

July round-up: how green tech boosts democracy

4 August 2022

Kevin Loane



Threat of an uncoordinated green transition

Debunking degrowth, again

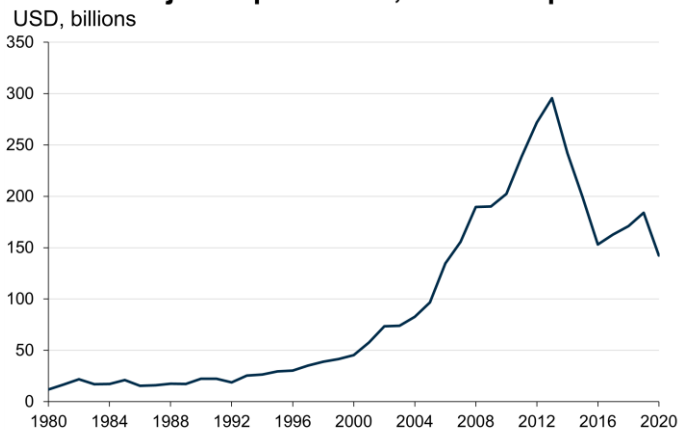
Energy transition can bolster global democracy

Two cheers for climate research

Threat of an uncoordinated green transition (6 July 2022)

- The world's largest oil companies¹ 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

World's major oil producers, annual CapEx*



*Combined capital expenditure of nine of the top ten oil firms, by market cap

Source: Refinitiv Datastream / Fathom Consulting

- 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, ConocoPhillips and Rosneft.

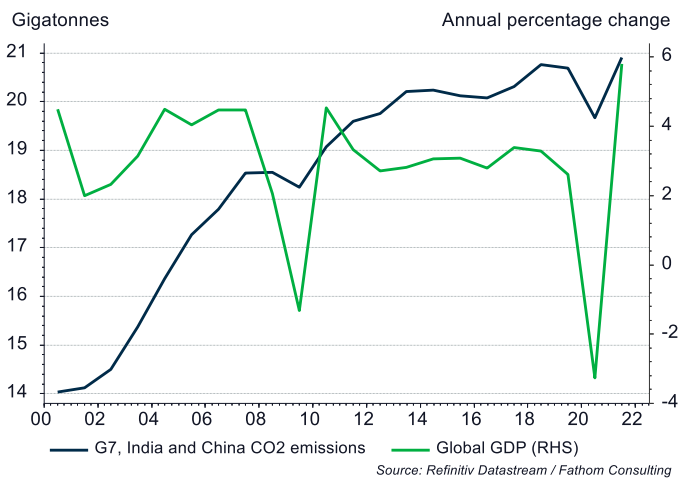


- The result is a sustained imbalance between demand and supply, which has kept prices high
- What is true at the micro level is true at the macro, too: the IEA has observed that world investment in fossil fuels is down 30% since the 2015 Paris Agreement
- At the same time, investment in clean energy 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



- 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

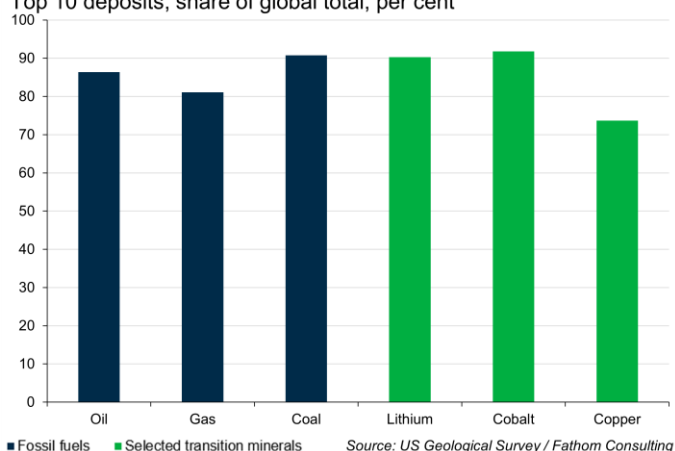


Energy transition can bolster global democracy (20 July 2022)

- 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

Deposit concentration

Top 10 deposits, share of global total, per cent



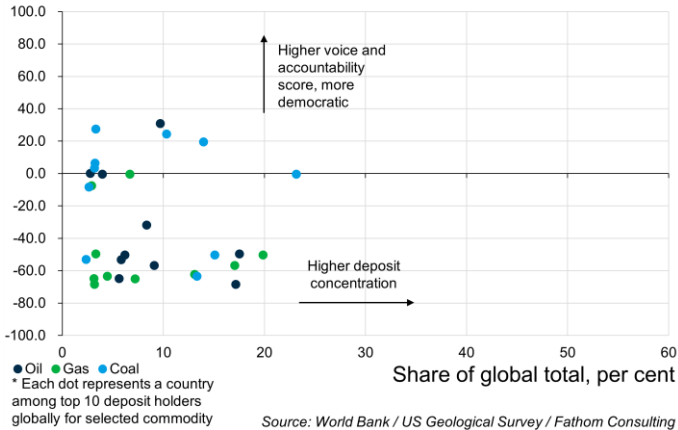
- But on the whole, deposits of transition minerals tend to be situated in more democratic countries, as per the World Bank's voice and accountability indicator
- This implies that the energy transition will shift demand away from autocracies towards democracies
- Moreover, the democratic credentials 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





