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# The energy transition in oil and gas

## February roundup

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Hi all,

After a quiet start to the year, I'm looking back over the first two months and the raging debate that continues around the oil and gas industry's record profits and what it should do with them. For what it's worth, my take is that, while the companies have come under fire for the scale of the payouts to shareholders, this is probably what I want them to do. Big oil companies aren't well placed to deliver renewable energy projects, so they should wind down fossil fuel production and hand the proceeds back to investors who can then invest in companies that are better placed to deliver new projects. Great in theory, but - so far - investors still aren't putting enough of those bumper fossil fuel returns into clean energy.

In this month's newsletter I'll be looking at BP's U-turn (again), Shell and Aramco's rhetoric on the growth of oil and gas and what the reality might be, as well as how much - or, rather, how little - the industry spent on CCS and hydrogen last year.

One bit of housekeeping from me, we have launched our research under a new brand - [Zero Carbon Analytics](#). From next month this newsletter will come from [murray.worthy@zerocarbon-analytics.org](mailto:murray.worthy@zerocarbon-analytics.org) and everything will stay the same - please update your contact list to make sure it gets to your inbox.

As always, please share this with colleagues if you find it useful - they can sign up [here](#).

Thanks,  
Murray

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Stat of the month:

1%

Hydrogen's share of the oil and gas industry's energy transition investment in 2022.



## Decarbonisation strategies

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The big news in February from BP was that it was ditching its less than three-year-old commitment to cut oil and gas production by 40% by 2030. That plan was replaced [with a new aim of reducing production by just 25%](#), with the company now planning on spending an extra USD 1 billion on oil and gas projects up to 2030. For BP, it's once again [‘Back to Petroleum’](#). This major increase in BP's planned production came despite the company [revising down its expectations of global oil and gas demand](#) in the 2030s just a few weeks before.

While BP's headline fossil fuel production numbers are bad, so are the details. The company is still keeping its 2020 target of divesting USD 25 billion of projects between 2020-2025. This means that it's still rapidly offloading it's most polluting and highest cost assets at a rate that was originally part of a plan for a significant production decrease, while revising up it's planned output. The result of this must mean that BP is planning even more new production to offset the reduction in output from those divestments. And it's the amount of new production that matters at the end of the day – not which company is taking fossil fuels out of the ground.



**“Scenarios like Shell’s can become part of a self-fulfilling prophecy, used to justify the construction of new fossil fuel infrastructure that locks in the use of the fuel that it predicted would be needed.”**

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## Oil and gas in the transition

[Shell is looking incredibly bullish on the prospects for LNG](#), putting out an analysis forecasting demand for the fuel to be nearly double the level expected by the IEA in 2040. Based on Shell's huge demand forecasts, LNG supply under construction would need to double to close a gap between supply and demand that it expects to open up in the late 2020s. Shell's forecasts appear to be based on the assumption that the EU won't deliver on its long-term climate targets. Instead, it is

forecasting EU demand to drop by roughly a fifth by 2030, which is in line with IEA expectations based on current policies. However, if the EU goes beyond the policies it already has in place (which is almost certain) and goes on to deliver on its climate pledges, that drop doubles to a more than 40% decline. But scenarios like Shell's can become part of a self-fulfilling prophecy, used to justify the construction of new fossil fuel infrastructure that locks in the use of the fuel that it predicted would be needed. With the company talking up the prospects for its gas, all [eyes will be on Shell's capital markets day on 26 June](#) to see whether it will be following BP in increasing its planned fossil fuel production.

In another example of the politics of scenarios and demand forecasting, Saudi Aramco doesn't appear to be following its own analysis on the future of oil demand. [As this excellent piece from Bloomberg points out](#), Aramco claims there is a huge USD 150 billion underinvestment in oil production that is set to have major implications for energy security and energy prices. Yet, Aramco - which made more cash over the last year than Exxon, Shell and Chevron combined - is not stepping in to fill this (theoretically) highly profitable gap. The story of its actual spending tells a different story - of a company expecting the decline and fall of oil demand, and so holding back on production to keep prices and profits high.

