ASX ANNOUNCEMENT **20TH JUNE 2022**

VANADIUM BATTERY STANDALONE POWER SYSTEM UPDATE

VSUN Energy's vanadium redox flow battery (VRFB) project for IGO Limited (ASX: IGO) progresses, as unit begins international shipment to Western Australia

KEY POINTS

- **First VRFB-based standalone power system (SPS) project for a mining operation in WA.**
- **VRFB being shipped from manufacturer E22 in Spain.**
- **SPS to be trialled by IGO Limited (ASX: IGO) to target 100% renewable energy to power a water bore pump.**
- **Mining sector offers a wide range of opportunities for fossil fuel reduction using 100% renewable energy coupled with long duration energy storage (12+ hours) using VRFB SPS configuration by VSUN Energy.**
- **Project partly funded by $3.69M Australian Government Modern Manufacturing Initiative Grant.**
- **System design, testing and implementation are being completed by VSUN Energy, 100% owned subsidiary of Australian Vanadium Limited.**

Australian Vanadium Limited (ASX: AVL, "the Company" or "AVL") is pleased to provide an update from its 100% owned renewable energy and energy storage subsidiary, VSUN Energy, on the design and construction of a high renewable capacity stand-alone power system (SPS) for IGO's Nova Nickel Operation.

In November 2021 AVL announced that ASX-listed IGO Limited (ASX: IGO) would trial an SPS based on a vanadium redox flow battery (VRFB) to power a mine process water bore pump, with a target of 100% renewable energy use.[1] This system will be the first of its kind deployed on an Australian mine site. The VRFB selected by VSUN Energy for this project has been built by Spanish VRFB manufacturer E22, a company backed by globally renowned renewable energy company Gransolar Group.

Managing Director, Vincent Algar comments, *"Following a difficult period for logistics and manufacturing around the world, we are excited about the progress on this SPS project with IGO.*

[1] See ASX announcement dated 11th November 2021 *'IGO's Nova Nickel Operation to Trial VSUN Energy Vanadium Battery Standalone Power System'*

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We are looking forward to receiving the battery in Australia and progressing through testing, installation, and commissioning. VSUN Energy and E22 have worked together to develop a unique solution that we see as being able to satisfy a large demand in the local market, to supply a truly long duration renewable energy and energy storage solution for off-grid, diesel dependent customers. Mining companies need robust solutions to take continuous bore pumps off diesel and power them with renewable energy all of the time. We will continue to provide information about the trial to the wider community as it progresses."

The VRFB for the project has been constructed with 300kWh of available energy storage capacity. It will be paired with ground mounted solar panels and integrated with a diesel generator to provide back up if required.

The battery is currently being prepared for shipment from Spain and will travel to Fremantle Port. The VSUN Energy team will undertake testing of the SPS in the Perth area prior to deployment. During this time AVL and VSUN Energy will showcase the unit to various mining clients, utilities and others who have shown a strong interest in the vanadium based technology.

VRFBs have a number of unique selling points which include high operating temperature range; non-flammability; a very long cycle life with no degradation over 20,000+ cycles and the ability to reuse the liquid vanadium electrolyte. These are a just few of the features making it ideal for displacing diesel fuel on operating minesites, as companies seek to lower costs and reduce reliance on fossil fuels.

Figure 1 300kWh VRFB during construction at E22's facility in Spain

After local testing and demonstration, the SPS will be transported to IGO's Nova Nickel Operation, located approximately 160km east-northeast of Norseman and 360km southeast of Kalgoorlie in Western Australia. The mine produces nickel, copper and cobalt.

The VSUN Energy VRFB SPS is targeted to provide extended periods of complete renewable energy supply for the continuously operating mine process water bore pump. The ability to continually power pumps for months on end using 100% renewable energy will not only significantly reduce the carbon emissions of the bore field, but will also help significantly reduce operational expenses for IGO. These include fuel costs and human maintenance costs, both of which are significant and rising in the mining sector at present.

