Greenko to invest $6 billion in pumped storage, green ammonia business in 3 years

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The Greenko group — which is building the world's largest pumped hydro storage facility near Kurnool in Andhra Pradesh, spending "upwards of a billion dollars" for that purpose — plans three more such facilities in the next three years.

Two of these will be roughly of the same size and the third, one-and-half times as big. Together, these will have a storage capacity of 50 GWh.

The Kurnool plant is expected to be commissioned by December this year. A third of the power will be supplied to Greenko's green hydrogen and green ammonia facility coming up at the port city of Kakinada, from where green ammonia will be exported.

In all, Greenko will invest $6 billion into this business,

◉ POWERPLAY

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Gautam Reddy, COO of Greenko ZeroC Pvt Ltd, told *businessline*, at the India Energy Week, held in Bengaluru last week.

In the same event, BC Tripathi, a Senior Advisor at Greenko, said the group will produce 3 million tonnes of green ammonia a year. The first shipment will happen by December 2025. Incidentally, Greenko has entered into an MoU with Germany's Uniper, under which it would supply 250,000 tonnes of green ammonia a year to the German company.

PUMPED STORAGE

The pumped storage facility, coming up at Pinnapuram village in Kurnool district, is the world's biggest. It is completely "off-stream", which means it is a closed loop, where water moves from lower reservoir to the upper and back, as required. The electricity for pumping the water to the upper reservoir comes from Greenko's 1,000 MW of solar and 550 MW of wind plants.

The facility can supply peak-time electricity for six hours. A part of the power has been contracted to be sold at a tariff of ₹4.23 a kWh — cheaper than the price of electricity from new coal projects, Reddy said. He said electricity from a pumped storage of this scale would be 60-65 per cent cheaper than a grid-scale battery storage.

Assuming that the electricity that would go into Greenko's electrolysers that manufacture green hydrogen, Reddy said the company will be able to produce green hydrogen at the same price as done from imported LNG.

DIVERSIFICATION

The company is now onto a "strategic diversification" into storage and is moving from 'green electrons' (renewable energy) to 'green molecules' (hydrogen and ammonia). As such, the group will no longer put up renewable energy projects, though it does not also intend to sell off its renewable energy assets, Reddy said.

Greenko has also set up a JV with John Cockreill of Belgium for building a 1-GW alkaline electrolyser plant. "It is almost 50:50 JV," Reddy said.