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Opening up renewable hydrogen export opportunities with Japan

On behalf of the Australian Government, ARENA has today announced up to \$2.17 million in funding to Stanwell Corporation Limited (Stanwell) to complete a feasibility study for a proposed hydrogen export project located in Gladstone, Queensland.

A key challenge of producing cost-competitive green hydrogen by electrolysis is the high capital costs of equipment. Large export-scale projects have the potential to improve cost competitiveness due to economies of scale.

The study, delivered in partnership with Japan's largest hydrogen supplier Iwatani Corporation, will investigate the feasibility of developing a hydrogen production facility capable of producing up to 36,500 tonnes per annum of renewable hydrogen and export to Japan from 2026. Stanwell and Iwatani's long term plan is to scale up to 328,500 tonnes per annum in 2031 to meet forecast Japanese demand. Stanwell proposes to ship hydrogen in liquid form utilising liquid hydrogen shipping vessels.

The \$10.4 million study is also supported by investment from a broader consortium of Japanese and domestic partners including Kansai Electric Power Corporation, Marubeni Corporation, Kawasaki Heavy Industries and APA Group, and funding support from the Japanese Ministry of Economy, Trade and Industry.

Australia holds a competitive advantage in the emerging hydrogen export market due to its existing expertise and infrastructure in energy export supply chains, proximity to key emerging hydrogen import markets in Asia with established trade relationships, and an abundance of renewable energy resources.

Since the release of Australia's National Hydrogen Strategy by the Council of Australian Government's (COAG) Energy Council in November 2019, the Australian Government has been advancing international collaborations, undertaking national coordination and supporting priority industry projects to grow a clean, innovative, safe and competitive hydrogen industry.

In January 2020, the Australian and Japanese governments signed a Joint Statement of Cooperation on Hydrogen and Fuel Cells. In June of this year, the governments also announced the Japan-Australia Partnership on Decarbonisation through Technology, recognising their shared ambition to accelerate the development and commercialisation of low and zero emissions technologies, including clean hydrogen. The study exemplifies the ongoing collaboration and exploration of emerging hydrogen trade opportunities.

ARENA CEO Darren Miller said the project represents an opportunity to investigate the potential of Australia becoming a significant exporter of renewable hydrogen.

"Stanwell's study presents a significant opportunity to accelerate the development of export opportunities for renewable hydrogen in Australia and to work with a highly credible consortium from Japan that has the potential to deliver a large scale export project.

"Australia's vast solar and wind resources and our proven ability to export energy products mean we are well placed to build a large-scale competitive hydrogen export industry in the future. Feasibility studies like this are a necessary and crucial step to build the case to attract the finance required for large impactful projects."

ARENA recently approved \$103 million in funding to support three 10 MW electrolyser projects through the Renewable Hydrogen Deployment Funding Round. Since 2018, ARENA has also invested \$60 million to support pre-commercial activities across 31 projects, including a number of feasibility studies focusing on smaller scale deployments with domestic end-use cases.

ARENA has also previously provided \$913,667 in funding to Stanwell to investigate the feasibility of a 10 MW electrolyser deployment project at the Stanwell Power Station near Rockhampton, Queensland, to supply domestic hydrogen.