Essar may turn Stanlow into world's first decarbonised green refinery

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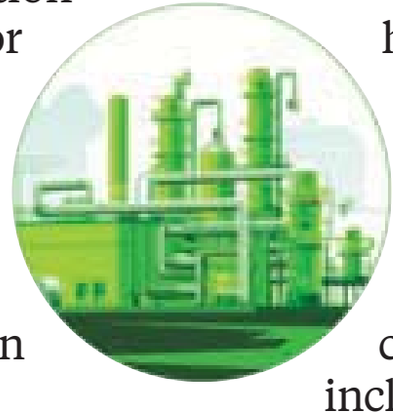
Essar group will turn the UK's Stanlow refinery into the world's first decarbonised green refinery as it plans to use blue hydrogen for meeting heating and power needs of the unit, cutting carbon emissions by as much as 95 per cent, a top official said Tuesday.

Speaking at FT's Energy Transition Summit India, Prashant Ruia, director of Essar Capital, which manages the group's portfolio of investments, said Essar Energy Transition's (EET) HyNet project will produce 350-megawatt of blue hydrogen in phase-1 and another 1 gigawatt in phase-II.



Since the UK does not have solar and wind potential to produce renewable electricity which could be used to split water in an electrolyser to produce green hydrogen and oxygen, EET will use natural gas to produce blue hydrogen and also capture and permanently store carbon produced during the process.

"We are going to make this (Stanlow) the world's first decarbonised green refinery. We are decarbonising 95 per cent of our carbon dioxide (CO2)" emissions that are released when crude oil is processed into fuels like petrol and diesel, he said.

Use of blue hydrogen in the refinery process will decarbonise up to 2.5 million tonnes of CO2 — equivalent to taking 1.1 million cars off the roads.

"Using hydrogen for the refinery heating and power requirement will be first globally," he said.

Last week, the UK government announced 21.7 billion pounds of funding over 25 years to support the construction of two carbon capture clusters in northern England that include large blue hydrogen projects. The money will be for the HyNet hub in Merseyside and the East Coast Cluster hubs in Teesside, which will see more than 8.5 million tonnes of carbon dioxide a year stored under the Irish Sea and North Sea.

EET is piloting the HyNet project.

Decarbonising the refinery would improve its profitability as the company would no longer have to pay carbon tax, he said.