

# Media Release

Monday, 18 October 2021

## WOODSIDE AND HELIOGEN TO COLLABORATE ON BREAKTHROUGH SOLAR TECHNOLOGY PROJECT TO REDUCE CARBON EMISSIONS

Woodside Energy (USA) Inc., a wholly owned subsidiary of leading Australian energy producer Woodside Petroleum Ltd, and Heliogen, a leading provider of AI-enabled concentrated solar energy, today announced further steps towards deployment of new solar energy technology with potential to play a significant role in the development of Woodside's future energy business.

Heliogen has been granted by Woodside a Limited Notice To Proceed ("LNTP") to begin procurement of key equipment for a 5 megawatt (MW) commercial-scale demonstration facility in California. The proposed facility will use Heliogen's AI-enabled concentrated solar technology.

The issuance of the LNTP follows a joint six-month feasibility study by Woodside and Heliogen and a front-end engineering and design ("FEED") contract that commenced earlier in 2021. The companies expect Full Notice to Proceed and construction to begin in 2022.

Heliogen's breakthrough technology is a modular, turnkey, AI-enabled concentrated solar energy system that aims to deliver clean energy with nearly 24/7 availability. The facility will utilise advanced computer vision software that precisely aligns an array of mirrors to reflect sunlight to a single target on the top of a solar tower, thereby enabling low-cost storage in the form of high-temperature thermal energy. Customers can opt to build on the baseline system that provides industrial-grade heat by adding thermal energy storage systems, a turbine for power generation, and electrolyzers for green hydrogen production.

The two companies also announced their intent to jointly market Heliogen's technology in the US and Australia. Under the proposed joint marketing arrangement, the companies will consider establishing a roadmap to collaborate on additional potential renewable energy projects, including replicating and scaling Heliogen's modular, AI-enabled concentrated solar facility to support Woodside's forecasted power requirements at its international locations, noting Woodside's commitments to reduce net emissions from its existing and future businesses. The arrangements under discussion include a framework to design, optimise and sell modularised industrial-scale and cost-competitive integrated renewable energy and hydrogen solutions in the US and marketing rights for Woodside in Australia.

Woodside CEO Meg O'Neill said the new collaboration with Heliogen demonstrated Woodside's focus on developing innovative technologies to meet customer requirements for low-cost, lower-carbon energy.

"This is a significant step toward the development of our first facility with Heliogen, which we hope will be just the start of our ongoing collaboration.

"Heliogen's innovative technology could play a key supporting role in development of Woodside's zero-carbon hydrogen and ammonia business, which would rely on access to abundant and reliable renewable power.

"We are also excited about the marketing rights for Heliogen's technology in Australia, where our abundant solar energy resources support application of this technology in remote power generation and other industrial processes," she said.

"Heliogen's AI-enabled concentrated solar technology has the potential to transform heavy industry by turning sunlight into a zero-carbon source of heat, power and hydrogen that is nearly always available," said Heliogen CEO and founder, Bill Gross.

"Although costs of large-scale solar are falling, conventional solar technologies are not yet cost-competitive with fossil fuels in most energy markets due to their intermittent availability. Heliogen's technology aims to close this gap through the use of AI, software and thermal storage. As the energy sector is ripe for applications

of green hydrogen fuels and decarbonisation strategies, Woodside is an ideal collaborator for our breakthrough solar technology, which will support the operational characteristics of heavy industry. We are excited to reach this important milestone in our relationship with Woodside and look forward to helping them to efficiently achieve their sustainability targets," he said.

### **About Woodside**

Woodside led the development of the LNG industry in Australia and is applying this same pioneering spirit to solving future energy challenges. The company is recognised for its world-class capabilities as an integrated upstream supplier of energy with a focus on LNG, which is a lower-emissions, competitive fuel ideally suited to supporting decarbonisation and improving air quality. Woodside is working to improve its energy efficiency, reduce and offset emissions, and explore options for lower-carbon energy in line with its aspiration to achieve net zero by 2050. Woodside seeks out opportunities to improve business performance through innovative thinking and applying technologies developed outside its industry.

### **About Heliogen**

Heliogen is a renewable energy technology company focused on eliminating the need for fossil fuels in heavy industry and empowering a sustainable future. The company's AI-enabled, modular concentrated solar technology aims to cost-effectively deliver near 24/7 carbon-free energy in the form of heat, power, and green hydrogen fuel at scale for the first time in history. Heliogen was created at Idealab, the leading technology incubator founded by Bill Gross in 1996. For more information about Heliogen, please visit <https://heliogen.com/>.

On July 6, 2021, Heliogen entered into a definitive business combination agreement with Athena Technology Acquisition Corp. (NYSE: ATHN). Upon the closing of the business combination, Heliogen will become publicly traded on the New York Stock Exchange under the new ticker symbol "HLGN". Additional information about the transaction can be viewed here: <https://heliogen.com/investor-center/>.

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#### **Contacts:**

##### **MEDIA**

**Christine Forster**  
M: +61 484 112 469  
E: christine.forster@woodside.com.au

## Decarbonizing Industry with AI-enabled Solar Energy + Storage



 Woodside

 Heliogen