

ASX ANNOUNCEMENT

23 FEBRUARY 2023

RENEWABLE GRID POWER FOR RAZORBACK PROJECT

MAGNETITE MINES TO CONNECT RAZORBACK VIA NEW SA-NSW INTERCONNECTOR

Highlights:

- **Power transmission design optimised to meet power demand for larger project scale**
- **Cost estimates received for private transmission line**
- **Power transmission corridor baseline environmental assessments well advanced**
- **ElectraNet Connection Options Report to confirm access to National Energy Market via new Bunday Substation & SA-NSW Interconnector**

MGT CEO Tim Dobson commented:

“Power supply is a critical component of our plans for a larger-scale Razorback Project, and we are delighted to confirm that grid connection remains our best option, providing access to South Australia’s “green power” transmission infrastructure, which is on track to supply 100% renewable energy by 2030. We have optimised our designs to take advantage of the new SA-NSW Interconnector to maximise supply reliability and maintain load capacity for future staged expansion. We have worked closely with ElectraNet to secure surety for our power transmission needs and are engaging with various providers to explore power supply on a ‘build-own-operate’ basis.

This important step further aligns Magnetite Mines with the global transition to decarbonised steel, and places Razorback at the forefront of South Australia’s burgeoning high-grade iron ore industry as a potential new supplier for efficient, green steel production.”

Magnetite Mines Limited (ASX:MGT) is pleased to provide an update on SA grid electricity supply plans for its Razorback Iron Ore Project in South Australia’s undeveloped Braemar Iron Formation. As part of current Optimisation Studies for a larger scale development of Razorback, MGT has revised the design and costing for an overhead transmission line to the site reflecting the increased power demand profile for Stage 1 and future scale-up opportunities.

The Company is targeting connection to the National Energy Market (NEM) via a new major substation at Bunday being constructed as part of the SA-NSW Electricity Interconnector (formally known as Project EnergyConnect), with power supply capacity at Bunday Substation verified by South Australian electricity network provider ElectraNet¹. A 126km long transmission line corridor, carefully designed to reduce potential environmental and social impacts, has been identified by MGT, and engagement with landowners has commenced.

Magnetite Mines is currently completing a series of optimisation studies to determine the go forward configuration for a larger-scale Razorback Iron Ore Project and is on track to complete these studies in March 2023. A key element of the studies is the provision of electricity to the Razorback site, located 240km north-east of Adelaide in South Australia's undeveloped Braemar Iron province. The Braemar hosts vast iron mineral resources with the potential to sustain high-grade iron ore production for many decades, meeting the needs of the decarbonising iron & steel industries.

Razorback is the logical first-mover project in the Braemar based on its scale and location. It is the closest Braemar project to Spencer Gulf port locations (~200km), has the largest resource base (6.0Bt) and the only JORC Ore Reserve (473Mt). Razorback also has the highest grade of the large-scale (+1 Bt) Braemar iron ore projects. Once established with the necessary infrastructure, including high-capacity, high-voltage electricity, Razorback has the potential to help unlock further projects in the developing Braemar Iron province.

In addition to transmission corridor and powerline studies, MGT has formally engaged South Australia's electricity network provider ElectraNet to progress the Project's staged power connection process by commissioning a Connections Options Report targeting a National Electricity Market tie-in at the Bunday Substation.

TRANSMISSION INFRASTRUCTURE ENGINEERING DESIGN

A study investigating the primary high voltage infrastructure requirements for the Razorback Project, based on a grid connection at Bunday Substation and the modelled power demand for the Stage 1, 5Mtpa project configuration, has been completed. A feasible, low-CAPEX solution has been identified that supplies sufficient transmission capacity (400MVA) for Stage 1 and future expansion staging requirements, with cost estimates provided to an AACE Class 5 standard.

