

BY TRACEY LAITY

The vanadium market has been notoriously volatile over the past 12 months, a trend likely to continue as Chinese supply and demand fluctuates, but one Western Australian mining operation's steady commitment to streamlining and shrewd plans for diversification are allowing it to make notable headway.

While at the helm of Australian Vanadium Limited (AVL), Chief Executive Officer Vincent Algar has overseen cost-cutting innovations as well as the awarding of federal major project status (MPS) to the company's Australian Vanadium project.

Although pleased by the endorsement, Mr Algar admitted he had no idea how profound an impact it would have on potential shareholders when it was awarded in September, spurring them to participate in a share purchase plan to the tune of \$5 million.

Mr Algar said the company was keen to continue to improve its position on the back of the MPS announcement.

"We are a commercial organisation, we're not there to hide behind the shirt-tails of government," he said. "We would like the assistance, but we will still do our own thing and make sure we prove our case to investors."

Indicative of this is Mr Algar's determination to improve operational efficiency through technological innovation. For instance, a pilot study by AVL found that by replacing the standard gas-fired roasting process employed by vanadium operators around the world since the turn of the century with a new grate-kiln roasting method, it could improve extraction rates drastically.

"We are putting the same material in the front and getting six per cent more vanadium out the back - all for less effort in the end, with less gas and less dust loading," he said.

"That is a huge benefit for us that will transfer directly onto the bottom line. Our primary objective is to, above all things, be on the bottom of the cost curve. We'll take the time it needs to get that done."

Additionally, AVL has found a way to modify the extraction process to better suit the ore, resulting in a higher-grade



Chasing the bottom

product that is ideally suited for the chemical, titanium and battery markets.

Traditionally, vanadium has been used in the steel market, primarily as a micro-alloyed element for rebar steel used in building and construction.

Ninety per cent of the vanadium market is in steel - but AVL has its sights firmly set on the remaining 10 per cent, of which vanadium flow batteries (VFB) for the renewable energy sector make up a notable part.

"About 10 per cent of the market lies outside of steel, but all of the sectors have high growth potential," Mr Algar said.

"Our main interest here at AVL is the battery sector. It has that renewable energy aspect to it because the technology is suitable for large-scale commercial applications, and as with steel, the Chinese are driving this new market."

Eden Capital Markets Director of Corporate Finance Oliver Morse said vanadium had "blue-sky potential" in the battery market, but added the market was a long way off from "meaningful" consumption of the commodity.

Despite this, Mr Morse said AVL was in prime position to replace dwindling supply and establish itself as a global primary producer.

To that end, Mr Morse said Eden Capital Markets had announced it would set up a new resources fund with a "view to potentially start investing in it at the point we're ready to do so".

"We come at this from a banking background and what you want to see is what happens to these projects in worst-case pricing scenarios," he said.

"Anyone can model out that if the vanadium price is \$12 or \$15 that it's going to make money, but what we want to know is how does the project behave if the prices don't recover or even if they fall down a bit from where we are now.

"What's nice about this project is it's pretty close to the bottom of the cost curve, which should provide some insurance against a declining commodity price market.

"AVL has got pretty experienced vanadium industry guys on this project, and that is what you need. The processing of this material is easy to get wrong. What we don't want is a whole lot of investment capital to go into building one of these things and it doesn't work. To the extent that you can de-risk these things through experience, I think they have the right people there to give it the best chance of working." **NMC**



Vincent Algar.



Oliver Morse.