

Australian Vanadium Ltd

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Australian Vanadium drives down costs as it innovatively optimises flagship project

Australian Vanadium Ltd's (ASX:AVL) advanced pilot test-work at the Metso pyrometallurgical testing facilities in the US is scheduled to be completed in September 2020.

The use of well-established Grate Kiln technology has demonstrated energy efficiency and adaptability for vanadium roasting.

Vanadium leach extraction in the most recent optimised pilot-scale testing of a grate-kiln flowsheet, which uses a pelletised concentrate feed, has achieved an average of 93.3% leach extraction.

Improvement on PFS

After allowing for scaling up, this is estimated to deliver an 8% relative improvement on the basis applied in the pre-feasibility study (PFS).

These test outcomes relate to the processing of concentrate designed to represent the average of the first five years of forecast production and build on results from previous AVL bench-scale tests, where 587 kilograms of concentrate was roasted in batches and similar vanadium leach extractions were observed.

AVL is advancing the development of its world-class Australian Vanadium Project, which is currently one of the highest-grade vanadium projects being advanced globally.

The WA project has a resource of 208.2 million tonnes at 0.74% vanadium pentoxide (V₂O₅), which includes a high-grade zone of 87.9 million tonnes at 1.06% V₂O₅.

It has an ore reserve of 18.24 million tonnes at 1.04% V₂O₅, which comprises a proved reserve of 9.82 million tonnes at 1.07% and a probable reserve of 8.42 million tonnes at 1.01%.

"Driving down operating costs"

The success of AVL's innovative processing flowsheet continues to confirm the company's goal - to design, build and operate the world's lowest-cost primary vanadium operation.

Managing director Vincent Algar said at the time: "The improvements in vanadium extraction that have now been demonstrated by AVL's high-quality pilot work are expected to flow through to the overall process recovery and therefore project revenue.

"This successful outcome is an example of AVL's application to innovation, ultimately aimed at driving down the project's operating and or capital costs."

Price: 0.025

Market Cap: \$73.25 m

1 Year Share Price Graph



Share Information

Code: AVL
Listing: ASX
52 week High: 0.025
52 week Low: 0.007

Sector: Mining

Website: www.australianvanadium.com.au

Company Synopsis:

Australian Vanadium Ltd (ASX:AVL) is focused on vanadium, seeking to offer investors a unique exposure to all aspects of the vanadium value chain - from resource through to steel and energy storage opportunities.

action@proactiveinvestors.com.au

The company's key driver is its objective to deliver a bankable feasibility study with an operating cost that can withstand the cyclical lows of the vanadium market.

Hydrometallurgical pilot program

With the optimised roast conditions now well understood, the final bulk production phase of the pyrometallurgical test-work program is being executed.

This work will also confirm the grate-kiln performance in treating the average life of mine (LOM) concentrate generated in AVL's previously reported crushing, milling and beneficiation (CMB) pilot test-work.

The downstream hydrometallurgical pilot program is also underway to finalise AVL's processing flowsheet, purify the leach liquor and generate final vanadium product.



The project consists of a high-grade vanadium-titanium-iron deposit in the Murchison Province of Western Australia

R&D refund

In early June, the company received \$1,834,184 from the Australian Federal Government's Research and Development (R&D) Tax Incentive Scheme for the 2018/19 tax year.

Administered jointly by the Australian Taxation Office and the Department of Industry, Science, Energy and Resources, the self-assessment scheme encourages companies to engage in R&D benefiting Australia, by providing a tax offset for eligible activities.

AVL's R&D work for the period was focused on the development of processing techniques to produce vanadium from a polymetallic ore for vanadium redox flow batteries (VRFB) and steel applications.

The company is compiling a claim for the 2019/20 period which covers further work on these R&D activities and additional processing research and development work related to the recovery of vanadium products from the Australian Vanadium Project.

As a result of the refund, the company's cash at bank is approximately \$5.5 million.

VSUN microgrid grant

VSUN Energy, AVL's wholly-owned subsidiary, is part of a group of companies working with Queensland Farmers' Federation (QFF) and last month this group was awarded \$654,807 to assess the advantages of microgrids through the Federal Government's Regional and Remote Communities Reliability Fund.

Algar said at the time: "We are delighted that the QFF project has been chosen to receive this grant and will enable information to be provided to their members about the way renewable energy and potential storage technologies such as vanadium redox flow batteries, can provide security of cost and energy supply.

"VSUN Energy has seen a significant increase in enquiries and interest for microgrids and stand-alone power systems (SPS) in agricultural settings and in the mining sector in 2020.

"VSUN Energy's focus on building strong relationships with major VRFB manufacturers over the last few years has enabled the company's ability to provide robust and detailed modelling of various microgrid and SPS opportunities."

Other members of the group include Cotton Australia, ReAqua and Constructive Energy.

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Contact us +61 (0)2 9280 0700 action@proactiveinvestors.com.au

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