

TEMASEK

### Joint Media Release

# International partnership to investigate green ammonia supply from Australia's hydrogen hubs

**5** November 2021, Singapore – Keppel Infrastructure Holdings Limited (Keppel Infrastructure)<sup>1</sup>, Incitec Pivot Limited (Incitec Pivot) and Temasek have signed a memorandum of understanding (MOU) to investigate the feasibility of producing green ammonia<sup>2</sup> in Queensland and New South Wales (NSW), Australia for export to meet the rapidly growing market demand for carbon-free energy globally, including Singapore. The green ammonia may be used as a direct feedstock in green energy generation, or as a hydrogen carrier to provide green hydrogen solutions.

The MOU will bring together the complementary strengths and capabilities of the three international partners:

**Keppel Infrastructure** has a strong track record in developing and operating efficient and reliable energy and environmental infrastructure, such as combined cycle power plants and waste-to-energy facilities, as well as in electricity retailing, and is looking to deepen its involvement in renewables and end-to-end low-carbon solutions including green electricity importation, hydrogen and carbon capture, utilisation, and storage.

*Incitec Pivot*, an ASX 100 company, is Australia's largest supplier of fertiliser on Australia's east coast and a global leader in the resources and agricultural sectors, with assets capable of blue/green conversion of ammonia. Incitec Pivot will contribute its world class expertise in ammonia production, along with its strategic land at Kooragang Island in the Port of Newcastle, NSW.

*Temasek* is a global investment company with a net portfolio of S\$381 billion as at 31 March 2021. Temasek is actively supporting a range of decarbonisation opportunities, including feasibility of various renewable energy options. Temasek will fund part of the feasibility study.

The three parties will work closely with the Queensland and NSW Governments to explore the feasibility of essential infrastructure, licences and approvals to facilitate the production and export of green ammonia.

In response to growing challenges brought about by climate change, there is an urgency to develop alternative sources of low carbon fuel options to decarbonise the power, industrial, maritime transportation and the aviation sectors.

Production of green ammonia can produce carbon-free electricity. It could be a direct fuel, or to reprocessed to produce green hydrogen for use as a fuel feedstock, for example to power gas turbines.

In addition, the green ammonia may be used to replace bunker fuels to decarbonise the global maritime industry.

<sup>&</sup>lt;sup>1</sup> Through its wholly-owned subsidiary, Keppel New Energy Pte Ltd.

<sup>&</sup>lt;sup>2</sup> Green ammonia is ammonia that is produced from 100% renewable energy feedstocks and carbonfree processes.

Ms Cindy Lim, CEO of Keppel Infrastructure, said, "Keppel is pleased to partner with Incitec Pivot and Temasek to explore and identify feasible pathways to develop secure, scalable and cost competitive green ammonia supply chains from production, transportation and storage to distribution and end-uses in the global and regional markets. Availing green ammonia, as a potential source of clean fuel to support the demand for sustainable energy, can meaningfully contribute to deep decarbonisation in power and hard-to-abate sectors.

"As part of Keppel Group, which offers solutions for sustainable urbanisation, Keppel Infrastructure possesses domain knowledge and operating expertise in the different aspects of the sustainable energy landscape and is uniquely placed to lead in this collaboration whilst adopting a whole-ecosystem approach. This will also catalyse Keppel Infrastructure's development efforts in zero-emission solutions and low-carbon energy services in line with Keppel's Vision 2030."

The MOU also supports Australia's National Hydrogen Strategy, which has identified seven clean hydrogen hubs across Australia, which includes Queensland and NSW, where Incitec Pivot has existing ammonia asset and brownfield sites and is well positioned to benefit from Queensland and NSW Government's recent announcements supporting the establishment of hydrogen export economy.

Incitec Pivot Managing Director & CEO, Ms Jeanne Johns, said, "We are delighted to partner with two of Singapore's leading companies to investigate new and exciting opportunities to create Australia's green ammonia industry.

"Both our Kooragang Island site and potential greenfield site in Gladstone have the advantage of being nominated by the Australian Government as locations for hydrogen hub development.

"We are looking forward to combining our leading ammonia manufacturing and handling expertise here in Australia with Keppel's large-scale energy and infrastructure development capabilities, and Temasek's experience in sustainable solutions. This is another step in our commitment to support the development of an Australian low carbon energy industry of the future."

Mr Frederick Teo, Managing Director of Sustainable Solutions at Temasek, stresses the need to seek alternative clean energy to drive sustainable development. "Adding a carbon-free fuel to the market will enable more companies to grow in a sustainable manner and potentially open new business opportunities as well."

Keppel Corporation Limited, the parent company of Keppel Infrastructure, does not expect the abovementioned development to have any material impact on its earnings per share and net tangible asset per share for the current financial year.

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## About Keppel Infrastructure

Keppel Infrastructure (KI) is a wholly-owned subsidiary of Keppel Corporation, a Singapore flagship multinational company providing solutions for sustainable urbanisation. KI provides solutions for some of the world's most pressing challenges through its power & gas, environment and new energy businesses by leveraging its proprietary technology, strong technical expertise and proven operating capabilities.

KI has a track record of developing energy and environmental infrastructure end-to-end, including power generation assets, waste-to-energy (WTE) facilities, large-scale district cooling systems, as well as NEWater and desalination plants. In Singapore, it operates a

1,300-megawatt high efficiency gas-fired combined cycle power plant and a utility pipe rack and pipeline network in Jurong Island. It is also Singapore's leading electricity retailer, and the first and largest district cooling systems developer and service provider. Globally, through Keppel Seghers, it is one of the leading WTE technology providers with more than 100 project references in 20 countries.

KI is expanding its presence, in Singapore and overseas, in areas such as power generation, waste management, district cooling, renewables and energy storage, electric vehicle charging infrastructure and other clean energy opportunities.

For more information, please visit www.kepinfra.com

## About Incitec Pivot

Incitec Pivot is an ASX 100 listed company headquartered in Melbourne, Australia, with a market cap of more than A\$6 billion.

Incitec Pivot has two customer facing businesses: Dyno Nobel, a global supplier of commercial explosives and industrial chemicals and Incitec Pivot Fertilisers, Australia's largest manufacturer and supplier of fertilisers. These businesses service our resources and agricultural customers with high-quality products, solutions and support.

With a team of more than 5000 dedicated employees, Incitec Pivot has world scale manufacturing operations in the USA, Australia, Mexico, Chile, Canada, Indonesia, PNG and Turkey, along with joint ventures in South Africa.

For more information, please visit <u>www.incitecpivot.com.au/</u>

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