Figure 2 VSUN Energy's Electrician Lee Bourke undertaking a site inspection at IGO's Nova Nickel Operation

The SPS project is partly funded by a $3.69M Australian Government manufacturing grant awarded to AVL under the Modern Manufacturing Initiative Resources Technology and Critical Minerals Processing National Manufacturing Priority roadmap.[2] The remainder of the grant is being used to finalise the high purity processing circuit for the Australian Vanadium Project; build and operate a

[2] See ASX announcement dated 21st July 2021 *'AVL Awarded $3.69M Federal Government Manufacturing Grant'*

commercial vanadium electrolyte manufacturing plant with an initial capacity of 33MWh per annum and manufacture of a prototype residential VRFB.

The agreement with IGO will end 12 months from the date of the system being commissioned and first power produced, unless extended or terminated in accordance with the agreement. The SPS is being provided to IGO at no charge, with the option to purchase or rent the system at the end of the trial period. The project will enable IGO to analyse the performance of the SPS for potential use in its dewatering and bore pumps systems.

This application for the VRFB is well suited to mining, agricultural and water utility sectors.

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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 239Mt at 0.73% vanadium pentoxide (V_2O_5), containing a high-grade zone of 95.6Mt at 1.07% V_2O_5 and an Ore Reserve of 30.9Mt at 1.09% V_2O_5 comprised of a Proved Reserve of 5Mt at 1.11% V_2O_5 and a Probable Reserve of 20.4Mt at 1.07% V_2O_5, reported in compliance with the JORC Code 2012 (see ASX announcement dated 1st November 2021 *'Mineral Resource Update at the Australian Vanadium Project'* and ASX announcement dated 6th April 2022 *'Bankable Feasibility Study for the Australian Vanadium Project'*).

VSUN Energy is AVL's 100% owned renewable energy and energy storage subsidiary which is focused on developing the Australian market for vanadium redox flow batteries for long duration energy storage. VSUN Energy was set up in 2016 and has since become world-renowned for its expertise with VRFBs. 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 VRFB energy storage.

APPENDIX 1

The Australian Vanadium Project – Mineral Resource estimate by domain and resource classification using a nominal 0.4% V_2O_5 wireframed cut-off for low-grade and nominal 0.7% V_2O_5 wireframed cut-off for high-grade (total numbers may not add up due to rounding).

Zone	Category	Mt	V_2O_5 %	Fe %	TiO_2 %	SiO_2 %	Al_2O_3 %	LOI %
HG	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
	Subtotal	**95.6**	**1.07**	**44.7**	**12.2**	**9.1**	**6.8**	**3.2**
LG	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	15.4	6.6
	Subtotal	**128.5**	**0.49**	**24.9**	**6.6**	**28.2**	**16.1**	**7.2**
Transported	Inferred	14.9	0.66	29.0	7.8	24.5	15.1	7.8
	Subtotal	**14.9**	**0.66**	**29.0**	**7.8**	**24.5**	**15.1**	**7.8**
Total	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	82.4	0.70	31.7	8.7	21.2	13.5	6.2
	Inferred	145.3	0.71	33.0	8.7	20.7	12.0	5.4
	Subtotal	**239.0**	**0.73**	**33.1**	**8.9**	**20.4**	**12.3**	**5.6**

The Australian Vanadium Project - Ore Reserve Statement as at April 2022, at a cut-off grade of 0.7% V_2O_5.

Ore Reserve	Mt	V_2O_5%	Fe%	TiO_2%	SiO_2%	LOI%	V_2O_5 production kt	Ore Reserve	Mt
Proved	10.5	1.11	61.6	12.8	9.5	3.7	70.9	Waste	238.5
Probable	20.4	1.07	63.4	12.2	9.2	3.0	152.9	Total Material	269.4
Total Ore	**30.9**	**1.09**	**62.8**	**12.4**	**9.3**	**3.2**	**223.8**	Strip Ratio	7.7

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 6th April 2022 which is available on the Company's website www.australianvanadium.com.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 6th April 2022 which is available on the Company's website www.australianvanadium.com.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.