

MEDIA RELEASE:

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SOUTH AUSTRALIAN MANUFACTURING FACILITY SET TO REVERSE THE TREND OF AUSTRALIA'S HEAVY RELIANCE ON OTHER COUNTRIES FOR UREA FERTILISER

Greenhill Energy's proposed Riverbend Energy Hub is set to reverse Australia's heavy reliance on other countries for urea fertiliser, while also increasing national food security and further 'greening' the primary industry sector.

The proposed urea manufacturing facility at Tailem Bend in South Australia's Murraylands is set to become Australia's first full integrated processing facility to convert landfill waste and sustainable biomass into high value products such as urea fertiliser and synthetic fuels, and into low-cost clean hydrogen for use in emission free power and transport.

The company has several MOUs in place with high calibre partners such as Elders, Solo Resource Recovery and Peats Soil and Garden Supplies to see the diversion of biomass and landfill waste into its proposed processing facility from 2025.

Greenhill Energy Executive Managing Director Nicholas Mumford said they also aim to support local farmers with their fertiliser needs, helping to increase domestic food security and as a practical circular economy demonstration of re-purposing biomass and landfill waste.

"Australia presently imports 100% of its urea needs, exposing domestic users to volatile and high-cost international pricing," he said. "We know our lack of sovereign capacity and resilience worries many people on the land. We aim to provide domestic supply certainty and place downward pressure on the cost of local food production.

"We are also opening up new opportunities for farmers on marginal land to provide our manufacturing plant with feedstock, through cropping of sustainable biomass, as a potential new revenue source. In return, we can provide farmers with their own urea fertiliser needs."

Nicholas said it is concerning how much Australia relies on other countries for the bulk of the nation's fertiliser needs, and this is steadily increasing every year.

"It's a very real problem, which has many in the industry looking for alternatives," Nicholas said. "We have a growing demand for fertiliser, with limited local production.

"By all reports, there hasn't been domestic production of urea fertiliser since the closure of a regional plant in 2022.



“There’s a green wave of renewable energy projects across the country, and it’s exciting to see the innovation and investment switching to technologies with less harmful emissions. Our advantage includes low-cost hydrogen production from sustainable biomass and landfill waste, and utilisation of onsite produced CO₂ which is a key ingredient in urea manufacture.

“At the same time as we import urea, we are sending potential useable biomass and waste feedstock to landfill. We aim to reverse the trend, by upcycling these waste materials into useful products such as green urea.”

The project will be underpinned by integrating proven hydrogen processing and manufacturing technologies, within a unique closed system, as Australia’s economy and industry seeks to decarbonise.

“We spent five years researching ways to upcycle Australia’s growing waste streams into high value products such as clean hydrogen and fertilisers,” he said.

“This led us to learn more about proven and advanced waste-to-hydrogen technologies, such as gasification, which are in successful application across many European countries. We also added a twist of Australian innovation to integrate energy inputs and outputs into a novel, closed ecosystem with diverse products.

“Through gasification and the generation of green hydrogen, ‘green urea’ will be one of our key products, helping Australia’s path to decarbonisation,” Nicholas said.

“Initially, we will have the capacity to generate 100,000 tonnes of green urea, which is under 5% of our nation’s needs. We can upscale from there, as we expand our technology and waste-to-hydrogen processes across Australia.”

Greenhill will be looking to replicate the Riverbend Energy Hub blueprint at other sites across Australia and internationally in years ahead.

“We are proud to be one step closer to delivering Australia’s first fully integrated facility of this kind in regional South Australia to convert high volume sustainable biomass and landfill waste into high value upcycled products, such as urea fertiliser.”

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