

Commercialisation Consultant TFMS appointed to perform VRB study

Study into residential energy storage to commence

Highlights:

- **Commercialisation consultant TFMS appointed to undertake residential energy storage study**
- **Market analysis to determine market positioning for residential VRB products**
- **Study to include;**
 - **a high level residential VRB costing study**
 - **preparation of VRB product budget**
 - **identification of potential funding partners and grant assistance**
 - **analysis of potential technology partners and manufacturing sites**
- **Integration with Australian vanadium electrolyte production being actively investigated**

Further to the ASX announcement dated 13 April 2017 Australian Vanadium Limited (ASX:AVL, “the Company” or AVL”) wishes to advise that its 100% owned subsidiary, VSUN Energy has appointed Tony Fitzgerald, Director of TFMS, to perform a strategic analysis of the residential storage market and VSUN Energy’s potential within it.

Tony Fitzgerald is the Director of TFMS and provides advisory and technology commercialisation assistance. Tony has worked in this field for over 30 years and has assisted organisations to successfully commercialise products in the energy storage, mining and automotive sector on an international scale including Australia, Europe, Taiwan, India, China, America and Japan.

VSUN Energy was launched in early 2016, (ASX announcement dated 10 March 2016), with a goal to advance the profile of vanadium energy storage in Australia.

The vanadium redox flow battery, (VRB), is a safe and stable energy storage device which offers the ability to store large amounts of energy for delivery over a period of many hours. VRBs provide very high cycle performance over an operating lifespan of over 20 years, with minimal degradation in performance during that time period. VRBs are also considered to be very safe, non-flammable devices which are attractive

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Australian Vanadium Limited

ASX: AVL
FRA: JT7.F

ABN: 90 116 221 740

T: +61 8 9321 5594
F: +61 8 6268 2699
E: info@australianvanadium.com.au
W: australiantanadium.com.au

Street Address:

Level 1, 85 Havelock Street
West Perth WA 6005

Postal Address:

Level 1, 85 Havelock Street
West Perth WA 6005

Projects:

Gabanimtha - Vanadium
Blesberg, South Africa - Lithium/Tantalum
Northanna Hill – Uranium/Vanadium



features for residential applications. It is these characteristics that make it a desirable option for the residential market.

The analysis undertaken by TFMS will cover a review of competitors in the residential energy storage marketplace and the points of difference a VRB can provide. It will analyse the financial structure and economic viability of local manufacture vs procurement. Potential funding and strategic partners will be assessed and recommendations made.

AVL Managing Director, Vincent Algar commented, “We have seen further huge growth in enquiries since our announcement two weeks ago. Consumers are keen to find a solution for their energy storage requirements that will give them what they want - a long-lasting, stable, quiet solution that they can really just forget about and let it do its work. Having Tony perform this study will enable the Company to make a fully informed decision with its plans for VSUN Energy going forward. This gives our shareholders confidence that we will only continue with this strategy if it will benefit them.”

VSUN Energy believes that the existence of a residential VRB product in developing markets, particularly Australia with its extremely high levels of residential rooftop generated solar energy, will have a consequential impact on the sales of larger VRB systems, as people become more comfortable and familiar with the robustness of the VRB technology. Small scale VRBs are also ideally suited for small scale standalone applications such as powering remote telecommunications facilities and irrigation pumping facilities.

Manufacturing locations within Australia are being considered, which would enable VSUN Energy to increase local employment and build Australian expertise in this growing technology. Local manufacturing will also reduce the cost of transportation and therefore the cost of batteries to Australian customers.

AVL’s plans for a commercial electrolyte plant, (ASX announcement dated 19 January 2017), are also progressing and this development would enable VSUN Energy to source vanadium electrolyte locally and at a competitive price. Vanadium electrolyte is a key component of VRBs.

Electrolyte production would also add to AVL’s revenue stream and having the security of an off-take agreement between AVL and VSUN Energy, will make the commercial plant more economically viable.

VSUN Energy continues to market and sell a range of sizes of commercial VRB systems suitable for business and stand-alone microgrids through to utility scale opportunities.

For further information, please contact:

Vincent Algar, Managing Director

+61 8 9321 5594