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Australia's PlasmaLeap raises A$30 Million to accelerate zero-emissions production of fertilisers and fuels

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PlasmaLeap Technologies, the Australian company pioneering zero-emissions production of ammonia and nitric acid, has secured almost A$30 million (US$20 million) in new funding from a group of strategic and institutional investors, which was led by the Gates Foundation, Investible and Yara Growth Ventures, the venture arm of Yara International, a world leading integrated nitrogen fertilisers producer.

The Series A round, which closed in January, also included Twynam, GrainCorp Ventures, Uniseed/UniSuper, Artesian, SVG Ventures and Agnition Ventures, part of New Zealand fertiliser co-operative Ravensdown. The proceeds will be used to progress first-of-a-kind fertiliser hubs in New South Wales and Tasmania, expand field trials, and further develop PlasmaLeap's core technology. Funding will also support longer-term applications in sustainable fuels and energy systems.

PlasmaLeap's technology, which was spun out of the University of Sydney, enables farmers to produce sustainable nitrogen fertiliser directly on their farms or at local hubs, reducing emissions, input costs, and supply-chain dependency. Nitrogen fertiliser production, transport, and application accounts for a significant share of global industrial emissions (~2.5% global CO2e), driven by fossil fuel-intensive manufacturing, long-haul transport, and chemical losses at the crop. Moreover, fertiliser

access and cost vary dramatically across the globe, with the retail price in certain parts of sub-Saharan Africa being nearly double the world fob[2]Â price, due to issues around importation, logistics, and financing.

"The backing of these strategic and institutional investors is strong validation of both the PlasmaLeap technology and the scale of the opportunity," said Frere Byrne, CEO & Co-founder of PlasmaLeap. "This funding allows us to move from successful trials into real-world deployment, demonstrating how clean, decentralised fertiliser and chemical production can transform agriculture, reduce emissions and guarantee sovereign security of critical resources like food and fuel."

"PlasmaLeap has developed a breakthrough platform for fertiliser with lower CO2 emissions, delivering step-change improvements in energy efficiency. We see strong potential for this technology to scale competitively and reduce the climate impact of farming," said Stian Nygaard, Investment Director at Yara Growth Ventures.

"Decarbonized and distributed liquid nitrogen production is the new frontier in agriculture. The PlasmaLeap technology can unlock opportunities for scaling-up fertigation and precision farming globally," said Martin Debaig, Fertigation Director at Yara International.

"PlasmaLeap is unlike anything we've seen in the green ammonia space and their technology is defining a new category in distributed sustainable fertiliser production. We first met the team through Greenhouse Tech Hub. As our tenth investment in a Greenhouse member, it reinforces our model of pairing early access and capital with a purpose-built innovation ecosystem," said Ben Lindsay, Investment Principal at Investible.

The global market for ammonia, the primary ingredient in most nitrogen fertilisers, is worth approximately US$69 billion a year, and projected to triple in size over the next 20 years.

PlasmaLeap's patented reactor technology produces ammonia and nitrate using only air, water and renewable electricity. The company's modular systems are scalable and designed to integrate with existing fertiliser supply chains.

The technology has the potential to improve national food security, reduce exposure to international price shocks, and reduce and stabilise input costs for growers. This capability becomes increasingly critical as resource availability and geopolitical instability continue to impact global fertiliser markets.

It is also expected to generate high quality carbon credits through the decarbonisation benefits it brings through production, transport and application-related emissions reduction. PlasmaLeap is considering a number of carbon standard methodologies that may be applied to credit generation from its technology.

PlasmaLeap continues to advance its technology platform with a focus on efficiency, scalability and commercial deployment. It also has potential to produce synthetic hydrocarbons from biogas, syngas, or other low-carbon feedstocks, supporting decarbonisation pathways for hard-to-abate sectors.