



# VANADIUM RECOVERY PROJECT UPDATE

## HIGHLIGHTS

- ISO compliant life cycle assessment (“LCA”) highlights excellent environmental credentials of Neometals’ proposed vanadium recovery process;
- Independently assessed gate to gate LCA shows potential to produce zero carbon vanadium;
- Peer reviewed preliminary feasibility study (“PFS”) on schedule for delivery to SSAB by 30<sup>th</sup> June 2021;
- Engineering Cost Study component of PFS materially complete with operating and capital costs to be announced in April 2021;
- Vanadium recovery pilot plant under construction with commissioning expected in May 2021; and
- Positive feedback received from a European battery cell maker currently testing Neometals’ high-purity vanadium chemical samples.

Innovative project development company, Neometals Ltd (ASX: NMT) (“**Neometals**” or “**the Company**”) is pleased to provide an update on its Scandinavian vanadium recovery project (“**Vanadium Recovery Project**”) activities. As announced on 6<sup>th</sup> April 2020 (see ASX announcement titled “*High-Grade Vanadium Recycling Agreement*”), Neometals has the ability, subject to funding certain evaluation studies, to enter into a 50:50 incorporated joint venture (“**JV**”) for the project with unlisted Scandinavian mineral development company, Critical Metals Ltd (“**Critical**”). The parties are jointly evaluating the feasibility of constructing a facility to process and recover high-grade vanadium products from vanadium-bearing steel making by-product generated by SSAB EMEA AB and SSAB Europe Oy (collectively “**SSAB**”) in Scandinavia.

As part of these evaluation activities the Company is undertaking a PFS which will include an AACE\* Class 4 Engineering Cost Study (“**ECS**”) on the recovery of vanadium pentoxide (“**V<sub>2</sub>O<sub>5</sub>**”) from high-grade vanadium-bearing steel by-product (“**Slag**”). Work on the ECS component of the PFS is materially complete with finalised capex and opex numbers expected to be announced to the market in April. Pursuant to the slag supply agreement between Critical and SSAB, the PFS is progressing well (on budget and ahead of schedule) for delivery by 30 June 2021.

In parallel with the PFS, an independently audited LCA has been completed by Minviro Ltd on the recovery of V<sub>2</sub>O<sub>5</sub> using the Company’s proprietary patent pending flowsheet. This environmental accounting methodology, which quantifies environmental impact across key categories, has highlighted the potential to produce zero carbon vanadium.

As part of an offtake product evaluation program, Neometals has supplied samples of high-purity V<sub>2</sub>O<sub>5</sub> to a European battery cell manufacturer. Samples were generated from the mini-pilot test work program that was previously completed in Perth (see ASX announcement dated 4<sup>th</sup> November 2020 titled “*Successful Vanadium Recovery Mini-Pilot and Commencement of PFS*”). Early feedback has confirmed very high product purity and battery cells using Neometals’ V<sub>2</sub>O<sub>5</sub> have cycle tested well.

\* Association for the Advancement of Cost Engineering

In order to prepare larger product samples for customer evaluation, a 1:1000 scale pilot plant (“Pilot”) (feed rate 25kg/hr) is currently under construction at Strategic Metallurgy in Perth. The Pilot is expected to start commissioning in May 2021 with results expected in the third quarter of 2021. This Pilot program will provide proof of scale confirmation of the technical feasibility of the Neometals process flowsheet which utilises a carbon-rich alkaline leach and conventional solvent extraction at atmospheric pressure and mild temperatures.

Neometals Managing Director Chris Reed said:

*“We are pleased with the technical and commercial progress of our Vanadium Recovery Project. The positive feedback on our product purity and performance in lithium-vanadium battery cell testing and potential zero carbon footprint of our ecofriendly process flowsheet make a compelling business case to fast-track our evaluation activities. The backdrop for domestic supply of critical battery materials in Europe strengthens daily, vanadium pentoxide prices have strengthened significantly in recent months and its emergence as a next generation lithium-ion battery material is accelerating”.*

*Authorised on behalf of Neometals by Christopher Reed, Managing Director*

## ENDS

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## About Neometals Ltd

Neometals innovatively develops opportunities in minerals and advanced materials essential for a sustainable future. With a focus on the energy storage megatrend, the strategy focuses on de-risking and developing long life projects with strong partners and integrating down the value chain to increase margins and return value to shareholders.

Neometals has four core projects with large partners that support the global transition to clean energy and span the battery value chain:

### Recycling and Resource Recovery:

- Lithium-ion Battery Recycling – a proprietary process for recovering cobalt and other valuable materials from spent and scrap lithium batteries. Pilot plant testing completed with plans well advanced to conduct demonstration scale trials with 50:50 JV partner SMS group, working towards a development decision in early 2022; and
- Vanadium Recovery – sole funding the evaluation of a potential 50:50 joint venture with Critical Metals Ltd to recover vanadium from processing by-products (“Slag”) from leading Scandinavian Steel maker SSAB. Underpinned by a 10-year Slag supply agreement, a decision to develop sustainable European production of high-purity vanadium pentoxide is targeted for December 2022.

### Downstream Advanced Materials:

- Lithium Refinery Project – evaluating the development of India’s first lithium refinery to supply the battery cathode industry with potential 50:50 JV partner Manikaran Power, underpinned by a binding life-of-mine annual offtake option for 57,000 tonnes per annum of Mt Marion 6% spodumene concentrate, working towards a development decision in 2022.

### Upstream Industrial Minerals:

- Barrambie Titanium and Vanadium Project - one of the world's highest-grade hard-rock titanium-vanadium deposits, working towards a development decision in 2021 with potential 50:50 JV partner IMUMR.