

ASX ANNOUNCEMENT

16<sup>TH</sup> MARCH 2022

## AVL AWARDED \$49 MILLION FEDERAL GOVERNMENT MANUFACTURING COLLABORATION GRANT

*AVL secures significant grant funding to create an Australian green fuelled vanadium industry.*

### KEY POINTS

- AVL has been awarded a competitive grant from the Australian Government under the Modern Manufacturing Initiative Collaboration Stream.
- The grant is for \$49 million which will be used to support the development of the Australian Vanadium Project.
- The Project, supported by the grant, enables new critical mineral production through the establishment of an integrated onshore Australian vanadium supply chain for steel and battery markets.
- Vanadium redox flow battery market development including vanadium electrolyte and battery project development for downstream vanadium use.
- Collaboration with ATCO Australia for green hydrogen and Bryah Resources Limited (ASX: BYH) for recovery of nickel, copper and cobalt from the tails stream.
- The Australian Vanadium Project has Major Project Status from the Australian Government and Lead Agency Status from the Government of Western Australia.

Australian Vanadium Limited (ASX: AVL, “the Company” or “AVL”) is pleased to advise that it has been awarded a \$49 million grant under the Australian Government’s Modern Manufacturing Initiative Collaboration Stream towards the development of the Australian Vanadium Project near Meekatharra and Geraldton, to create an Australian green fuelled vanadium industry.

Managing Director, Vincent Algar comments, “AVL is delighted to have been awarded this grant from the Australian Government. Our project will create hundreds of jobs in Australia and help to build the critical vanadium industry both locally and internationally. We have developed an innovative and collaborative approach to building a fully integrated project, from mine through to processing and end use in the steel and battery markets. Our collaborations are allowing us to build a project with

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unique social and environmental benefits. We look forward to working with our partners to bring the Australian Vanadium Project into production and further develop downstream opportunities for green steel and the vanadium redox flow battery market.”



**Figure 1 Location of the Australian Vanadium Project**

Collaborating to create an Australian green fuelled vanadium industry will enable AVL to develop the high-grade Australian Vanadium Project (the Project) in Western Australia. The Project consists of an open cut mine and a crushing, milling and beneficiation plant (CMB) south of Meekatharra and a vanadium pentoxide processing plant located near Geraldton.

Vanadium is on the critical metal list in many countries, including Australia, the United States, Japan and many European countries. Vanadium is used in critical aerospace and chemical applications, is a key component in high strength and specialty steel products and has an important and growing use in long duration, safe energy storage applications.

### Collaboration

Working with ATCO to incorporate green hydrogen into the Project will fuel the processing of vanadium to a >99.9% pure  $V_2O_5$  product, suitable for the critical mineral and battery markets. The  $V_2O_5$  will subsequently be processed into vanadium electrolyte to fill vanadium redox flow batteries (VRFBs) at the AVL vanadium electrolyte manufacturing plant. AVL’s vanadium electrolyte manufacturing plant is currently being built in Kwinana, Western Australia. The plant is partly funded through the Australian Government’s Resources Technology and Critical Minerals Processing

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National Manufacturing Priority Roadmap.<sup>1</sup>

Through AVL's 100% owned battery subsidiary VSUN Energy, VRFBs will be installed in industries from agriculture and mining, through to residential energy storage and charging infrastructure for electric vehicles. By establishing manufacturing capabilities across both critical minerals and recycling as well as clean energy within Australia, AVL's collaborative project will create hundreds of jobs, whilst enabling technologically driven solutions towards a low carbon economy.

Working with Bryah Resources, AVL intends to explore the opportunity to process an economic critical battery mineral resource from what was previously a waste stream at the Project. A tailings stream from AVL's CMB circuit contains sulphides and the base metals cobalt, nickel, copper and gold. This collaboration will provide further downstream critical and battery mineral processing capabilities.

AVL's business to research collaborations as part of the grant include Curtin University, Queensland University of Technology and Australian Nuclear Science and Technology (ANSTO), enabling AVL to further improve the manufacturing process for high purity vanadium and vanadium electrolytes. AVL is an associate participant in the Future Battery Industries Cooperative Research Centre (FBICRC) and is contributing to their activities.

