

# JOINT EXPLORATION FOR LIQUEFIED HYDROGEN SUPPLY INFRASTRUCTURE TO POWER KEPPEL'S DATA CENTRES IN SINGAPORE

Keppel, Kawasaki, Linde, MOL and Vopak have entered into a MOU to study the technical and commercial viability of a LH<sub>2</sub> supply infrastructure for Singapore.

Production of H<sub>2</sub> using renewable energy



SOLAR AND WIND FARMS

ELECTROLYSERS

Renewable energy sourced from large-scale solar and wind farms to power electrolyzers  
Electrolyzers split the water molecules using renewable energy to produce hydrogen (H<sub>2</sub>)

Converting H<sub>2</sub> to LH<sub>2</sub> for storage and export



LIQUEFACTION PLANT

LH<sub>2</sub> STORAGE AND EXPORT TERMINAL

Gaseous H<sub>2</sub> is liquefied to liquid hydrogen (LH<sub>2</sub>) reducing its volume to 1/800th  
LH<sub>2</sub> is stored in cryogenic tanks and is ready for loading onto specialised marine tankers

Marine transportation



LH<sub>2</sub> TANKERS

LH<sub>2</sub> is shipped to Singapore in specialised marine tankers

Import into Singapore



LH<sub>2</sub> IMPORT TERMINAL

LH<sub>2</sub> is discharged into cryogenic tanks and is subsequently regasified into gaseous state to fuel the H<sub>2</sub>-based power plant

Green electrons for Keppel's data centres



FLOATING DATA CENTRES

HIGH RISE DATA CENTRES

Vision to build embedded H<sub>2</sub>-powered data centres in Keppel's drive to support a carbon-neutral digital future for Singapore

Hydrogen, which does not emit carbon dioxide during combustion, is gaining traction as a clean energy alternative for land-scarce markets. In liquid form, hydrogen occupies 800 times less volume than in gaseous state, allowing for more compact and efficient storage and transportation.