

# Yellow Rock embarks on Vanadium Battery Storage integration strategy to maximize value

Yellow Rock Resources has initiated a vertical integration strategy to extract additional value from the emerging vanadium market in energy storage.

## Highlights:

- » Rapidly growing interest and market opportunities exist in energy storage markets that present exciting opportunities for Yellow Rock
- » The Company has created a subsidiary company, VSUN Pty Ltd (“VSUN”) to specifically develop opportunities in the distribution of Vanadium Redox Flow Batteries (VRFB’s)
- » The Company has secured distribution rights with two German Vanadium Battery Makers and is in negotiations with other major stakeholders in the vanadium battery storage market
- » Yellow Rock has partnered with a prominent Perth based commercial solar installer which has an extensive track record of commercial and residential solar system installation
- » The vertical integration strategy will allow Yellow Rock to position itself in successive elements of the battery development and distribution chain
- » The long term strategy will ensure Yellow Rock can leverage the high-grade Gabanintha Vanadium project, currently being advanced to feasibility, to supply vanadium product into the battery market, in addition to the steel market

## Vanadium vertical integration strategy underway

Yellow Rock Resources is pleased to announce it has embarked on a vertical integration strategy which will cement its position in the rapidly growing battery storage market.

Yellow Rock CEO, Vincent Algar commented on the historic step for the Company, which holds 100% of Australia’s highest grade and best located Vanadium-Titanium-Iron deposit at Gabanintha in Western Australia.

“As we develop this project we are seeing the rapid development of commercial grid storage technologies, such as the scalable Vanadium Redox Flow Battery. The VRFB is very well suited to the commercial and grid solutions being called for in this exciting space. Our step into the battery and vanadium electrolyte distribution market is designed to build a significant market share as an integrated company, benefiting shareholders with early cash flows “

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## ASX ANNOUNCEMENT

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## Projects:

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



The Company has long held a focus on supplying its potential vanadium production to the battery storage market, which is growing fast alongside energy production from renewable sources. It is expected that over the next few years, as demand for grid-scale energy storage grows, up to 30 per cent of the storage demand will be satisfied by Vanadium Redox Flow Batteries as part of over 185Gwh of expected storage.

“The amount of power being generated from renewable energy sources is growing as people recognise the value of a sustainable and predictable source of energy,” Mr Algar said.

“Battery storage is integral to the continued development of this market in order to regulate and take full advantage of renewable energy creation.”

In terms of vanadium demand, it is likely that this battery market growth will lead to demand for an additional 300,000 tonnes of vanadium, purely for use in batteries. This represents a three-fold increase in current vanadium consumption in the global steel industry.

Yellow Rock is securing a position in this market now and increasing exposure to the positive growth by vertically integrating its business. Over the past few months the Company has entered into negotiations with electrolyte producers, battery manufacturers and Australian-based solar installers as first steps in the process.

Yellow Rock has created a subsidiary company, VSUN Pty Ltd, which will be controlled by Yellow Rock and focus on the development of VRFB market opportunities, initially within Australia. It will primarily be concerned with the distribution of vanadium flow batteries from global producers, leveraging off installer partners and their existing client bases. VSUN will also evaluate how it can participate in the manufacture of vanadium electrolyte – the key element of the batteries. The development of Australian electrolyte plants will maximise value within the local markets.

These negotiations have now resulted in a partnership with a prominent local solar installer, and securing the right to distribute German VRFB's from two suppliers inside Australia. This has formed the basis of the VSUN subsidiary company, which is already progressing leads with companies operating within Australia who want to augment their planned solar installations with storage.

## **Integration with the Gabanintha Vanadium Project**

Yellow Rock's high-grade Gabanintha vanadium Project, currently on a pathway through feasibility studies, contains the highest vanadium grades of any Australian vanadium-titanium-iron deposit. The resource upgrade process currently underway will cement the world class nature of the project and pave the way to more definitive economic studies in 2016. As a potential producer of vanadium, Yellow Rock and the subsidiary company VSUN will be able to utilise locally-produced vanadium as part of the electrolyte manufacture. This electrolyte would then be used in the batteries distributed by the subsidiary company.

With this strategy Yellow Rock, as the parent company, will benefit from increasing vanadium demand from the existing steel market (6% per annum) as well as positive exposure to the growing battery storage market.

## **Market Development**

VSUN will undertake market development activities to identify potential clients. It will also finalise detailed technical discussions with the battery suppliers and electrolyte plant developers. Marketing information for the new company is being developed ahead of a full scale launch planned for October 2015. Interested parties can make contact through the yellow rock website or via [vsun.com.au](http://vsun.com.au).

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