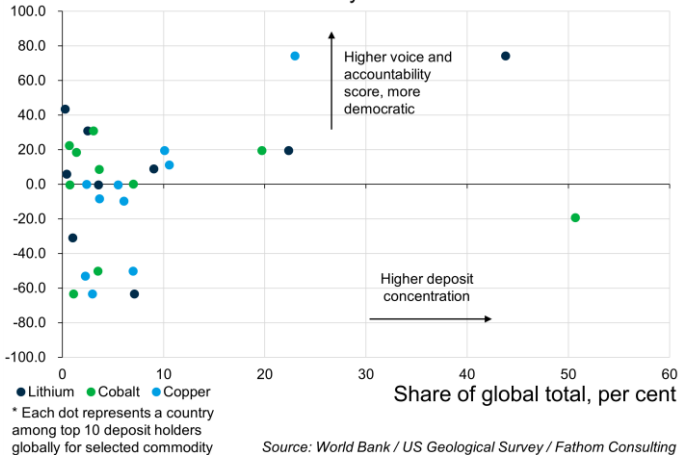
Commodity reserves and governance, fossil fuels*

World Bank voice and accountability indicator score



Commodity reserves and governance, transition minerals*

World Bank voice and accountability indicator score



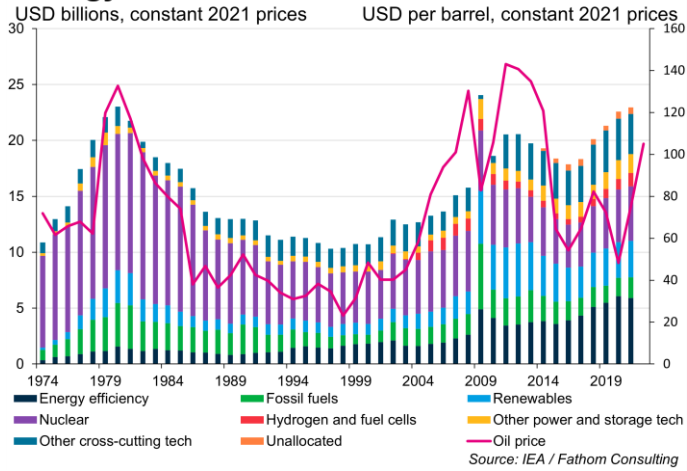
Two cheers for climate research (27 July 2022)

- 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





Energy RD&D



- 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

Energy RD&D

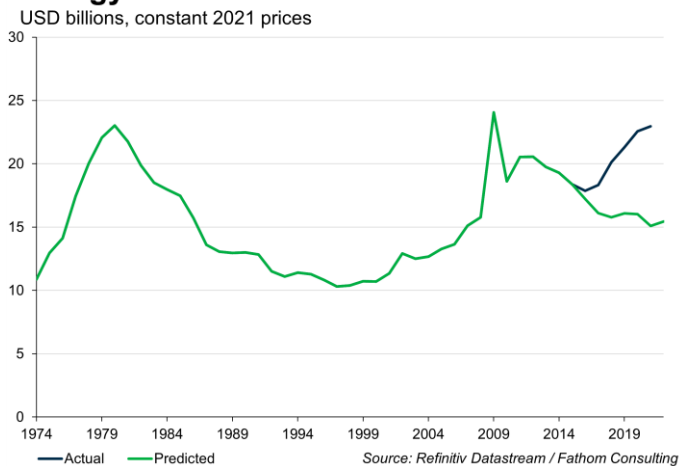




Chart authors: Kevin Loane, Brian Davidson, Andrew Brigden

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 Beviden Street
London
N1 6BH
Tel: +44 (0)20 7796 9561



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

This newsletter is a confidential, copyright protected communication intended only for the person to whom it was originally sent. If received in error, please notify the sender and delete immediately. Its intended recipients may not make copies of this newsletter, or distribute it to third parties, without the written consent of Fathom Consulting.

Fathom Consulting is a trading name of Fathom Financial Consulting Limited, a company registered in England & Wales under the Companies Act, company number 04942817, © 2022

Regulatory Disclaimer

FFC LIMITED and all of its affiliates (henceforth FFC) do not conduct "investment research" as defined in the FCA Conduct of Business Sourcebook (COBS) section 12 nor do they provide "advice about securities" as defined in the Regulation of Investment Advisors by the U.S. SEC. FFC is not regulated by the SEC or by the FCA or by any other regulatory body.

This research report has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. Nonetheless, FFC has an internal policy that prohibits "front-running" and that is designed to minimize the risk of receiving or misusing confidential or potentially material non-public information.

The views and conclusions expressed here may be changed without notice. FFC, its partners and employees make no representation about the completeness or accuracy of the data, calculations, information or opinions contained in this report. This report may not be copied, redistributed or reproduced in part or whole without FFC's express permission.

Information contained in this report or relied upon in its construction may previously have been disclosed under a consulting agreement with one or more clients. The prices of securities referred to in the report may rise or fall and past performance and forecasts should not be treated as a reliable indicator of future performance or results. This report is not directed to you if FFC is barred from doing business in your jurisdiction. Nor is it an offer or solicitation to buy or sell securities.

Analyst Certification

I Kevin Loane, the lead analyst, certify that the views expressed herein are mine and are clear, fair and not misleading at the time of publication. They have not been influenced by any relationship, either a personal relationship of mine or a relationship of the firm, to any entity described or referred to herein nor to any client of FFC nor has any inducement been received in relation to those views.

I further certify that in the preparation and publication of this report I have at all times followed all relevant FFC compliance protocols including those reasonably seeking to prevent the receipt or misuse of material non-public information.