

30 August 2021

LAKE GILES FEASIBILITY STUDY UPDATE: Macarthur engages VECKTA to provide hi-tech approach to delivery of sustainable power solution for Lake Giles

Macarthur Minerals Limited (ASX: MIO) (TSX-V: MMS) (OTCQB: MMSDF) (the **Company** or **Macarthur**) is pleased to announce that it has appointed VECKTA to provide critical inputs for the design of an optimised onsite energy system as part of the Feasibility Study for Macarthur's high grade magnetite Lake Giles Iron Project.

Highlights

- VECKTA appointed to provide critical inputs to the power solution at Lake Giles for Feasibility Study.
- VECKTA's role will be to consider the technical, economic and market parameters necessary to deliver an optimized power solution for Macarthur's needs.



VECKTA is a joint venture between Worley and XENDEE.

- The engagement is intended to help deliver a low cost, customized energy solution that will meet the needs of a 24/7 magnetite process plant and associated infrastructure, whilst enabling Macarthur to minimize the carbon footprint of the Lake Giles Iron Project and achieve its sustainability objectives throughout the life of the mine.
- Feasibility Study remains on track for delivery.

VECKTA is a joint venture company between global professional services consultancy Worley and microgrid planning and assessment software developer XENDEE.

VECKTA is an innovative cloud-based marketplace platform for simplifying the deployment of onsite energy systems. It is powered by XENDEE (winner of a Gold medal at the 2021 Edison Awards for Critical Human Infrastructure), a proprietary software solution to mirror real world dynamics – analysing a range of data including power demand (load) requirements, geographic location and terrain, climate data and other inputs to help design the optimal energy configuration. It will help Macarthur focus on ensuring that the final power

the green iron ore company

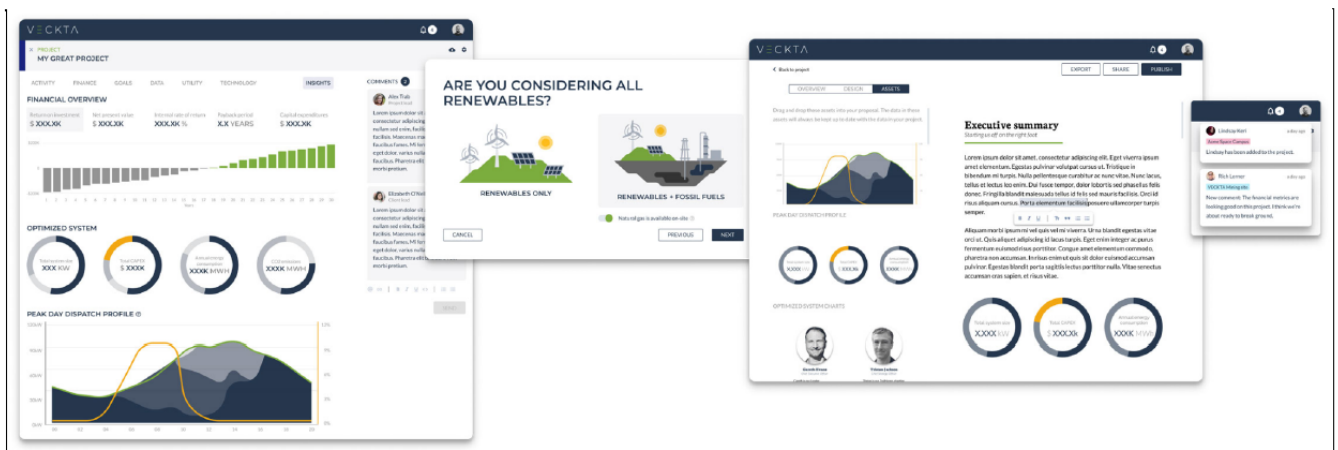
'Walk with us, and discover something big.'



system design and equipment selection focuses on achieving an optimised mix of cost reduction, carbon reduction and improved reliability to meet the needs of the project.

The power system design for Lake Giles will be determined by the package of modelling work that VECKTA will be undertaking, but Macarthur fully expects that the stationary power system configuration will include a material component of renewables penetration from commencement of operations.

Following the completion of VECKTA's modelling work, and after delivery of the broader Feasibility Study, Macarthur and VECKTA will examine a next phase engagement that can assist Macarthur to competitively source all required inputs (equipment, services and capital) to deliver a complete, turnkey solution for Lake Giles under an Energy as a Service (EaaS) contract model. Macarthur envisages that this would include an adaptive approach to increased renewables integration over the life of the mine, enabling Macarthur to adopt and integrate emerging technologies as cost and performance is proven – including the potential to integrate hydrogen energy solutions at scale (contemplated under the recently announced MOU with LAVO Hydrogen Technology Holding Pty Ltd (see 1 June 2021 announcement [here](#))).



