



# Media Release

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## WOODSIDE LAUNCHES CARBON CAPTURE AND UTILISATION COLLABORATION WITH RECARBON AND LANZATECH

Leading Australian energy producer Woodside and US-based technology developers ReCarbon and LanzaTech have launched a collaborative studies program aimed at converting carbon emissions into useful products.

Together, Woodside, ReCarbon and LanzaTech are investigating the viability of a proposed Carbon Capture and Utilisation (CCU) pilot facility in Perth, Western Australia.

The proposed pilot facility would recycle greenhouse gases such as carbon dioxide (CO<sub>2</sub>) and methane into value-added ethanol using ReCarbon and LanzaTech's technologies. The ReCarbon technology would convert carbon dioxide and methane into synthesis gas, with the LanzaTech technology fermenting the synthesis gas into ethanol. Traditionally, ethanol manufacture relies on land and water use for source crops, such as corn. CCU reduces the reliance on these natural resources.

Woodside believes CCU is an emerging field with growing demand from existing and potential customers seeking alternative solutions for lower carbon.

This collaboration and proposed pilot demonstrate Woodside's commitment to developing new energy products and lower-carbon services.

The project is now in the front-end engineering design phase.

Woodside CEO Meg O'Neill described CCU as an exciting addition to the portfolio as it looked at carbon as an opportunity and resource, not just a challenge.

"What's notable about CCU is the wider co-benefits. Some end products have a further decarbonisation benefit. Products such as ethanol can be used as raw materials in the chemical manufacturing industry.

"We also see a potential role for the technology in helping to abate some of our Scope 1 and 2 emissions," she said.

Australia's Clean Energy Regulator is currently leading a co-design process to develop a carbon capture use and storage method under the Emissions Reduction Fund.

ReCarbon Founder and CEO Dr. Jay Kim welcomed the collaboration.

"The global energy and fuel sector is experiencing unprecedented transition. We are grateful to be selected as a leading technology solution to transform greenhouse gases into decarbonised products. Woodside is moving decisively by establishing real projects with its CCU initiative, and ReCarbon is proud to play our part," he said.

LanzaTech CEO Dr. Jennifer Holmgren noted the scale of the opportunity.

"Waste carbon can be transformed into critical resources like ethanol without adding CO<sub>2</sub> to the atmosphere. Together with Woodside and ReCarbon, we can create an opportunity to reuse greenhouse gases for meaningful applications," she said.

Woodside aims to thrive through the energy transition by building a low-cost, lower-carbon, profitable, resilient and diversified portfolio. Woodside's climate strategy has two key elements: reducing Woodside's net equity

Scope 1 and 2 greenhouse gas emissions<sup>1</sup>, and investing in the products and services that its customers need as they reduce their emissions. In 2021, Woodside set a US\$5 billion investment target by 2030 for new energy products and lower-carbon services such as hydrogen, renewables and carbon capture utilisation and storage (CCUS)<sup>2</sup>.

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## **About Woodside**

We provide energy which Australia and the world needs to heat homes, keep lights on and enable industry. We have a reputation for safe and reliable operations..

We aim to thrive through the energy transition by building a a low-cost, lower-carbon, profitable, resilient and diversified portfolio.

Our hydrocarbon business is complemented by a growing portfolio of hydrogen, ammonia and solar opportunities in Australia and internationally. Our new energy opportunities include the proposed hydrogen and ammonia projects H2Perth and H2TAS in Australia and the proposed hydrogen project H2OK in North America.

## **About ReCarbon**

Founded in 2011, ReCarbon, Inc. (<https://recarboninc.com>) is the developer of a commercial proprietary microwave plasma technology applied to the conversion of greenhouse gases (carbon dioxide and methane) to syngas (hydrogen and carbon monoxide). Based in California, USA with a global operational footprint, ReCarbon is deploying its disruptive, combustion-free, climate-positive technology in plants and projects worldwide, producing revenue and reducing costs in targeted hard-to-abate industry sectors.

## **About LanzaTech**

LanzaTech harnesses the power of biology and big data to create climate-safe materials and fuels. With expertise in synthetic biology, bioinformatics, Artificial Intelligence and Machine Learning coupled with engineering, LanzaTech has created a platform that converts waste carbon into new everyday products that would otherwise come from virgin fossil resources. LanzaTech's first commercial scale gas fermentation plant has produced over 30 million gallons of ethanol which is the equivalent of keeping over 150,000 metric tons of CO<sub>2</sub> from the atmosphere. Additional plants are under construction globally. LanzaTech is based in Illinois, USA and employs more than 300 people. Further information is available at [www.lanzatech.com](http://www.lanzatech.com).

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<sup>1</sup> In 2020, Woodside announced targets to reduce net equity Scope 1 and 2 emissions by 15% by 2025 and 30% by 2030, towards an aspiration of net zero by 2050 or sooner. Target is for net equity Scope 1 and 2 greenhouse gas emissions, relative to a starting base of the gross annual average equity Scope 1 and 2 greenhouse gas emissions over 2016-2020 and may be adjusted (up or down) for potential equity changes in producing or sanctioned assets with an FID prior to 2021. Post-completion of the Woodside and BHP petroleum merger (which remains subject to conditions including regulatory approvals), the starting base will be adjusted for the then combined Woodside and BHP petroleum portfolio.

<sup>2</sup> Investment target assumes completion of the proposed merger with BHP's petroleum business. Individual investment decisions are subject to Woodside's investment hurdles. Not guidance.