PART TWO | Hydrogen electrolyser consolidation: Strategic plays for the next phase

By Stephen B. Harrison on Jan 29, 2025 FEATURE | COLUMNISTS

Picking back up from Part One of this column, where I discussed the ways in which the electrolyser field is likely to be thinned out in the brutal capital, investment and market environment, here I explore what the game plan could be for the companies that remain.

As consolidation reshapes the hydrogen electrolyser value chain, the surviving players will need to adapt by leveraging strategic investments, critical component innovations, and value-driven acquisitions.

Outside of the mould-breakers, when comparing electrolyser efficiency, stack life, minimum turn-down, permissible number of 'offs', and other key performance parameters, it is becoming increasingly difficult to identify points of difference between many of the 'standard' players. This is especially true when looking at pressurised PEM and pressurised alkaline stacks and systems.

> How did we get here? Read Part One to find out more about the black hole of consolidation heading for the electrolyser industry.

For the electrolyser builders which survive, innovative critical components will be in high demand. They are the differentiators that lead to the stack builder having a USP.

To ensure stack builders and electrolyser system OEMs continue to stand out in the long-term, when they believe they have found something unique they may wish to acquire the associated critical component manufacturer. Or they may seek to bring emerging component-level technologies in-house through other means to strengthen their competitive position.

Many critical components for electrolysers are also relevant to other sectors. For example, woven, knitted and sintered meshes are used for filters in the automotive and chemical sectors in addition to being used to build electrolyser stacks. The tail may therefore begin to way the dog, with leading critical component manufacturers acquiring electrolyser stack builders or systems builders to add value to their market offer.

Producers of high-tech manufacturing equipment which traverses sectors may take over start-ups that have encroached into their field. For example builders of atomic layer deposition (ALD) coating machines for the semiconductor industry may take on similar technology providers who are working on electrolyser electrode ALD coating equipment.

Established players which cover a broad range of sectors with their technologies will have sufficient resources and cash from other business units to execute the transactions they wish to pursue.

A buyer's guide

Capitalising on the next wave of hydrogen opportunities will look more like a value play than a growth play. The venture capitalist (VC) era is over, those heady valuations based on hockey-stick green hydrogen growth are gone.

Looking for special situations where some key components of value can be salvaged from the wreckage may be a relevant buy-side strategy to follow.

Engaging with potential partners to let them know the olive branch is there, if and when they need it will also be prudent.

There could be less risk investing in this area than there was three years ago. Valuations in this market are more realistic than they were when multiples were in the thousands or loss-making entities were being valued for hundreds of millions of dollars.

When the deals come, valuations may largely be influenced by competitive bidding with the price based on the strategic value of the jewel in the target's crown, rather than a bottom-up valuation of the entire entity based on their business model and revenue projection.

Despite current valuations of players in the hydrogen electrolyser value chain being lower than they were some years ago, no investor would take the risk of buying assets that are likely to decay their value to zero. Due diligence, adherence to compliance rules and prudence will still be key.

Get ready for private equity-day

The start-up CEO's hopes and dreams may come true. Perhaps the customers will come and the orders will eventually begin to flow. Perhaps this next R&D investment will yield the killer product. Perhaps electrolyser build projects which have been awaiting FID come to fruition.

This must be the bottom. Things can only get better from here, right? Perhaps not.

For the pro-active sellers, the start-ups looking to exit or those running out of capital there are actions that can hedge against the risk of being left with nothing. Or worse, being left with a heavy burden of debt.

When all was going well, there was a pitch deck at the ready to show to potential investors. Now that there may be a more nervous environment, a deck still needs to be prepared. Different messages, different target audiences, different terms. But being realistic and being ready will mean that you are likely to have some kind of leverage if the axe begins to fall.

Talking to potential future partners now, whilst things are still going well, will be a wise investment of time by the CEO. After all, their ultimate role is to increase the value, or at least preserve the viability, of the entity they lead.

Or, join the sharks. Get in with an ambitious investor. Play the consolidation game from the driving seat. Do it to others, before they do it to you. Who knows, you may find yourself boosted from start-up founder to CEO of a major player almost overnight.

In this high-stakes environment, the players who adapt proactively – whether through strategic acquisitions, innovation, or collaboration – will emerge as the leaders of green hydrogen's next chapter.