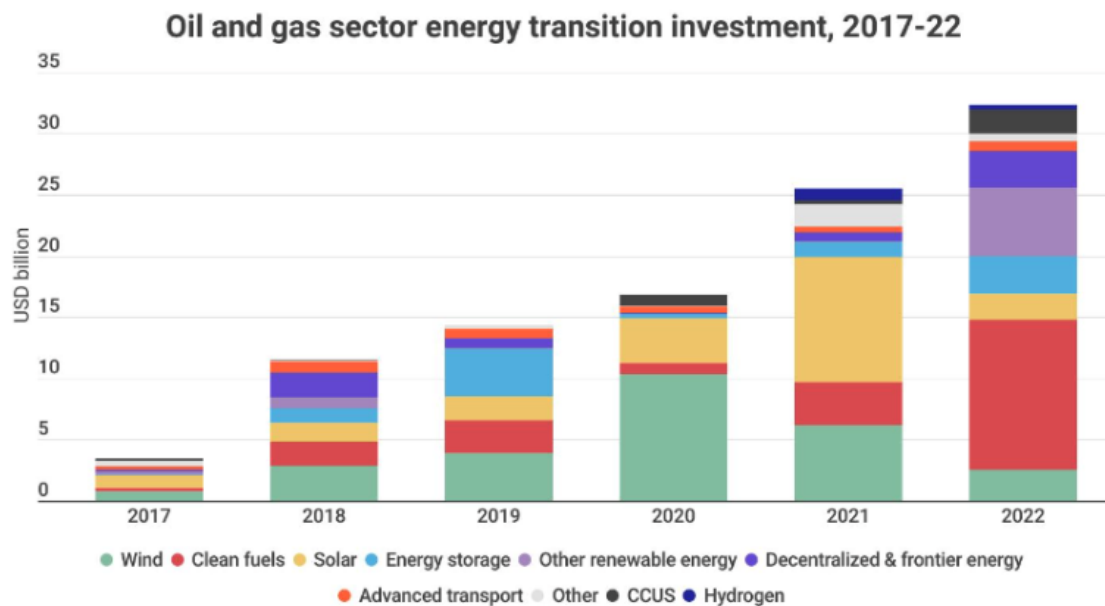
While demand for gas is falling in Europe, the EU is massively overbuilding new gas capacity. New analysis from Zero Carbon Analytics has found that [new EU LNG capacity in development could provide 65% more gas than Russia was supplying in late 2022](#). The scale of this overcapacity is only set to get worse as the EU rapidly reduces its use of gas by both shifting away from Russian gas and delivering on its climate goals.



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## Clean energy investments

Backing out of renewables, investing in fossil fuel substitutes and not financing hydrogen and CCS seem to be the main trends coming out of [BloombergNEF's latest analysis of clean energy spending](#) by the oil and gas industry.



Data for 2022 showed the industry massively cutting back on new investment in wind and solar, instead focusing on ‘clean fuels’. BloombergNEF are unhelpfully vague about how they define that category, but ‘Renewable Natural Gas’ or biomethane makes up a very large chunk of it. In fact, just two renewable natural gas deals - BP’s purchase of Archaea and Chevron’s purchase of Renewable Energy Group - accounted for a massive 20% of all energy transition investment by the sector last year.

While CCS and hydrogen dominate political debates about the future of fossil fuels, the industry is clearly not yet willing to finance these proposed solutions - with the two technologies only accounting for just 6% and 1%, respectively, of the sector’s clean spending last year.



## Hydrogen

It’s not just the oil and gas industry that’s failing to fund hydrogen - the global pipeline of new hydrogen projects slowed dramatically through 2022, ending the year with 12% less new capacity than was announced in 2021, [according to Wood Mackenzie](#). The new additions still represent a one-third increase in announced capacity, which would be impressive were it not for the fact that [annual growth rates for hydrogen closer to 100% would likely be needed](#) to meet targets like the REPowerEU strategy.

# Carbon capture and storage

One major hydrogen-adjacent project that is being lined up is [Exxon's plan to produce blue ammonia for export to East Asia](#), according to a deal announced in February. Ammonia is hydrogen combined with nitrogen, which is much easier to transport than hydrogen itself, and the 'blue' refers to how the hydrogen is made - from fossil gas with carbon capture and storage (CCS). The [final investment decision for the plant is due in 2024](#), with exports to follow in 2027 or 2028.

It will be very interesting to see if buyers in Japan and South Korea do commit to this, as financially and technically the project makes very little sense. Aside from questions about the efficiency of CCS more generally, [Michael Liebreich points out](#) it would make far more sense to ship fossil gas in the form of more energy dense LNG then use it with CCS at the point of power use rather than creating ammonia, which is less energy dense and harder to transport. Either way it's also set to be staggeringly expensive - [100% ammonia-fired power in Japan in 2050 would be double the cost of renewables](#), according to BloombergNEF. Liebreich's take is that ammonia could play a minor role for seasonal storage in markets like Japan, but it's not going to be a mainstay of its energy system.

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In order to help gauge how oil and gas companies are positioning themselves in the energy transition, this newsletter specifically focuses on how they are moving into renewables and clean energy. To offer up-to-date analysis, it uses insight from media sources and subscription-based databases, like BloombergNEF.

Feel free to forward this newsletter on to colleagues!

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