

## AVL Battery and Electrolyte Plant Update

### Highlights:

- **Western Australia's first Vanadium Flow battery leaving GILDEMEISTER factory in Austria on 13 July 2016.**
- **Installation and commissioning expected in September.**
- **Electrolyte pilot plant design is complete and construction is underway by UK Company C-Tech Innovation.**
- **AVL's battery focused subsidiary VSUN is advancing battery sale proposals at various stages, from prospects to proposals submitted.**
- **VSUN is currently working on multiple tender responses for energy storage systems within Australia.**

Australian Vanadium Limited (ASX: AVL, "the Company" or "AVL") is pleased to update the market on the latest developments within its vertical integration strategy.

### First battery sale

As per ASX announcement 'AVL Signs First CellCube Vanadium Battery Sale in Western Australia' dated 18<sup>th</sup> May 2016, the first battery purchased through AVL for the Australian market leaves the factory in Austria today. This first battery has given the company and its associates the opportunity to refine the procedures required, including:

- providing accurate specifications to GILDEMEISTER, the manufacturer, enabling them to customise the battery to Australian standards.
- working with Western Power to ensure that their requirements are met. This has involved areas such as ensuring that compatible inverters are installed into the battery.
- liaising with customs and excise to ensure that the battery and its electrolyte are compliant with relevant regulations.
- building relationships with reputable shipping agents.

13 July 2016

### ASX ANNOUNCEMENT

#### Australian Vanadium Limited

ASX: AVL  
FRA: JT7.F

ABN: 90 116 221 740

T: +61 8 9228 3333  
F: +61 8 9486 8066  
E: [info@australianvanadium.com.au](mailto:info@australianvanadium.com.au)  
W: [australianvanadium.com.au](http://australianvanadium.com.au)

#### Street Address:

129 Edward Street  
Perth WA 6000

#### Postal Address:

129 Edward Street  
Perth WA 6000

#### Projects:

**Gabanintha** Vanadium  
**Gabanintha** Gold, Copper



FB10-100 battery

### Electrolyte Plant

As per the ASX announcement 'Australian Vanadium Purchases Pilot Electrolyte Plant from C-Tech Innovation Ltd' dated 7<sup>th</sup> June 2016, we have been working with C-Tech to finalise the pilot plant's design. The design is now complete and construction has commenced. We are narrowing down locations for the pilot plant and the ability of local organisations to provide quality testing of electrolyte in Western Australia.



Example of a pilot electrolyte preparation plant

### **About Australian Vanadium Limited**

AVL is a diversified resource company with an integrated strategy with respect to 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 100%-owned, world-class Gabanintha Vanadium project. Gabanintha is currently one of the highest-grade Vanadium projects being advanced globally with Measured, Indicated and Inferred Resources of 91.4Mt, grading 0.82% V<sub>2</sub>O<sub>5</sub> and containing a discrete high-grade zone of 56.8Mt, grading 1.0% V<sub>2</sub>O<sub>5</sub> reported in compliance with the JORC Code 2012 (ASX Announcement 10 November 2015).

AVL also aims to develop a local production capacity for high-purity vanadium electrolyte, which forms a key component of vanadium redox flow batteries (VRB). The Company has recently purchased a vanadium electrolyte pilot plant from C-Tech Innovation Limited, a research, technology and innovation organisation based in the UK (ASX Announcement 7 June 2016). C-Tech Innovation Limited has developed technologies for electrochemical preparation of vanadium electrolyte as well as many other chemical and electrochemical technologies.

This purchase will enable AVL to develop unique vanadium electrolyte production expertise and capability in Australia, through both stand-alone and planned mine-attached facilities. The pilot plant will be used to test and verify the production of vanadium electrolyte products that are suitable and approved for use in third party VRB products being sold in Australia, New Zealand, the Pacific and Asia.

AVL, through its 100%-owned subsidiary VSUN Pty Ltd, is actively marketing vanadium redox flow batteries in Australia through a distribution agreement with world-leading flow battery manufacturer, GILDEMEISTER Energy Storage GmbH (ASX Announcement 11 April 2016).

For further information, please contact:

**Vincent Algar, Managing Director**

+61 8 9228 3333