



Hard energy reality has mugged Fortescue's hydrogen dream

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Body

Transition Andrew Forrest is not alone. Many companies have suffered a similar delusion about a simple, easy and cheap future.

Fortescue's hydrogen dreams have come up against the hard energy reality - affordability, reliability and zero emissions are difficult to achieve together. But **Fortescue** is not alone.

For the past decade, many have suffered a similar energy delusion. Promises of an easy transition have given way to the realisation that nothing with energy or climate ambitions is simple or cheap.

Only this month, Google, which had claimed to be carbon-neutral since 2007, said it no longer counted offsets and that it now aimed for neutrality by 2030 because the energy demand associated with AI had seen its emissions increase 48 per cent between 2019 and 2023. Likewise, some Australian funds walked back climate commitments. Or just ask Europe.

The hype around green hydrogen should be a case study for those interested in the difficulties when it comes to energy and climate.

Despite green hydrogen being seen as the Swiss Army knife for difficult decarbonisation problems, buyers were hard to find, largely because the cost remained stubbornly high and the technical challenges more complex than envisaged.

Attempts to deliver green hydrogen at \$2 a kilogram sounded great at a political level. But, like most politically generated targets, ambition is no replacement for hard analysis.

Even with the best assumptions, analysts struggled to get it below \$5 a kilogram any time soon. And as with all projections, they depended on the assumptions. The rise in interest rates and equipment costs have cruelled low-cost scenarios.

As clean energy advocate Michael Liebreich noted earlier this year, when it came to hydrogen, "expectations have raced far ahead of reality".

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While various governments and the IEA were making grandiose predictions about how much clean hydrogen would be produced, they bore no relationship to the real world.

The Sixth Hydrogen Ministerial held last September in Japan predicted global production of renewable/low-carbon hydrogen by 2030 would be 90 million tonnes.

This would, Liebreich pointed out, require 60 times more clean hydrogen production than what's already been funded. Even more risibly, he noted an annual demand of 50 million tonnes would have to be created from sectors that do not use hydrogen.

In other words, the hydrogen story, at best, is based on wishful thinking. Less charitably, it's based on hype driven by subsidy chasing.

And with the increasingly likely return of former president Donald Trump to the White House, the wishful thinking of hydrogen advocates will face even further setbacks as the new administration seeks to wind back elements of the Biden administration's Inflation Reduction Act. Hydrogen subsidies are on the list.

This isn't to say green or clean hydrogen has no future, rather its application will be more modest - green metals, some transport and fertilisers.

Fortescue's about-face reflects the bigger challenge of decarbonising its Pilbara mining operations, for which it still claims will be "Real Zero by 2030". Its mines and rail operations annually consume about

700 million litres of diesel.

The push to electrify the Pilbara mines as a way of decarbonising is not straightforward.

Starting with the diesel trucks that carry iron ore, each of these weigh more than 500 tonnes, and carry 300 tonnes of ore. Add in trains about 2.8 kilometres in length, all powered by diesel locomotives, there are clear challenges of cost-effectively electrifying what is a global logistical operation that operates 24/7.

Doing so requires more than just the rollout of renewable energy. Realistically, the push to achieve net zero in the mines requires step changes in technology and its commercial deployment, all of which will take time.

Further, it highlights the need for a more realistic approach to the challenges of decarbonisation.

Whether activists and some policymakers want to hear it, the world is not moving off fossil fuels any time soon. Last year saw record demand for oil, coal and gas. This is not about to change.

The real world of energy where demand is only rising, with affordability and reliability the key criteria, is only going to make it harder for those companies that have overpromised.

And although **Fortescue** has taken the hard decision to moderate its decarbonisation ambitions and in the process lay off 700 people, it's an open question as to who else will follow suit. There is no shortage of companies that have made tough-to-meet commitments that look increasingly unrealistic.

Patrick Gibbons is a former diplomat and partner at corporate advisory firm Orizontas.

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