The capacity contemplated enables significant future expansion of the Project and the potential future electrification of materials handling activities. Low levels of line loss are expected during Stage 1 of the Project given the low transmission load relative to line capacity. The study identified a 275kV single circuit transmission line as the basis of the cost estimate. The mine site substation has also been designed and costed (AACE Class 5) as part of this scope. This substation steps the power supply voltage down from 275kV to 11kV.

As recently advised to the market, the Company is working closely with ElectraNet who have confirmed that there will be sufficient supply capacity at the Bunday Substation connection point to meet the Project's forecast needs¹. In line with ElectraNet's formal connection network process, further engagement is now planned to confirm the specific connection, network reliability and administrative requirements to enable connection into the Bunday Substation and ElectraNet's network.

TRANSMISSION LINE ALIGNMENT AND SUSTAINABILITY APPROACH

Over the last 18 months, MGT has methodically planned and designed a transmission line alignment between the Razorback Project and Bunday Substation. Multiple alignment variants have been tested against environmental and social factors, with an optimised 126km alignment now included as the basis of the go-forward Project scope (Figure 3).

Key factors assessed and addressed in determining the alignment included:

- vegetation community types and potential for the presence of listed species
- areas supporting reduced vegetation clearance needs
- major topographical features, including creeks, hill ranges and land subject to inundation
- land uses, including existing infrastructure corridors and property boundaries
- stakeholder interest and support.

MGT have undertaken baseline ecology assessments along ~94% of the transmission line, with residual sections proposed to be completed in the following months. Land access negotiations with priority groups along the transmission line alignment are progressing well.

