ASX ANNOUNCEMENT **19 MARCH 2024**

BATTERY READY VANADIUM ELECTROLYTE PRODUCED

Western Australian manufacturing facility operational

KEY POINTS

- **AVL has successfully produced its first high purity vanadium electrolyte for use in vanadium flow batteries at its electrolyte manufacturing facility.**
- **Independent testing shows that the vanadium electrolyte complies with typical specifications required by vanadium flow battery manufacturers.**

Australian Vanadium Limited (ASX: AVL, "the Company" or "AVL") is pleased to announce that it has successfully commissioned its vanadium electrolyte manufacturing facility (Facility) and produced its first high purity vanadium electrolyte, ready for use in vanadium flow batteries (also known as 'VFBs'). This follows the completion of construction of the Facility in December 2023[1] and the official opening by Federal Resources Minister, the Hon. Madeleine King MP on 17 January 2024.[2]

Independent analysis of the vanadium electrolyte produced at the Facility shows that the impurities in the electrolyte were well within limits typically expected by vanadium flow battery manufacturers.

AVL's Chief Executive Officer, Graham Arvidson comments, "*The completion of the facility, coupled with the confirmation of the production of on-specification vanadium electrolyte from Western Australia's first manufacturing facility, achieves another major milestone for AVL and is a positive reflection of the technical and operational expertise within our organisation. We are ready to accept orders for electrolyte and are actively pursuing sales.*"

Vanadium electrolyte is one of the key components of vanadium flow batteries. These batteries are well suited to large-scale energy storage applications, such as those required for electrical grids. They offer a high capacity for energy storage and a long cycle life, having the ability to be charged and discharged repeatedly without significant degradation. AVL's wholly owned subsidiary, VSUN Energy Pty Ltd, is establishing a long duration energy storage pilot for Horizon Power in Kununurra, in the north of Western Australia.[3] Projects such as this have the potential to use vanadium

[1] See ASX announcement dated 15 December 2023 *'Vanadium Electrolyte Facility Construction Complete'*
[2] See ASX announcement dated 31 January 2024 *'Quarterly Activities Report', page 5*
[3] See ASX announcement dated 8 January 2024 *'Horizon Power Vanadium Flow Battery arrives In WA'*

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electrolyte produced by the Facility, demonstrating the potential for a high local content solution for Australia's long-duration energy storage needs.

The unique advantages of vanadium flow batteries, including their scalability, long lifespan and the ability to maintain capacity over time, makes vanadium electrolyte a critical component in addressing the challenges of energy storage and distribution in a world increasingly reliant on intermittent renewable energy sources.

The successful establishment of the Facility is an important milestone for AVL and the development of industries to support Australia's long-term carbon emission reduction plans. The Facility was built with Federal government assistance in the form of a $3.69 million Australian Government Modern Manufacturing Translation grant, awarded to AVL under the National Manufacturing Priority Roadmap in 2021.[4] The majority of the grant was used to contribute to the cost of building the Facility.

The Facility, located in Wangara, Perth, was designed to produce high-purity electrolyte to support up to 33 MWh per year of VFB energy storage.[5] AVL is able to expand the Facility easily. The ability to source local electrolyte will enable AVL to become a trusted supplier of vanadium electrolyte for battery projects in Australia and the wider region, at a time when there is increasing community and government interest in ensuring capabilities to support the energy transition.

Figure 1 - Ben Davis and Haley Knighten Criss (USV) and Flormirza Cabalteja (AVL) with first vanadium electrolyte samples

The Company is using proven electrolyte manufacturing technology licensed from U.S. Vanadium LLC (USV) exclusively to AVL in Australia and New Zealand. Staff from USV travelled from the United States to assist with commissioning. Supplies of the vanadium oxides required by the Facility

[4] See ASX announcement dated 21 July 2021 *'AVL Awarded $3.69M Federal Government Manufacturing Grant'*
[5] See ASX announcement dated 15 March 2023 *'Vanadium Electrolyte Manufacturing Facility Update'*

for the production of vanadium electrolyte are currently being provided by USV. When the Australian Vanadium Project is in production, the Company will provide full 'pit to battery' downstream value addition, by generating a vanadium concentrate at the mine site, to be fed to AVL's proposed processing plant for producing the vanadium pentoxide used as a feedstock for the Facility.

The vanadium electrolyte produced at the Facility was analysed by LabWest Minerals Analysis Pty Ltd, a National Association of Testing Authorities (NATA) accredited laboratory specialising in the low-detection limit elemental determinations required for battery electrolytes. The impurities were all at levels below typical limits set by VFB manufacturers, as shown in Table 1.

Table 1 - Comparison of electrolyte generated by AVL with typical industry specifications for key impurities

	V (mol/L)	Cu (mg/L)	Sb (mg/L)	Al (mg/L)	Ca (mg/L)	Cr (mg/L)	Fe (mg/L)
AVL product	1.61	0.03	0.32	1.13	3.39	2.81	26.10
Typical specification	1.58-1.62	0.1-1	0.5-1	≤50	≤30	2-15	≤40

	K (mg/L)	Mg (mg/L)	Mn (mg/L)	Mo (mg/L)	Na (mg/L)	Ni (mg/L)	Si (mg/L)
AVL product	3.08	1.03	0.42	3.98	0.01	0.76	2.52
Typical specification	≤20	≤20	≤20	≤20	≤30	≤5	≤10

Samples of vanadium electrolyte produced at the Facility will now be provided to manufacturers of vanadium flow batteries for formal qualification for use in their batteries. AVL's VFB-focused subsidiary, VSUN Energy, has experience working with a range of battery manufacturers around the world and has built relationships for electrolyte supply by AVL. Post qualification, AVL anticipates ongoing commercial production of vanadium electrolyte to fulfil orders as they are received.

For further information, please contact:

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This announcement has been approved in accordance with the Company's published continuous disclosure policy and has been approved by the Board.

ASX CHAPTER 5 COMPLIANCE AND CAUTIONARY AND FORWARD LOOKING STATEMENTS

ASX Listing Rules 5.19 and 5.23

ASX Listing Rule 5.19

The information in this announcement relating to production targets, or forecast financial information derived from a production target, is extracted from the announcement entitled 'Bankable Feasibility Study for the Australian Vanadium Project' released to the ASX on 6 April 2022 which is available on the Company's website www.avl.au.

The Company confirms that all material assumptions underpinning the production target, or the forecast financial information derived from a production target, in the original market announcement continue to apply and have not materially changed.

ASX Listing Rule 5.23

The information in this announcement relating to exploration results and mineral resource and ore reserve estimates for the Australian Vanadium Project is extracted from the announcement entitled 'Bankable Feasibility Study for the Australian Vanadium Project' released to the ASX on 6 April 2022 which is available on the Company's website www.avl.au.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement, and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the competent person's findings are presented have not been materially modified from the original market announcement**.**

Forward-Looking Statements

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of AVL and certain of the plans and objectives of AVL with respect to these items.

These forward-looking statements are not historical facts but rather are based on AVL's current expectations, estimates and projections about the industry in which AVL operates and its beliefs and assumptions.

Words such as "anticipates," "considers," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the industry in which AVL operates.

These statements are not guarantees of future performance and are subject to known and unknown

risks, uncertainties, and other factors, some of which are beyond the control of AVL, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. Such risks include, but are not limited to resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings.

AVL cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of AVL only as of the date of this release.

The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made.

AVL will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.