

## **Good Earth Green Hydrogen and Ammonia Project Overview**

### **The Project**

The Good Earth Green Hydrogen and Ammonia ('GEGHA') Project is an integrated solar energy to hydrogen and ammonia plant that will be constructed at the Wathagar cotton gin in northern NSW.

The majority of hydrogen will be consumed to produce low-carbon fertiliser (anhydrous ammonia). There will also be substantial direct use of hydrogen on-farm to replace diesel and LPG use in irrigation pumping, mobile farm equipment, and drying raw cotton for processing.

### **Project Proponents**

The GEGHA Project is being delivered by the Hiringa Sundown Project Trust ('HSPT'). The HSPT is a joint venture between Sundown Pastoral Company and Hiringa Energy Limited, managed by Hiringa Energy Pty Ltd (together referred to as Hiringa).

- Sundown Pastoral Company is a privately owned Australian agricultural and pastoral company with a renowned reputation for innovative farming techniques, sustainable agricultural production methods and environmental stewardship since establishment in 1964.
- Hiringa Energy is a privately owned hydrogen company founded in New Zealand with a physical Australian presence, and a strategic focus on hydrogen solutions for hard-to-abate sectors. Since 2016, Hiringa has been developing low-carbon hydrogen production projects to supply industry, agriculture and transport, including utility-scale wind and solar to hydrogen and ammonia production.

### **Location and Site Suitability**

The GEGHA Project is located just off the Gwydir Highway on Sundown Pastoral's 'Keytah' property. Site selection for the GEGHA Electrolysis and Ammonia plant and storage is in close proximity to the existing Wathagar gin (an existing agri-industrial land use) as well as the power and water sources required for the plant's operation.

The area where the main plant and equipment will be constructed is flat, largely cleared and has previously been used for waste cotton storage. The nearest off-farm residence is approximately 3.9km away from the site.

All above ground buildings, plant and equipment will be fully contained within the Wathagar gin flood protection levee which, in addition to providing an important flood defence, creates a visual screening barrier from the adjacent Gwydir highway.

Access to the gin is provided off the Gwydir Highway which may require a small upgrade to ensure a safe entry/ exit point for the construction and operation of the GEGHA facility.

## **Plant Production**

The GEGHA Project will deliver up to 1,500 tonnes of hydrogen and 4,600 tonnes per annum of low-carbon anhydrous ammonia (equivalent to displacing approximately 6,800 tonnes per annum of imported high-carbon urea) to Sundown and neighbouring agribusinesses, via 10-12 MW of electrolysis capacity supported by 27 Megawatts of on-site solar PV.

## **Key Dates and Delivery Milestones**

The detailed planning and design phase commenced in Q2 2023 and will continue through 2023 and 2024. Construction is planned to commence in late 2024 with the plant operational by Q3 2025.

## **Key Benefits**

### *Immediate Impact of the GEGHA Project*

The GEGHA project will demonstrate the potential for low-carbon hydrogen and ammonia adoption in regional hard-to-abate sectors including agriculture, industrial manufacturing and heavy transport.

In addition to on-farm hydrogen and ammonia use, hydrogen can support regional decarbonisation more broadly by displacing high-carbon fuels and feedstock in industrial manufacturing, and through heavy freight refuelling – including the logistics of moving agricultural produce to port.

### *Unlocking a Pathway for Regional Decarbonisation*

The GEGHA project concept is scalable and repeatable, with feasibility underway for 50 MW electrolysis / 20,000 tonne p.a. projects able to serve demand more broadly in agricultural valleys at low distribution cost.

The two locations being investigated for larger-scale projects include Moree and the Riverina in southern NSW. These locations possess a high density of irrigated cotton growing operations, as well as other agricultural commodities likely to benefit from local low-carbon fuel and fertiliser supply.

Both the GEGHA project and future expansion projects will establish a pathway to eliminating agricultural sector reliance on high-carbon fuels and fertilisers whilst bringing about greater supply chain stability and price certainty.

## **Further Information and Enquiries**

Hiringa is actively engaged in stakeholder and community consultation in relation to the Project. For any further information, please visit the Project website [www.gegha.com.au](http://www.gegha.com.au). Project personnel can be reached via the website or our Project email [gegha@hiringa.com.au](mailto:gegha@hiringa.com.au). We welcome all interest in the Project and would be happy to respond to any requests for further information or expressions of interest in supply of Ammonia or Hydrogen.