INTERVIEW TRANSCRIPT

GreenHy2 is commercialising the next generation of tried and proven stand-alone power supplies (SAPS) using solid state hydrogen storage technology that will provide Australia's electricity networks with a 100% renewable fraction, off–grid, safe and reliable renewable energy storage solution.

GreenHy2 is an Australian-based specialised provider of Renewable Energy solutions with a mission of delivering value for customers across the resource sector supply chain.

GreenHy2 has constructed many solar farms across Australia and continues to provide innovative engineering solutions combining renewable energy with Hydrogen storage capacity.

Today, GreenHy2 is a valued long-term partner of some of the country's leading electrical transmission providers.

Read the conversation:

Casey Portors:

"Hi everyone. I'm here with Paul Dalgleish, the Managing Director and Chairman of GreenHy2 with the ASX ticket code H2G. Welcome Paul, great to have you. Let's just go through a quick overview of, GreenHy2 and the company. Would you mind giving us a bit of background on GreenHy2?"

Paul Dalgleish:

"So GreenHy2 was formally Tempo. We were around for about 10 years on the ASX as a listed company. In the past, we've predominantly done renewable energy. But in recent years, we focused more heavily on renewable energy to the point where we're only at renewable energy. We rebranded our name to GreenHy2 to reflect our hydrogen focus, and we've now got a very specific hydrogen technology that we use as a hydrogen battery.It's solid-state hydrogen storage, and now the company is generally focused wholly on hydrogen and renewable energy. So GreenHy2 is our new brand."

Casey Portors:

"Great. Thanks, Paul. The technology is very exciting. Do you mind giving us an overview of the nature of it, solid-state hydrogen storage, and metal hydrides and how it works? "

Paul Dalgleish:

"So we work for the last few years with a company called GKN out of Europe, very advanced in hydrogen storage in metal powders. We use the first titanium hydride, which is a metal powder and it stores hydrogen as a solid. So the key feature of storing hydrogen solids is that it's more dense than just about any other energy storage mechanism you can use. And so it's 15 times as dense as lithium in the same volume. This technology GKN have been working on for 12 years and been thoroughly tested at commercial stages. We have a relationship with them over the last two years. We have a testing demonstrator plant with a very good utility in Australia, Essential Energy that's been running for six months. And the technology is now very much proven. We have a partnering agreement with GKN for Australian New Zealand and we are using some parts of Southeast Asia as well."

Casey Portors:

"Great. That all sounds really exciting and I think something about the renewable energy space is that majority of the market has been focusing on renewable energy generation and transmission, but this end of the market has been relatively unrecognized up until this point. So the problem that you solve with this technology is revolutionary, but there is a little bit of an education process that needs to happen. Would you agree? "

Paul Dalgleish:

"I think that, that the technology is still considered new, though it's been around for many, many years in Australia, that is, In Europe, it's quite well understood and, quite common. Yeah, the storage of energy is the biggest gap that we have in the market, of course. So we can generate solar and we can generate wind, but the sun doesn't always shine. The wind doesn't always blow. So you have to store energy for nighttime use and for that you need batteries. Clearly, lithium's not gonna be the long-term solution, and hydrogen is a much better alternative.

But storing hydrogen can be problematic if it's at very high pressures in gas form. Here, we store it at low pressure, ambient temperature in a very safe, solid form. So it's the safest way to store hydrogen, and it's the densest way to store hydrogen. So it's a, it's an answer to a very complex problem, but it suits the Australian market very well."

Casey Portors:

"Exactly. And I think that something very unique about Australia is that we have all of this potential for renewable energy generation. The storage issue is something that you guys address, but a unique feature of Australia's electricity network makes this solution very fitting to Australia. Can you just delve into that a little bit more?"

Paul Dalgleish:

"So Australia has a very fragile grid, we might say. It's got a large area to cover with the grid system and very few people on that grid, in large parts of Australia. So it's very difficult to get transmission lines out to people. One is transmission lines can be delicate in Australia because we have lots of bushfires, floods, and cyclones and also the bush transmission lines can cause bushfires if things don't go correctly. So in this way, our country's energy utilities are taking a lot of properties off-grid. And to take properties off-grid, you need a high-density battery so that they have power all year round and not have to rely on something like diesel or the grid. So having a very high-density battery in hydrogen that's a renewable source, our battery lasts for over 20 years and is completely recyclable. So we're having this solution for this market is ideal. So our energy delivers to remote communities like Ergon or Western Power or Horizon Energy, Northern Territory Power and Water, and Essential Energy all have large amount numbers of customers who are uneconomic for them to supply power to."

Casey Portors:

"Great. And I think that's something that everyone would have, would like to learn more about is where exactly you guys are at with speaking to these potential customers and the trials that you have going on. "

Paul Dalgleish:

"We have a demonstrated unit with essential energy. It's been running for over six months and working well. And this is a classic case of taking a property off the grid and running it without any diesel backup, using solid-state hydrogen batteries, and solar. We use fuel cells and electrolyzers in the technology to create electricity when the sun shines and we store it, and then we provide it all year round."

Casey Portors:

"Great. And something that we'd like to emphasize is that you guys are focusing on standalone power supplies as an initial application for this technology, but of course, there's much more to it than just that. Do you wanna talk about what the potential opportunities are outside of SAPs? "

Paul Dalgleish:

"There are large numbers of potential opportunities. SAPs is just the, probably the prime focus at the moment because it's the best market for us at this point in time. It's a, low-hanging fruit if you like. And so we are focused on that. Any removal of diesel is very expensive. And so for those communities working on diesel, this is an absolute best opportunity for them to come off diesel, lose the noise, lose the CO2 outcomes from diesel get onto renewable energy and then have renewable energy all year round, there are lots of islands who are on diesel as well. And then we'll move on to the general market."

Casey Portors:

"Great. Thanks, Paul. I think we can all agree it's very exciting to watch you guys as you continue to commercialise the technology. What would you say is the key aspect of the company that everyone should be paying attention to as you continue to commercialise the metal hydride technology?"

Paul Dalgleish:

"That we're the only company that has a solid-state hydrogen battery, which therefore leads to the fact that we are the only company that can probably take properties off-grid without diesel support. And so that solution for all those users for instance at Essential, 1% of their customers cost 17% of the grid costs. So to take those customers off-grid requires this sort of high-density battery so that they've got power all year round and if there's a period of no sun for 30 days, they don't run out of power. So we're the only company in Australia doing this. We're the only company in Australia who's capable of delivering that solution to these customers. And there's large amounts of customers."

Casey Portors:

"Thank you very much, Paul. It was great having you with us.

Paul Dalgleish:

"My pleasure, Casey."