Examples of project reports and RFQ/RFP mechanisms offered by VECKTA, the Energy Transition Platform.

Andrew Bruton, CEO of Macarthur Minerals commented:

“Macarthur’s approach to the development of the Lake Giles Iron Project was never going to be a cookie-cutter solution.

A changing global investment climate has seen a shift of focus towards mining companies that are actively moving towards implementation of sustainable energy solutions that can achieve a pathway for delivery of lower carbon outputs. But at the same time, those solutions must have the potential to deliver lower operating cost outcomes if companies like Macarthur are to be competitive and grow into the future.

The increasing success of technology applications in helping to lower costs and simultaneously address climate impacts is now more clear than ever, and it is placing increased expectations on the mining industry to adapt.

Companies which understand this convergence will be better placed to deliver the sustainable solutions that can deliver longer term value outcomes for projects and meet the new value investment expectations of shareholders. Macarthur is one of those companies.

This important engagement with VECKTA brings us another week closer to the completion of the Feasibility Study. We are pleased to be working with VECKTA team and welcome their input into the Feasibility Study.”

Gareth Evans, CEO and Founder of VECKTA commented:



“The mining industry is critical to a successful energy transition, providing the minerals and metals required to produce the technologies required. Producing such resources sustainably is not only a social expectation it is increasingly becoming business critical from an operational, product sales and capital investment perspective.

It is very exciting and rewarding to work with Macarthur, who recognize the importance of developing sustainable assets while appreciating the energy transition as a huge opportunity to assess and develop solutions that bring operational, strategic and social benefits.

VECKTA has a mission to revolutionize and accelerate the deployment of onsite energy systems through our marketplace. We provide quick, cost effective, solution agnostic and independent access to the most optimal and customized solutions for specific business needs and objectives. It is imperative that we unlock the potential of this market, empower our customers to prioritize high quality, bankable projects and then engage with the supply chain to access solutions in a repeatable, streamlined and cost-effective way.”.

On behalf of the Board of Directors, Mr Cameron McCall, Chairman

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Company profile

Macarthur is an iron ore development, gold and lithium exploration company that is focused on bringing to production its Western Australia iron ore projects. The Lake Giles Iron Project mineral resources include the Ularring hematite resource (approved for development) comprising Indicated resources of 54.5 million tonnes at 47.2% Fe and Inferred resources of 26 million tonnes at 45.4% Fe; and the Lake Giles magnetite resource of 53.9 million tonnes (Measured), 218.7 million tonnes (Indicated) and 997 million tonnes (Inferred). The JORC reporting tables and Competent Person statement for the magnetite and hematite mineral resources have previously been disclosed in ASX market announcements dated 12 August 2020 and 5 December 2019. Macarthur has prominent (~721 square kilometre tenement area) gold, lithium and copper exploration interests in Pilbara region of Western Australia. In addition, Macarthur has lithium brine Claims in the emerging Railroad Valley region in Nevada, USA.

About VECKTA

VECKTA is the Energy Transition Market Platform. VECKTA integrates the world’s most advanced energy system engineering tools with an end-to-end marketplace to integrate and accelerate the development of distributed energy systems (DES) and microgrid projects. VECKTA empowers businesses and communities to quickly and easily baseline their energy situation today, customize a solution specific to their needs (cost, reliability and/or emissions) and then seamlessly engage and contract the best equipment, services, and capital providers in the market to finance, deploy and operate it sustainably and profitably. www.veckta.com

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Caution Regarding Forward Looking Statements

Certain of the statements made and information contained in this press release may constitute forward-looking information and forward-looking statements (collectively, “forward-looking statements”) within the meaning of applicable securities laws. All statements herein, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future, including but not limited to statements regarding expected completion of the Feasibility Study; conversion of Mineral Resources to Mineral Reserves or the eventual mining of the Project, are forward-looking statements. The forward-looking



statements in this press release reflect the current expectations, assumptions or beliefs of the Company based upon information currently available to the Company. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include but are not limited to: unforeseen technology changes that results in a reduction in iron or magnetite demand or substitution by other metals or materials; the discovery of new large low cost deposits of iron magnetite; the general level of global economic activity; failure to complete the FS; inability to demonstrate economic viability of Mineral Resources; and failure to obtain mining approvals. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. The forward-looking statements contained in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not assume any obligation to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.