WOODSIDE EXPANDS HYDROGEN PORTFOLIO TO THE UNITED STATES

Leading Australian energy producer Woodside has announced plans to expand its portfolio of hydrogen production opportunities to the US, securing land in Oklahoma for future development of a modular hydrogen facility and entering a memorandum of understanding (MoU) with Hyzon Motors.

Woodside has secured a lease and option to purchase 94 acres (38 hectares) of vacant land in Ardmore, Oklahoma, to underpin future development of its proposed H2OK project. The Company is also progressing similar land acquisition opportunities aligned to growth markets in the US.

Subject to approvals and customer demand, the H2OK concept involves construction of an initial 290-megawatt (MW) facility, which will use electrolysis to produce up to 90 tonnes per day (tpd) of liquid hydrogen for the heavy transport sector. The location offers the capacity for expansion up to 550 MW and 180 tpd.

Woodside has completed preliminary design of the modular, scalable production facility and is evaluating tenders to enable commencement of front-end engineering design before the end of this year. The project is targeting a final investment decision in the second half of 2022, and first liquid hydrogen production in 2025.

Woodside is also taking a proactive role in developing the US and Australian hydrogen markets, entering an MOU with Hyzon Motors as a New York-based supplier of zero-emissions hydrogen fuel cell-powered commercial and heavy transport vehicles. Woodside and Hyzon intend to explore opportunities to work together on demand stimulation, supply and infrastructure solutions, and coordinated advocacy.

Woodside CEO Meg O’Neill said H2OK and collaborative arrangements like the Hyzon MoU are part of the company’s strategy to deliver new energy projects that are cost-competitive and scalable to meet customer demand, noting the significant potential for growth in the US hydrogen market.

“With H2OK we will be bringing Woodside’s extensive liquefaction experience from LNG to deliver large-scale hydrogen production.

“H2OK would be located in a highly prospective part of the US market, close to national highways and the supply chain infrastructure of major companies that have signalled their interest in securing reliable, affordable and lower carbon energy.

“Following the completion of Woodside’s proposed merger with BHP’s petroleum business, we would have a significant presence in the North American market and we expect new energy opportunities to be a growing component of our portfolio,” she said.

Woodside has already announced plans to develop phased hydrogen and ammonia production projects in Perth (H2Perth) and northern Tasmania (H2TAS) to supply both Australian and international markets, leveraging capabilities built over decades of reliable and affordable LNG production and supply.

Woodside also announced in October a new collaboration with renewable energy technology company Heliogen, involving the proposed construction of a 5 MW commercial-scale demonstration facility in California using Heliogen’s concentrated solar power technology.

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Additional background on H2OK project

H2OK is a liquid hydrogen production facility proposed to be built in the Westport Industrial Park in Ardmore, Oklahoma.

Subject to approvals and customer demand, H2OK would involve construction of an initial 290 MW electrolysis facility producing up to 90 tpd of liquid hydrogen for the heavy transport sector, with potential expansion to 550 MW and 180 tpd.

The proposed H2OK facility is located in a strategic transport and supply chain corridor with potential for customers to adopt hydrogen for a range of uses including:

- Heavy-duty trucks
- Warehouse forklifts
- Heavy-duty equipment
- Ground handling equipment
- Fuel cell microgrids for warehouses and datacentres.

Hydrogen production

Hydrogen produces zero carbon emissions when it is consumed as fuel and is emerging as an important component in the world’s transition to a lower-carbon future.

Woodside intends for H2OK to be a net-zero project. Power will be sourced from Oklahoma’s existing network, a large portion of which is wind-powered, and Renewable Energy Certificates will be used to abate any remaining emissions.

H2OK joins H2Perth and H2TAS among Woodside’s publicly announced hydrogen production opportunities.
Proposed H2OK facility in Ardmore, Oklahoma: Conceptual images only. H2OK is subject to project approvals, regulatory approvals, commercial agreements and market demand.