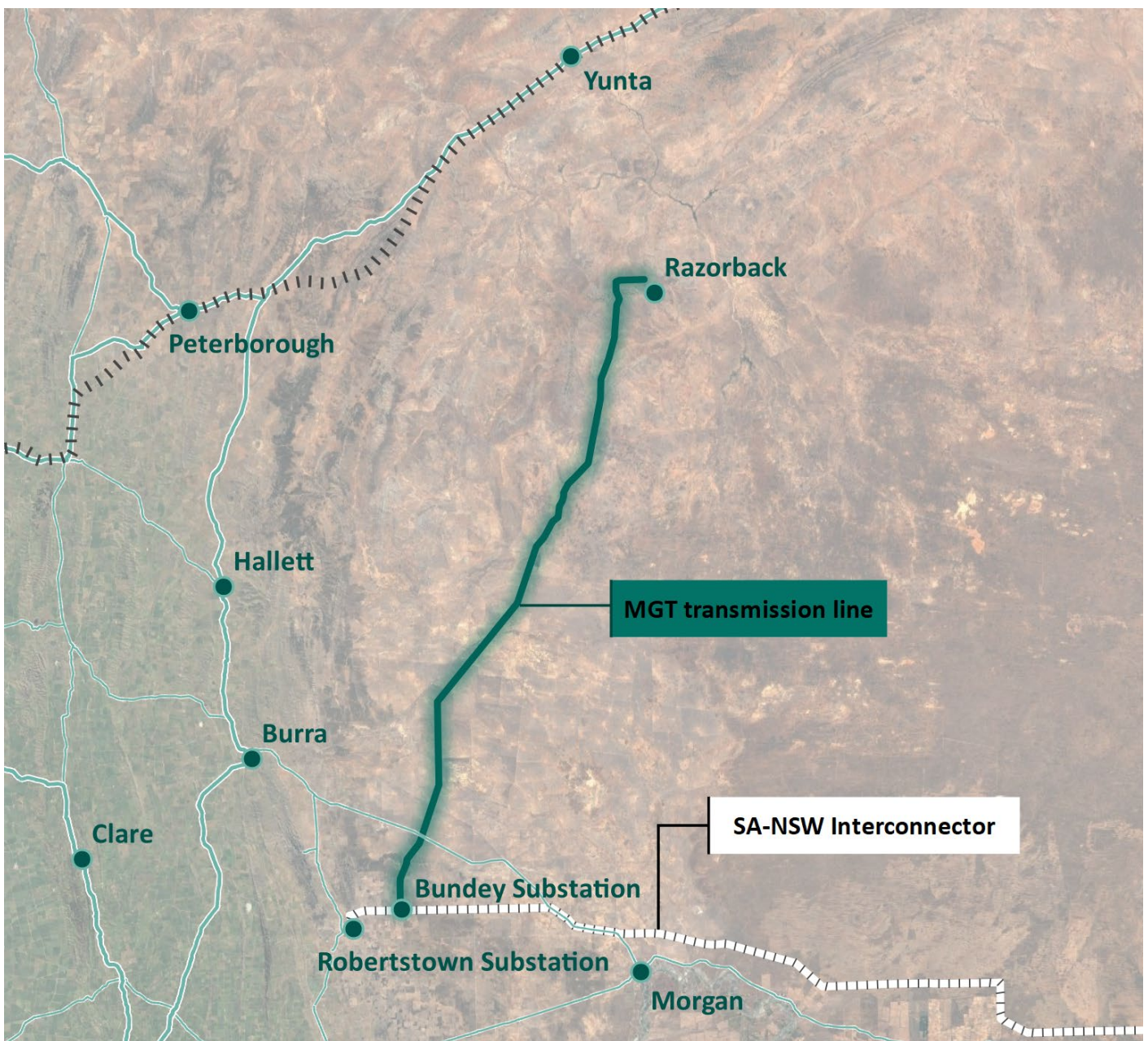


Figure 1. Proposed overhead transmission line alignment, Razorback to Bunday Substation

BUNDEY SUBSTATION AND SA-NSW INTERCONNECTOR

The SA-NSW Interconnector, formally known as Project EnergyConnect, is the development of a high voltage connection between the SA and NSW NEM sectors. The project will connect the Robertstown Substation in SA to substations in Buronga and Wagga, NSW. Included within the scope of Project EnergyConnect is the construction of a new 330/275kV substation at Bunday, approximately 15km northeast of Robertstown.

From the Bunday Substation, a 275kV double circuit transmission line will connect to the existing Robertstown Substation while a 330kV double circuit transmission line is being constructed eastwards from Robertstown to Buronga and Wagga. These dual double circuit lines provide significant security and reliability of supply to the Bunday Substation, and hence for Razorback with its proposed connection into this asset.

TECHNICAL APPROVALS FOR NEM CONNECTION COMMENCED

MGT has further engaged with ElectraNet to commence the network connection process. A Connection Options Report (COR) and Indicative Pricing Estimate (IPE) will be delivered mid- 2023, and will:

- assess all options for connection into Bunday Substation
- formally confirm the lack of system thermal constraints
- identify potential impacts and mitigants on the connection point and regulated network
- commence early engagement with the Australian Energy Market Operator
- identify contestable and non-testable portions of development activities
- assess administrative requirements, such as land access and approvals requirements
- provide indicative annual tariff rates for the transmission infrastructure.

The COR and IPE are predecessors to a Connection Enquiry, which is the following stage of the formal connection process.

This announcement has been authorised for release to the market by the Board.

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ABOUT MAGNETITE MINES

Magnetite Mines Ltd is an ASX-listed iron ore company focused on the development of magnetite iron ore resources in the highly-prospective Braemar iron region of South Australia. The Company has a 100% owned Mineral Resource of 6 billion tonnes of iron ore and is developing the Razorback Iron Ore Project, located 240km from Adelaide, to meet accelerating market demand for premium iron ore products created by iron & steel sector decarbonisation, with the potential to produce high-value Direct Reduction (DR) grade concentrates. Razorback is set to become a very long-life iron ore project with expansion optionality in a tier 1 jurisdiction that will produce a superior iron ore product sought by steelmakers globally. For more information visit magnetitemines.com.

References

1. ASX Announcement - 31 Jan 2023 - Quarterly Report to 31 December 2022