

ASX ANNOUNCEMENT

21 MAY 2024

# FINAL PAYMENT RECEIVED FOR VANADIUM FLOW BATTERY GRANT

## KEY POINTS

- AVL has successfully completed work and received the final payment from the \$3.69 million Australian Government Modern Manufacturing Initiative grant awarded in 2021.
- The grant provided AVL with matched funding for initiatives including the:
  - Design and construction of AVL's commercial vanadium electrolyte manufacturing facility to support the rollout of vanadium flow batteries in Australia.
  - Development of a high-purity processing flowsheet for a circuit to produce chemical and master-alloy grade vanadium pentoxide as part of the Australian Vanadium Project.
  - Design and manufacture of a prototype residential vanadium flow battery and stand-alone power system for the Australian energy market.

Australian Vanadium Limited (ASX: AVL, 'the Company' or 'AVL') advises that it has successfully completed work relating to the Australian Government grant awarded in 2021 under the *Modern Manufacturing Initiative – Manufacturing Translation (MMI-T) Stream* of the *Resources Technology and Critical Minerals Processing National Manufacturing Priority Roadmap*.<sup>1</sup> The final payment of \$922,049\* of the total MMI-T grant value of \$3.69 million\* has now been received. This grant is in addition to AVL's grant of \$49 million\* under the *Modern Manufacturing Initiative – Manufacturing Collaboration (MMI-C) Stream*, which was awarded in 2022 and is ongoing.<sup>2</sup>

CEO, Graham Arvidson commented, "AVL is extremely grateful to have been supported by the Australian Government to build and bring our vanadium electrolyte manufacturing facility into operation, particularly at this pivotal time of transforming Australia into a renewable energy superpower. Having this production facility in Western Australia forms part of the Company's 'pit to battery' strategy, which also comprises mining and processing of vanadium in the State and further downstream activities in the vanadium flow battery market. In addition, we have been able to produce ultra-high purity vanadium products and begin development of a residential vanadium flow battery prototype and stand-alone power system."

\* Excluding GST

<sup>1</sup> See ASX announcement dated 22 July 2021 'AVL Awarded \$3.69M Federal Government Manufacturing Grant'

<sup>2</sup> See ASX announcement dated 30 May 2023 '\$49 Million Government Grant Agreement Executed'

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The grant was awarded as matched funding, mainly to support the design and construction of the Company's vanadium electrolyte manufacturing facility, which has successfully produced its first high purity vanadium electrolyte.<sup>3</sup>

Vanadium electrolyte is a key component of vanadium flow batteries (VFBs). These batteries are well suited to large-scale energy storage applications, as 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 with minimal degradation over the extremely long battery life.

The electrolyte manufacturing facility was officially opened in January 2024 by the Federal Resources Minister, the Hon. Madeleine King MP.

The grant funding also provided for the inclusion of the design of an ultra-high purity processing circuit to produce chemical and master-alloy grade vanadium pentoxide as part of the development of the Australian Vanadium Project. The Company recently announced the achievement of ultra-high purity 99.9% V<sub>2</sub>O<sub>5</sub> through testwork undertaken with Australia's Nuclear Science and Technology Organisation (ANSTO).<sup>4</sup>



**Figure 1 – Residential VFB prototype pictured at the vanadium electrolyte manufacturing facility**

The grant also part-funded the Company's development of a prototype residential VFB and stand-alone power system based on a VFB, for the Australian energy market. The prototype residential VFB has been designed with 5kW of power and 15kWh of stored energy capacity. With the battery's

<sup>3</sup> See ASX announcement dated 19 March 2024 'Battery ready vanadium electrolyte produced'

<sup>4</sup> See ASX announcement dated 25 March 2024 'Achievement of Ultra-High Purity 99.9% Vanadium Product'

characteristics of flexibility, minimal degradation in performance over a 25-year lifespan and non-flammability, it has the potential to be a highly desirable product for homeowners looking for an alternative to a lithium-ion battery solution. Development of the prototype continues and is expected to be installed at a residential property in due course for further testing by AVL's 100% owned VFB-focused subsidiary VSUN Energy.

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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.*

## ABOUT AUSTRALIAN VANADIUM LTD

AVL is a resource company 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. AVL is advancing the development of its world-class Australian Vanadium Project at Gabanintha. The Australian Vanadium Project is one of the most advanced vanadium projects being developed globally, with 395.4Mt at 0.77% vanadium pentoxide ( $V_2O_5$ ), containing a high-grade zone of 173.2Mt at 1.09%  $V_2O_5$ , reported in compliance with the JORC Code 2012 (see ASX announcement dated 7 May 2024 ‘39% Increase in High Grade Measured and Indicated Mineral Resource’).

VSUN Energy is AVL’s 100% owned renewable energy and energy storage subsidiary which is focused on developing the Australian market for vanadium flow batteries for long duration energy storage. VSUN Energy was set up in 2016 and is widely respected for its VFB expertise. AVL’s vertical integration strategy incorporates processing vanadium to high purity, manufacturing vanadium electrolyte and working with VSUN Energy as it develops projects based on renewable energy generation and VFB energy storage.

## APPENDIX 1

The Australian Vanadium Project – Mineral Resource estimate by domain and resource classification using a nominal 0.4% V<sub>2</sub>O<sub>5</sub> wireframed cut-off for low-grade and nominal 0.7% V<sub>2</sub>O<sub>5</sub> wireframed cut-off for high-grade (total numbers may not add up due to rounding).

Zone	Category	Mt	V <sub>2</sub> O <sub>5</sub> %	Fe %	TiO <sub>2</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %
HG	Measured	30.6	1.14	46.3	12.9	7.4	6.2
	Indicated	74.8	1.11	47.5	12.6	7.0	5.7
	Inferred	67.9	1.06	45.3	12.1	9.0	6.6
	<b>Subtotal</b>	<b>173.2</b>	<b>1.09</b>	<b>46.5</b>	<b>12.5</b>	<b>7.8</b>	<b>6.1</b>
LG	Indicated	61.8	0.55	26.1	7.1	26.6	16.3
	Inferred	142.5	0.48	24.9	6.6	28.9	15.2
	<b>Subtotal</b>	<b>204.3</b>	<b>0.50</b>	<b>25.3</b>	<b>6.8</b>	<b>28.2</b>	<b>15.5</b>
Transported	Inferred	17.9	0.65	31.0	7.3	24.1	14.4
	<b>Subtotal</b>	<b>17.9</b>	<b>0.65</b>	<b>31.0</b>	<b>7.3</b>	<b>24.1</b>	<b>14.4</b>
Total	Measured	30.6	1.13	46.3	12.9	7.4	6.2
	Indicated	136.6	0.85	37.8	10.1	15.8	10.5
	Inferred	228.2	0.66	31.4	8.3	22.6	12.6
	<b>Subtotal</b>	<b>395.4</b>	<b>0.77</b>	<b>34.8</b>	<b>9.3</b>	<b>19.1</b>	<b>11.4</b>

Note: Totals may not add up due to rounding

## ASX CHAPTER 5 COMPLIANCE AND CAUTIONARY AND FORWARD-LOOKING STATEMENTS

### ASX Listing Rule 5.23

The information in this announcement relating to exploration results for the Australian Vanadium Project has been extracted from the relevant announcements. The information in this announcement relating to mineral resource estimates for the Australian Vanadium Project is extracted from the announcement entitled '39% Increase in High Grade Measured and Indicated Mineral Resource' released to the ASX on 7 May 2024. The relevant announcements are available on the Company's website [www.avl.au](http://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 announcements, 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 announcements.

### 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.

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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.

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