### **Critical Mineral Strategy**

AVL's Project is directly aligned with Australia's Critical Minerals Strategy (2019). There are currently no operating vanadium mines in Australia, despite having the third largest economic vanadium reserves globally. AVL is well positioned for partnerships and offtake agreements with countries that are seeking a secure ultra-high purity vanadium supply required for VRFBs, specialty chemicals, aerospace and defence.

### **Next Steps**

The Company will now work with the Australian Government to finalise the legal agreement for the grant, with associated terms and conditions to be agreed upon.

*For further information, please contact:*

**Vincent Algar, Managing Director** +61 8 9321 5594

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

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<sup>1</sup> See ASX announcement dated 21<sup>st</sup> July 2021 'AVL Awarded \$3.69M Federal Government Manufacturing Grant'

## 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 239Mt at 0.73% vanadium pentoxide ( $V_2O_5$ ), containing a high-grade zone of 95.6Mt at 1.07%  $V_2O_5$ , reported in compliance with the JORC Code 2012 (see ASX announcement dated 1<sup>st</sup> November 2021 '*Mineral Resource Update at the Australian Vanadium Project*' and ASX announcement dated 22<sup>nd</sup> December 2020 '*Technical and Financial PFS Update*').

VSUN Energy is AVL's 100% owned subsidiary which is focused on developing the market for vanadium redox flow batteries for energy storage.

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, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant 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.

## 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).

2021 Nov	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> %	LOI %
<b>HG</b>	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	27.5	1.10	45.4	12.5	8.5	6.5	2.9
	Inferred	56.8	1.04	44.6	11.9	9.4	6.9	3.3
	<b>Subtotal</b>	<b>95.6</b>	<b>1.07</b>	<b>44.7</b>	<b>12.2</b>	<b>9.1</b>	<b>6.8</b>	<b>3.2</b>
<b>LG 2-5</b>	Indicated	54.9	0.50	24.9	6.8	27.6	17.1	7.9
	Inferred	73.6	0.48	25.0	6.4	28.7	15.3	6.6
	<b>Subtotal</b>	<b>128.5</b>	<b>0.49</b>	<b>24.9</b>	<b>6.6</b>	<b>28.2</b>	<b>16.1</b>	<b>7.2</b>
<b>Trans 6-8</b>	Inferred	14.9	0.66	29.0	7.8	24.5	15.1	7.8
	<b>Subtotal</b>	<b>14.9</b>	<b>0.66</b>	<b>29.0</b>	<b>7.8</b>	<b>24.5</b>	<b>15.1</b>	<b>7.8</b>
<b>Total</b>	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	82.4	0.70	31.7	8.7	20.7	12.0	5.4
	Inferred	145.3	0.71	33.0	8.7	20.7	12.0	5.4
	<b>Subtotal</b>	<b>239.0</b>	<b>0.73</b>	<b>33.1</b>	<b>8.9</b>	<b>20.4</b>	<b>12.3</b>	<b>5.6</b>

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### COMPETENT PERSON STATEMENT — MINERAL RESOURCE ESTIMATION

The information in this announcement that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (consultant with Trepanier Pty Ltd) and Mr Brian Davis (consultant with Geologica Pty Ltd). Mr Barnes and Mr Davis are both members of the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). Both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Barnes is the Competent Person for the estimation and Mr Davis is the Competent Person for the database, geological model and site visits. Mr Barnes and Mr Davis consent to the inclusion in this announcement of the matters based on their information in the form and context in which they appear.

### COMPETENT PERSON STATEMENT — ORE RESERVES

The technical information in this announcement that relates to the Ore Reserve estimate for the Project is based on information compiled by Mr Ross Cheyne, an independent consultant to AVL. Mr Cheyne is a Fellow of the Australasian Institute of Mining and Metallurgy. He is an employee and Director of Orelogy Mine Consulting Pty Ltd. Mr Cheyne has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Cheyne consents to the inclusion in the announcement of the matters related to the Ore Reserve estimate in the form and context in which it appears.

### COMPETENT PERSON STATEMENT – METALLURGICAL RESULTS

The information in this announcement that relates to Metallurgical Results is based on information compiled by independent consulting metallurgist Brian McNab (CP. BSc Extractive Metallurgy). Mr McNab is a Member of AusIMM. He is employed by Wood Mining and Metals. Mr McNab has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is undertaken, to qualify as a Competent Person as defined in the JORC 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr McNab consents to the inclusion in the announcement of the matters based on the information made available to him, in the form and context in which it appears.

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## 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.