

## Joint Media Release

21 September 2022

### **World-leading conglomerates announce plans to develop a green energy supply chain from Australia to Korea**

Three of Korea's largest conglomerate groups, Korea Zinc, Hanwha Impact and SK Gas, and Australian-based Ark Energy have formed the Hanguk-Hoju (Korea-Australia) Hydrogen (Han-Ho H2) consortium and signed a Memorandum of Understanding (MoU) to develop a supply chain to export more than 1 million tonnes of green ammonia per annum from Australia to the Republic of Korea by 2032.

The MoU was signed at Queensland Government headquarters in Brisbane and witnessed by The Hon. Anastacia Palaszczuk MP, Premier of Queensland and Minister for the Olympics.

Premier Palaszczuk said her Government has worked to ensure major consortiums like Han-Ho H2 are welcomed through a supportive policy and regulatory regime.

"Today, we welcome the Han-Ho H2 consortium to Queensland to accelerate progress in our renewable hydrogen industry and advance green energy exports to Korea," the Premier said.

Korea is already the third largest importer of ammonia in the world. Based on ammonia's characteristics to act as a hydrogen carrier combined with the Korean Government's recent commitments to co-fire green ammonia as a carbon-free fuel in the country's coal and gas-fired generators, the Korea Institute of Energy Research estimates Korea's total ammonia demand will exceed 21 million tonnes per annum beyond 2030.

Ark Energy will lead the consortium and leverage its experience building the domestic hydrogen economy of North Queensland through its SunHQ H2 Hub, which is focused on diesel fuel replacement through hydrogen commercial mobility. Ark Energy will also leverage its renewable energy portfolio including the Collinsville Green Energy Hub south-west of Bowen, which will have a potential generation capacity of up to 3,000MW.

Ark Energy CEO, Daniel Kim, said strategic partnerships will be essential to building a new green ammonia supply chain from Australia to Korea, the scale of which does not currently exist.

"Together with our parent company, Korea Zinc, we carefully selected Hanwha Impact and SK Gas as potential partners and we are delighted that they have decided to join our consortium. Our partners and our parent company are major players in Korea's hydrogen economy and have a forecast demand for more than 2 million tonnes of green ammonia per annum from 2030," said Mr Kim.

Korea Zinc's participation in the consortium will be as one of the offtakers and will also contribute to a number of the workstreams in the MoU including ammonia production, storage and associated infrastructure.

Korea Zinc Vice Chairman, Yun B. Choi, said the group has invested more than A\$3 billion in Australia since it established the Sun Metals zinc refinery in Townsville more than two decades ago. Australia will continue to be a key strategic market for the group as we develop, build, own and operate renewable energy and green hydrogen projects for the long-term.

"As the first major refiner in the world to join RE100, this MoU aligns with our commitment to power our global operations from 100% clean energy by 2050. We look forward to working with our partners to further unlock Australia's potential to become a large-scale producer and exporter of green hydrogen and its derivatives including green ammonia," said Mr Choi.

Hanwha Impact's participation in the consortium will be as one of the offtakers and will also contribute to a number of workstreams in the MoU including ammonia cracking and converting gas turbines to hydrogen ready turbines.

Hanwha Impact CEO, Hee-Cheul Kim, said the group is operating under a mandate to drive change to a sustainable future and is prioritising investments in hydrogen-focused low carbon technologies.

"We are excited to be part of the Han-Ho H2 consortium and look forward to collaborating with our partners to build new green growth engines for the Australian and Korean economies. The Han-Ho H2 consortium will accelerate Hanwha Impact's transition to an eco-friendly energy and carbon-neutral company," said Mr Kim.

SK Gas' participation in the consortium will be as one of the offtakers and will also contribute to a number of workstreams in the MoU including export terminal infrastructure, shipping solution, import terminal infrastructure and end use market development.

SK Gas CEO, Brian (Byung Suk) Yoon, said the strategic importance of the MoU and the infinite potential of the consortium can't be overstated.

"This MoU aligns with our ambition to become a global top tier Net Zero Solution Provider. We're excited to be collaborating with our partners to play a tangible role in helping countries like Korea in its energy transition by providing clean hydrogen," said Mr Yoon.

Pursuant to the MoU, the Han-Ho H2 consortium has agreed to target the execution of a Heads of Agreement (HoA) by the end of December 2022.

## About Green Ammonia

Green ammonia is produced from green hydrogen, which in turn is produced from renewable energy (including solar and wind) via an electrolysis process. Green ammonia is a critical enabler to decarbonising coal and gas-fired power generation, the marine sector where it can be used as a zero-carbon bunkering fuel as well as the manufacture of fertilisers and explosives. Green ammonia is an excellent energy carrier over long distances and can be transported relatively easily. It can also be cracked back to hydrogen gas to be used in other applications such as the transport sector.

## About Ark Energy

Ark Energy Corporation Pty Ltd is accelerating the energy transition by helping its customers decarbonise even if they operate in notoriously hard to abate industry sectors. Ark Energy is helping its parent company, Korea Zinc Co. Ltd., become one of the first major refiners in the world to produce green zinc. Ark Energy aims to become a low-cost producer, extreme user and demand creator of green hydrogen and its derivatives including green ammonia. [Ark Energy](#)

## About Hanwha Impact

Hanwha Impact is a holding company within Hanwha Group of which major business areas include solar power, energy, defence, aerospace and retail. Hanwha Impact's core mission is to accelerate the Group's transition to carbon neutrality. Hanwha Impact will lead a sustainable future for the world and humanity through its transition into an eco-friendly energy and carbon-neutral company, breaking conventional frames and investing in future technologies. As an example of its investment in hydrogen economy, Hanwha Impact acquired two hydrogen combustion technology companies PSM and Thomassen Energy in 2021. [Hanwha Impact](#)

## About Korea Zinc

Korea Zinc Co. Ltd. is the largest and most environmentally friendly zinc producer in the world. Korea Zinc is listed on the Korea Composite Stock Price Index (KOSPI) with a market capitalisation of approximately A\$13billion. Korea Zinc has a proud 25-year history in Australia through its Sun Metals zinc refinery in Townsville, which is the largest private sector employer in North Queensland. Korea Zinc was the first major refiner in the world to join RE100 and commit to powering its global operations from 100% clean energy by 2050. Korea Zinc's future growth strategy is underpinned by its *Troika Drive* focussed on Renewable Energy and Green Hydrogen, Secondary Battery Materials and Resource Recycling. [Korea Zinc](#)

## About SK Gas

SK Gas has the vision to become the Net Zero Solution Provider for customers by providing low carbon solution of LNG and LPG as well as zero carbon solution of clean hydrogen and ammonia. SK Gas is the no.1 player in the Korean LPG market and is the leader in LPG global trading. Recently SK Gas has expanded its portfolio to LNG by building a LNG terminal, LNG/LPG dual fuel power plant and LNG marketing business. The LNG terminal and power plant are expected to be operational from 2024. SK Gas plans to leverage its LNG/LPG assets and capabilities to grow a successful clean hydrogen and ammonia business targeting power generation, industrial and mobility sectors. [SK Gas](#)

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