

21 December 2023

PILBARA MINERALS' POWER STRATEGY TO REDUCE EMISSIONS INTENSITY AND COSTS

Australian lithium producer Pilbara Minerals Limited (ASX: PLS) (**Pilbara Minerals or the Company**) is pleased to release its medium-term Power Strategy which is expected to reduce power related emissions intensity¹ (tCO₂-e/MWh) by up to 80% by 2030², compared to the 2023 financial year (**FY23**). This initiative is aligned with Pilbara Minerals' strategic ambition to become a sustainable battery materials producer, as well as driving ongoing operational cost savings.

To deliver the Power Strategy, Pilbara Minerals has executed two key agreements which will expand on-site power generation at Pilgangoora Operation and support the transition from diesel to natural gas, including installation of a lithium-ion Battery Energy Storage System (**BESS**). These agreements are the first step in supporting Stage 1 of the Company's Power Strategy to reduce emissions intensity and costs which is expected to be operational in the second half of FY25.

Key highlights

- The Power Strategy involves a three-staged approach. Stage 1 transitions thermal generation from predominantly diesel to natural gas and BESS. Stage 2 aims to increase existing solar generation at site, and Stage 3 plans the addition of emerging wind power generation should it become available via grid connection by 2030.
- Emissions intensity is forecast to reduce by ~20% following completion of Stage 1, ~48% following completion of Stage 2 and up to 80% following completion of Stage 3 if deployed, all relative to FY23.
- Together, Stages 1 and 2 are also anticipated to deliver material power unit cost reductions³ for the Pilgangoora Operation. The cost profile of Stage 3 including any potential savings, is dependent on emerging regional wind solutions and infrastructure being developed and becoming available to the Pilgangoora Operations in the future.
- The Power Strategy supports Pilbara Minerals' commitment to achieving net zero scope 1 and scope 2 emissions in the decade commencing 2040 and positions the Company for a sustainable, cost-effective future.⁴

Pilbara Minerals' Managing Director and CEO, Dale Henderson, said:

"We are delighted to announce our phased power strategy that further moves us along the path to net zero, supports reduced operating costs and will grow in lock-step with our production expansion needs. This strategy builds on the first phase of installed solar power generation commissioned in late 2022.

Successful delivery of the strategy is anticipated to achieve a ~48% reduction in power emissions intensity by 2027 via our own natural gas and solar power generation initiatives at site and up to 80% reduction by 2030 should emerging wind power generation opportunities become regionally available. This also supports our aim to be a leader in the provision of sustainable battery materials."

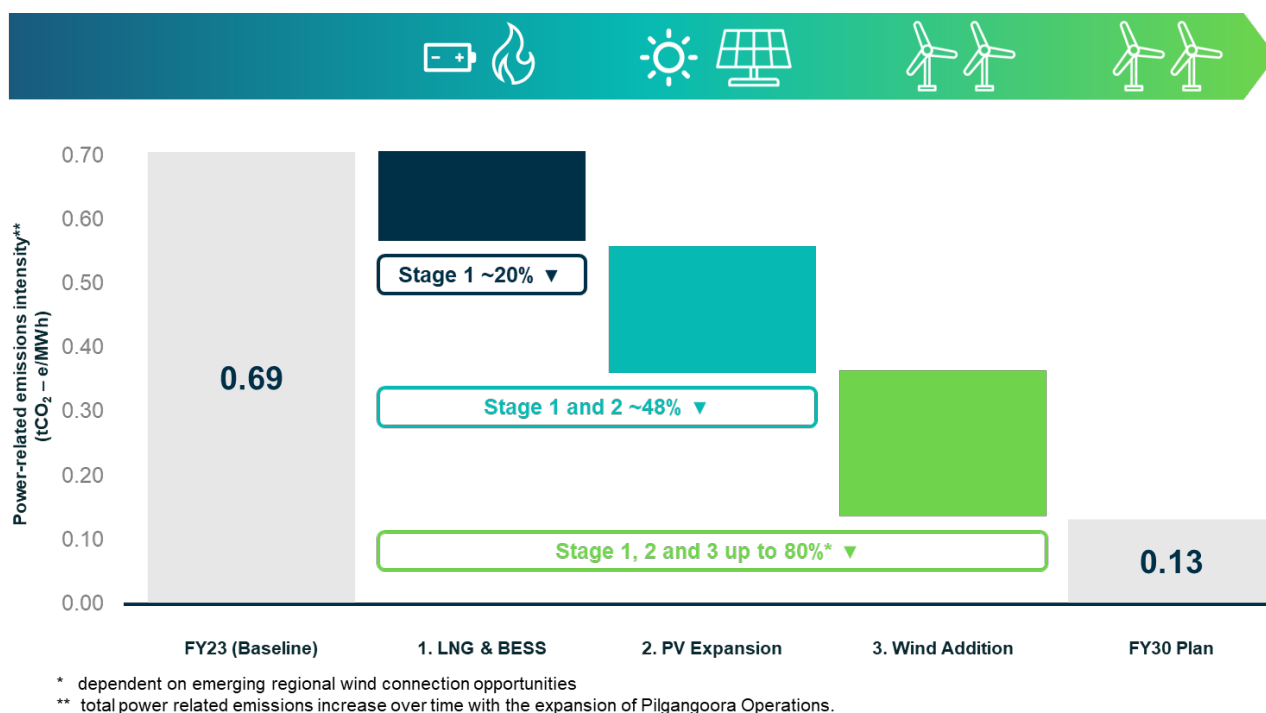
¹ Emissions intensity refers to tonnes of Carbon Dioxide equivalent per megawatt hour (tCO₂-e/MWh). Total power related emissions increase over time with the expansion of Pilgangoora Operations.

