



GREEN LIGHT FOR GREEN AMMONIA: AUSTRALIA'S CHIEF SCIENTISTS WITNESS GROUNDBREAKING INNOVATION AT PLASMALEAP TECHNOLOGIES

How an Australian Plasma Technology Company is fuelling a greener future and leaving fossil fuels in the dust.

Vision available to download [here](#). Images available to download [here](#).

Wednesday 12 July, 2023 - *PlasmaLeap Technologies*, a pioneering Australian company revolutionising the energy and agricultural sectors, has showcased its groundbreaking green ammonia technology to Australia's Chief Scientist Dr Cathy Foley and NSW Chief Scientist Professor Hugh Durrant-Whyte.

Ammonia has long been a vital component in the agricultural sector, serving as a key ingredient in fertilisers. However, the traditional ammonia production method has come under scrutiny due to its significant carbon footprint and detrimental environmental impacts. Today, traditional ammonia production accounts for approximately two per cent of global carbon emissions, equivalent to the entire aviation sector.

PlasmaLeap Technologies recognised the urgent need for a sustainable alternative, leading them to develop groundbreaking zero-emission ammonia production technology which uses only renewable electricity, air and water.

PlasmaLeap Technologies Chief Executive Officer Frere Byrne said the breakthrough achieved by *PlasmaLeap* is a huge step forward for the industry and could abate significant industrial emissions, accelerate the development of the global Hydrogen economy, and contribute materially to achieving global Net-Zero. And having Dr Foley and Professor Durrant-Whyte witness the state-of-the-art reactors in action is a testament to the potential of *PlasmaLeap's* technology.

"It's fantastic to have had the Chief Scientists visit our facility and witness the capabilities of *PlasmaLeap's* technology. Their interest, alongside a growing number of international energy and agricultural businesses, reinforces our position as industry leaders in the development of green fuel and energy technology." Mr Byrne said.

"*PlasmaLeap's* reactors demonstrate frontier science and engineering, and boast an unprecedented level of performance and scalability. Our Chief Technology Officer, PJ Cullen, working with University of Sydney and UNSW colleagues demonstrated a new plasma driven path to ammonia synthesis and achieved world leading energy efficiency and production rates with technology that consumes only air, water and electricity."

"With the ability to produce zero-emissions ammonia at rates literally thousands of times that of the next best competing electrochemical technology, *PlasmaLeap's* reactors could be critical in achieving global Net-Zero by 2050."



PLASMALEAP

Technologies

UNSW Scientia Professor Rose Amal, co-director of the ARC Training Centre for Global Hydrogen Economy added "Electrification of our industries is a key component of meeting global Net-Zero targets and *PlasmaLeap Technologies* has achieved a remarkable feat in developing new electricity-driven chemical pathways for industry, including ammonia,"

"Electricity driven chemistry has the potential to transform the landscape of global carbon emissions by providing sustainable alternatives to high emitting industries. I am thrilled to witness such innovative solutions originating from Australian companies like *PlasmaLeap Technologies*." Prof. Amal said.

As one of the leading chemical reactors on the market, *PlasmaLeap's* technology has captured the attention of various industries, including agriculture, renewables and resources companies, and is used widely in research centres around the world.

Hugh Mackinnon, owner of the significant soft fruit operation *Mountford Berries* in Tasmania will be trialling the technology as a Driscoll's Grower allied to the Global Genetics and Marketing Company.

"The Mackinnon family have been farming at Mountford for five generations. We have a deep interest in sustainable agriculture, particularly technologies that have the potential to reduce carbon emissions across the entire sector," Mr Mackinnon said.

"We will be trialling the technology in our operation and believe the innovation, which provides zero-emissions ammonia feedstock on-demand, has the ability to transform horticulture businesses both environmentally and economically."

PlasmaLeap Technologies is on track to achieve energy efficiency rates of 20 kWh/kg ammonia in its large scale reactors by the end of 2023. *PlasmaLeap Technologies* is poised to become a prominent player in the global energy and chemicals landscape. With their groundbreaking green ammonia and eFuel technology, the company is spearheading a transformative shift towards sustainable energy solutions. As they continue to grow rapidly and scale up production, all eyes are on *PlasmaLeap Technologies* as the rising star of the industry.

About PlasmaLeap Technologies:

Established in 2019, *PlasmaLeap Technologies* is an Australian company specialising in the development of advanced plasma-based chemical reactors. With a team of technical and commercial experts and a commitment to innovation, *PlasmaLeap Technologies* aims to revolutionise heavy emitting industries through their state-of-the-art zero-emissions eFuels and chemical technology. Their flagship reactors are setting new standards in the field and propelling *PlasmaLeap Technologies* to the forefront of green energy technology advancements globally.

For more information about PlasmaLeap Technologies, please visit: www.plasmaleap.com

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