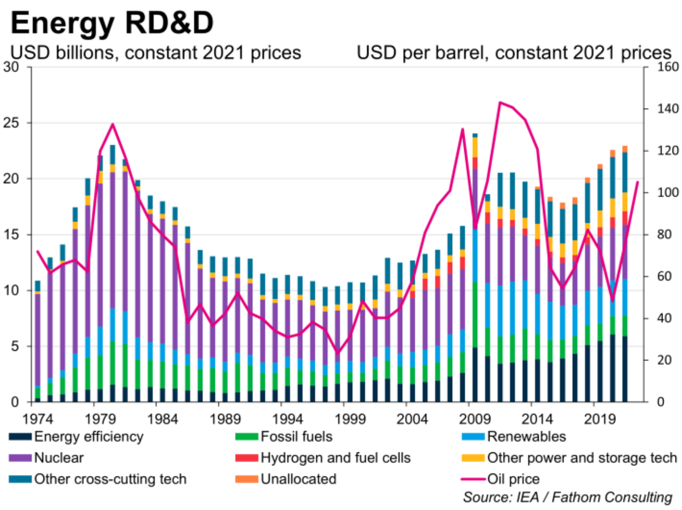

**Commodity reserves and governance, transition minerals***

World Bank voice and accountability indicator score

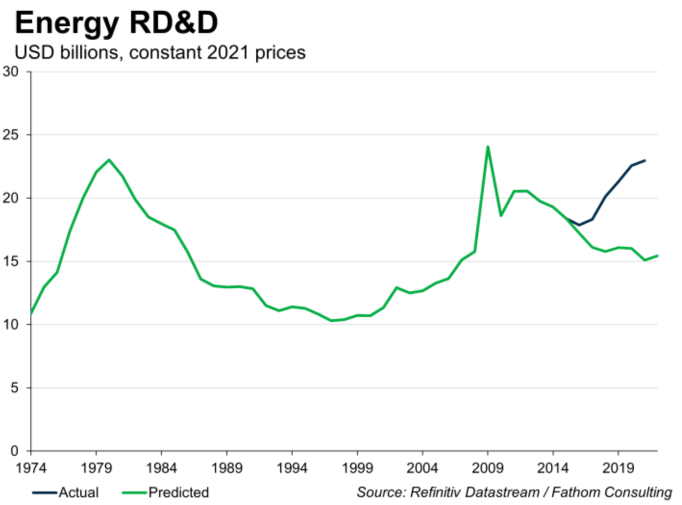



**Two cheers for climate research** (27 July 2022)

- The route to net zero is through investment and technological innovation, as my colleague Kevin Loane argued earlier this month; and here data on energy-related research, development and demonstration (RD&D), collected by the International Energy Agency (IEA) across its member states, provide some grounds for optimism
- Energy RD&D spending has risen steadily since the late 1990s, after adjusting for the effects of inflation




- Until the mid-2010s energy RD&D spending tended to rise and fall with the oil price; but since the Paris Agreement of 2015, incentives put in place by governments around the world have driven RD&D spending higher, even as the oil price fell sharply
- We estimate that RD&D spending in 2021 was some 50% higher than might have been expected, given movements in the price of oil alone
- With oil trading in a range $100-$120 since Russia's invasion of Ukraine, we can expect further sizeable increases in energy RD&D through 2022 and 2023
- However, much of the additional spending has been aimed at improving energy efficiency, rather than developing new and cleaner forms of energy – more resources need to be devoted to the latter if net zero targets are to be met






Continued

***Chart authors: Kevin Loane, Brian Davidson, Andrew Brigden***

**Further reading:**

Reflections from COP26 — winners and losers

Handling the green transition

**In case you missed it, here's last month's round-up:**

Down, but not out? China's evolving economy

Fathom Consulting
47 Bevenden Street
London
N1 6BH
Tel: +44 (0)20 7796 9561

Contact information
kevin.loane@fathom-consulting.com
www.fathom-consulting.com