Benchmark Comments on the Surge in Vanadium and Vanadium Redox Flow Batteries

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TORONTO, Oct. 4, 2018 - CellCube Energy Storage Systems Inc. ("CellCube" or the "Company") (CSE: CUBE) (OTCQB: CECBF) (Frankfurt: 01X) is pleased to provide the following article that has been prepared by Benchmark Mineral Intelligence:

Benchmark has advised some of the world's most influential corporations. These include leading producers of critical minerals, battery cell producers, electric vehicle manufacturers, large investment houses and some world leading brokers.

Rocketing vanadium price primed for 'Elon Musk moment

'Frik Els (http://www.mining.com/author/frik/) | 5 days ago |

Spiking cobalt and lithium demand from booming sales of electric vehicles grabs all the headlines, partly thanks to Tesla CEO Elon Musk's propensity to make news (http://www.mining.com/web/markets-musk-stop-messing-around-settle-sec-now/), but another battery metal has actually experienced more action this year.

Vanadium is primarily used to strengthen steel (today it makes up more than 90% of the market) and prices for ferro-vanadium hit decade highs this month.

Vanadium pentoxide (V O) which makes its way into so-called vanadium redox flow batteries used in energy storage systems breached $20 a pound for the first time since 2005 this month. That's a four-fold increase from the start of 2017.

Simon Moores of Benchmark Mineral Intelligence, a battery materials research and price discovery provider based out of London, says the recent success of lithium ion batteries being deployed in increasing larger systems that are exceeding 1GWh has brought to light the huge potential of the market for all types of battery technologies.

Vanadium flow batteries have a lifespan of over 20 years without capacity loss, are non-flammable, and can operate at any temperature. Another advantage over lithium ion is that this type of battery can be charged and discharged simultaneously making it highly suitable for large-scale storage from renewable sources, such as solar and wind when connected to an electricity grid. The main downside is low energy density which means comparatively large installations needed.

"If a vanadium battery producer steps forward with bold plans to produce vanadium flow at mass scale, giving the industry its Elon Musk or lithium ion moment, the potential for the technology to be the second most deployed ESS battery in the world is there," says Moores.

"Raw material self-sufficiency is a critical component to this. At least a third of the cost of a vanadium flow battery is vanadium pentoxide which makes up the liquid electrolyte. If companies are thinking of creating the Gigafactory of vanadium flow batteries, they will either need to own a mine or implement a new pricing system where the fully recyclable vanadium in the battery is leased."

Should all the supply chain challenges be solved, Benchmark believes 25% of the energy storage market is up for grabs in 2028. Benchmark forecasts that the energy storage market will then be between 100GWh to

120GWh in size.

The amount of V2O5 in a single MWh is just under 10 tonnes. South Africa, China, and Russia produce more than 80% of the world's vanadium, mostly as a by-product of magnetite mining and in the steelmaking process. Only around 80,000 tonnes of vanadium were produced last year.

Source: http://www.mining.com/rocketing-vanadium-price-primed-elon-musk-moment/

About CellCube Energy Storage Systems Inc.

CellCube is a Canadian public company listed on the Canadian Securities Exchange (symbol CUBE), the OTCBB (symbol CECBF), and the Frankfurt Exchange (Symbol 01X) focused on the fast-growing energy storage industry which is driven by the large increase in demand for renewable energy.

CellCube supplies vertically integrated energy storage systems to the power industry and recently acquired the assets of Gildemeister Energy Storage GmbH, now Enerox GmbH the developer and manufacturer of CellCube energy storage systems. CellCube recently acquired EnerCube Switchgear Systems (formerly Jet Power and Controls Ltd.) and Power Haz Energy Mobile Solutions Inc. (formerly HillCroft Consulting Ltd.) and has also invested in an online renewable energy financing platform, Braggawatt Energy Inc.

CellCube develops, manufactures, and markets energy storage systems on the basis of vanadium redox flow technology and has over 130 project installations and a 10 year operational track record. Its highly integrated energy storage System solutions features 99% residual energy capacity after 11,000 cycles with the focus on larger scale containerized modules. Basic building blocks consist of a 250kW unit family with 4, 6 and 8 hours variation in energy capacity.

On Behalf of CellCube Energy Storage Systems Inc.,
Mike Neylan, CEO, Director

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