Hydrogen – dividing the room

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"There are things being done at the moment that would have made 2007 Macquarie blush." Sometimes you "innocently" ask a question and get a lot more back than you bargain for.

This week, the question posed to a bunch of infra types was delivered in the shape of a straw poll for which there isn't a simple yes/no answer: "Does hydrogen make sense as an investment?"

That lured them in! And not without good reason.

Hydrogen has long furrowed this infra hack's brow as an energy source, a concern shared by an old mate of the infra fund variety who puts it rather nattily: "It's great on PowerPoint, not so great on spreadsheet."

Without even bothering with the hydrogen colour chart, let's just lay out – in the simplest possible way – what hydrogen projects look like:

- captive projects – makes sense
- offtake in the bag – fair enough
- build it and they will come – worked once in an atrocious movie

The first one speaks for itself and these projects are copper-bottomed. You secure your power source (green's the magic colour), locate the electrolyser next to where it's going to be consumed. Bob's your uncle. Fanny's your aunt.

Without question, the best example of this is dished up by H2 Green Steel (H2GS) – now Stegra – and its hydrogen-powered green steel plant in Boden, northern Sweden… a landmark transaction in this sector.

In June we reported on the EU approving Swedish state support for this project to the tune of €265 million ($283.5m). This is a direct grant partially disbursed under Sweden's national recovery and resilience facility (RRF). Add to that a €255 million slug of equity from the EU Innovation Fund.

Meanwhile, the European Investment Bank and the Nordic Investment Bank took part in the project finance. The EIB contributed €314 million – of which €200 million was backed by a guarantee from the European Commission under the InvestEU programme – and €114 million of intermediated financing through commercial banks. NIB was in for €57 million of the PF debt, of which €9 million was supported under InvestEU.

And this speaks to a lot of the comments from infrastructure folk this week. As one says, hydrogen makes sense "with the right contractual structure", caveating that with: "The right contractual structure seems frequently unobtainable."

DFIs are leaning into this sector in a way that reminds one of the early days of wind power… but it feels a lot less temporary with H2. The sense is that – in Europe, for example – you can expect the EIB to have a seat reserved for it at every table for the foreseeable future.

This thesis is stood up by the European Commission in April awarding aggregate subsidies of €720 million to support 7 renewable hydrogen projects that were successful in its pilot European Hydrogen Bank auction.

And you know how they love cutting big cheques and snipping green ribbons.

Offtake, offtake, offtake

At our LatAm conference earlier this year in Miami, one of the panellists was unable to attend. His last-minute stand-in was briefed with the simple message: "Offtake, offtake, offtake."

This was well received by the audience and you'll be relieved that the replacement panellist did actually have a good bit more to say than the one word on repeat.

The second bullet is where you have a buyer for the hydrogen / ammonia from the get-go. And for this, let's point to NEOM Green Hydrogen Plant in Saudi Arabia as an excellent example.

NEOM Green Hydrogen Company (NGHC) – JV between NEOM (ENOWA), Air Products and ACWA Power – will commission the plant in 2026 and will start producing 600 tonnes per day of hydrogen. The project includes production of nitrogen by air separation, as well as up to 1.2 million tonnes per year of green ammonia.

NGHC – the project company – has an exclusive 30-year offtake agreement with Air Products for all the green ammonia.

There you go. It just makes sense.

Project finance principles in evidence – bankers smiling. All is well in the world.

Build it and they will come

In a curious parallel with the move Field of Dreams, buyers seem to be every bit as spectral, insubstantial and – in some instances – not terribly approachable.

While it would be easy to name and shame a good number of H2 projects that fall into this category, the thought of a deluge of furious emails is so off-putting let's just say: "You know what I'm talking about."

Bringing it down to brass tacks. If you're going to build a pub in the middle of nowhere, you better have something pretty damned special to reel the punters in.

Now that all the hype has died down on hydrogen – sticking with this analogy – you don't really see people reaching for the car keys to visit a hostelry in the wastelands.

One infra veteran puts it quite simply – and this is for hydrogen across the board – when he says: "I think there are better places to put money."

Another calls for a return to a more quantifiable market: "We moved from owning assets – utilities, toll roads, wind farms – and maybe trading them for upside to someone with a lower cost of capital… to the wholesale development of assets as being mainstream infrastructure.

"The buyers are making Herculean assumptions to justify astronomical prices, and largely ignore that rates are higher, so cost of capital should be too."

A banker of some renown joins in: "The investment case still needs to be proven. It seems like the early stage of wind farms, where tech was expensive – but economies of scale sort it over time. Overall, early stage but moving in right direction, and good probability of being a very successful investment over time."

One more hopes that Adam Smith's invisible hand will sort things out eventually while another says: "There has been some cooling off on the hydrogen front, but there will be bankable deals if we apply old fashioned PF principles. The recent influx of financial investors in infrastructure is not helping though."

Meanwhile another draws a parallel with a similar set of projects that are working through the system: "Having seen where carbon capture is allegedly trending towards, I can't help feeling it's another sector where people are fooling themselves as to the actual risks involved and there are better investment returns out there."

And the last word goes to an infra fund veteran who points out that "If you want to launch manned space rockets at the moon it has quite a good track record", but warns that it has "more of a chequered history for slow moving air transportation alternative to aircraft".

As for the role hydrogen will play in energy generation across the planet, he shrugged and looked uninterested.