² Power related emissions intensity reductions of up to 80% compared to FY23 are targets only and assume that the Company will implement the 3 staged power strategy as detailed in this release. Stage 3 assumes and is dependent on renewable wind power generation and associated grid infrastructure being developed and becoming available to the Pilgangoora Operation from third parties by 2030.

³ Based on predicted gas and diesel prices.

⁴ Unlocking the full potential of the Power Strategy's contribution to the Company's net zero ambition will rely on advancements in infrastructure, technology and economics, particularly with respect to emissions-free firming solutions.

Figure 1. Forecast Pilgangoora Operation power emissions intensity.



Power Strategy - Stage 1

As previously announced on Final Investment Decision (**FID**) for P1000⁵, additional power will be required to support the P1000 expansion project and the mid-stream demonstration plant. This expansion in power requirements will include a transition of the existing Pilgan power station from predominantly diesel to a combined natural gas/diesel power station with BESS.

Stage 1 builds on Pilbara Minerals' existing strategy to displace the use of diesel fuel with a 6MW solar array which was commissioned in late 2022.

Pilbara Minerals has executed two agreements to facilitate Stage 1, and support Stage 2 of the Power Strategy. The first agreement is a five-year gas supply agreement with Woodside Energy to supply LNG from its Pluto LNG Truck Loading Facility. The second is an amendment to the existing Build Own and Operate Contract with Pacific Energy with a term of 15 years. Under this agreement, Pacific Energy will convert the current on-site Pilgan power plant to a combined natural gas/diesel power station, expand power generation for the P1000 expansion project and integrate a BESS system for supply stability and to support future growth in solar contribution from Stage 2 of the Power Strategy.

The Stage 1 upgrade consists of new high-speed gas generators, onsite LNG storage and a BESS at the main Pilgan power station. A portion of existing diesel generators will remain onsite to provide additional power security across the Pilgan and Ngungaju power plants.

Stage 1 is planned to deliver a 90% substitution of diesel for stationary power generation via trucked LNG which is a lower emissions-intensive fuel source and is expected to achieve operational cost savings. It is expected that this solution will reduce power emissions intensity by ~20%.

The LNG solution outlined in Stage 1 is targeted to be fully online by the second half of FY25 with funding already allocated under the P1000 expansion project.

⁵ For more information see Pilbara Minerals ASX Announcement "P1000 Project Final Investment Decision" dated 29 March 2023.

Power Strategy - Stage 2

Stage 2 will partially displace onsite LNG fuel consumption with renewable generation targeting a variable renewable energy (VRE) fraction of ~35% via expansion of the existing on-site solar array to approximately 40 MW. The generation will enable renewable energy to satisfy up to 100% of power requirements during suitable daylight periods when operating in conjunction with the BESS installed as part of Stage 1. The Stage 1 gas power station will provide power security during periods of low solar PV generation.

Following completion of Stage 2, emissions intensity is forecast to reduce by ~48%, relative to FY23.

Full generation of 40 MW from Stage 2 is targeted to be operational by the June Quarter FY26.

Power Strategy - Stage 3

Stage 3 requires third party wind power generation and associated grid infrastructure to be developed and become available to the Pilgangoora Operation. If implemented, this is expected to facilitate an increase in the overall VRE fraction to greater than 75% when operating in conjunction with the Stage 2 solar array.

It is anticipated that Stage 3 can be achieved before FY30 given the multiple third parties currently progressing plans to connect the North-West Interconnected System (NWIS) to Newman via new transmission infrastructure that would likely route close to the Pilgangoora Operation. Several vendors are also progressing plans to target first wind supply to the NWIS in FY28, providing the necessary renewable generation sought under this Power Strategy.

Should such renewable energy and infrastructure become available to the Pilgangoora Operation, following completion of Stage 3, emissions intensity is forecast to reduce by up to 80%, relative to FY23.

Release authorised by Dale Henderson, Pilbara Minerals Limited's Managing Director and CEO.

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About Pilbara Minerals

Pilbara Minerals is the leading ASX-listed lithium company, owning 100% of the world's largest, independent hard-rock lithium operation. Located in Western Australia's resource rich Pilbara region, the Pilgangoora Operation produces spodumene and tantalite concentrates. The significant scale and quality of the operation has attracted a consortium of high quality, global partners including Ganfeng Lithium, General Lithium, POSCO, and Yibin Tianyi.

Important Information

This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein.

Guidance as to production, unit costs and capital expenditure is based on assumptions, budgets and estimates existing at the time of assessment which may change over time impacting the accuracy of those estimates. These estimates are developed in the context of an uncertain operating environment including in respect of inflationary macroeconomic conditions, incomplete engineering and uncertainties surrounding the risks associated with mining and project development including the approvals,

construction, commissioning and ramp up of P680 and P1000 which may delay or impact production and have a flow on effect on sales.

Actual results may therefore vary significantly depending on these risks and the timing required to address them. All information is provided as an indicative guide to assist sophisticated investors with modelling of the Company. It should not be relied upon as a predictor of future performance.

Information in this announcement regarding production targets and expansions in nameplate capacity of the Pilgan Plant in respect of the P680 and P1000 projects are underpinned by the Company's existing Ore Reserves that have been prepared by a Competent Person in accordance with the JORC Code (2012 Edition) and were released by the Company to ASX on 24 August 2023. The relevant proportions of proven Ore Reserves and probable Ore Reserves are 9% proved Ore Reserves and 91% probable Ore Reserves. The Company confirms it is not aware of any new information or data that materially affects the information included in that release or report and that all material assumptions and technical parameters underpinning the Ore Reserves estimates continue to apply and have not materially changed.