



LITHIUM-ION BATTERY RECYCLING PRIMOBIUS JV UPDATE

HIGHLIGHTS

- Neometals and its JV partner, SMS group, making strong progress towards European lithium-ion battery recycling commercialisation
- German showcase demonstration plant permitted for construction. Assembly underway and majority of equipment in country and/or on site
- Battery feed secured from auto industry for demonstration trials and subsequent product evaluation
- Evaluation programs being discussed with potential offtakers for several of the material streams generated during demonstration trials
- New EU Battery regulations provide significant commercial tailwinds with sustainability, recycled content, circularity and ethical domestic sourcing in focus

Innovative project development company, Neometals Ltd (ASX: NMT) (“Neometals” or “the Company”), is pleased to provide an update on the commercialisation of its lithium-ion battery (“LIB”) recycling technology in partnership with SMS group (“SMS”). The Neometals and SMS 50:50 incorporated joint venture (“JV”), Primobius GmbH (“Primobius”), is making strong commercialisation headway on multiple fronts and the company is excited about making its mark on the battery value chain in 2021.



Figure 1 - Render of demonstration plant in Hilchenbach showing battery shredding (left, foreground) and hydrometallurgical refining circuits (right, background)

Neometals Managing Director Chris Reed commented:

“Primobius has made strong progress towards developing Europe’s largest sustainable LIB recycling plant. Europe is becoming the largest LIB producer outside China as its auto industry transitions away from the internal combustion engine. We are looking forward to showcasing our recycling solution in Europe and demonstrating our ability to safely and sustainably recover and produce high-purity critical battery materials from ever increasing volumes of production scrap and end-of-life batteries.

The EU battery regulations have been strengthened considerably with a focus on decarbonisation of electric vehicle supply chains and battery manufacturing. The regulatory landscape now encompasses the entire battery value chain which aligns with our high recovery, low CO₂, hydrometallurgical recycling solution and our ability to deliver the scale required through our partnership with SMS group”.

Demonstration Plant and Trials

Primobius has completed the design and procurement phases of its recycling demonstration plant (“**DP**”) located within the SMS manufacturing centre in Hilchenbach, Germany. Primobius recently received the necessary permits to commence construction of the DP to process spent and scrap LIBs at a rate of 1t per day. All equipment other than a crystalliser is now located in Germany, and preparations are underway for installation at Hilchenbach.

The DP trial schedule sees commissioning and operation of the shredding and beneficiation circuit first, followed by the hydrometallurgical refining circuit commencing in Q2 2021. Scrap LIBs and partially processed ‘black mass’ has been secured from potential partners e.g. in the automotive industry. The DP will serve as a showcase where product outputs from the recycling process can be evaluated by potential customers, partners and off-takers. Specifically, the DP will provide an opportunity for carmakers, consumer electronics and battery manufacturers to verify Primobius’ capability to safely, sustainably and ethically dispose of hazardous LIBs and generate re-usable materials for the production of new sustainable batteries and satisfy all regulatory custody, carbon footprint, certification and stewardship obligations.

As it relates to product offtake, Primobius goes into its DP trial with confidence from pilot trial data that the key payables (nickel and cobalt sulphate) are higher purity than required by Chinese national specifications for cathode use. Each product generated during DP trials, low and high value, will be used for evaluation trials with potential off-takers. Multiple dialogues are being progressed concurrently and Primobius has a strong understanding of which markets, and which potential purchasers, the various recycled materials will suit (particularly as it relates to the key cathode chemicals to be produced).

Feasibility and Site Studies

Preparatory activities for the Class 3 feasibility study (“**FS**”) are underway now. Comprehensive FS activities will commence in January 2021 with the engineering cost study scheduled to provide operational and capital cost estimates, based on data generated during DP operations, by October 2021.

Primobius has been progressing its site selection study for future commercial operations with several possible locations shortlisted in and around the Germany. The central part of Europe offers compelling advantages in terms of proximity to vehicle and LIB manufacturing plants and product off-takers. Site selection developments will advance hand in hand with commercial/partner development activities. See ‘Next Steps’ below for an indicative project development timeline.

Commercial Activities

Running in parallel to demonstration and feasibility development activities are a number of Primobius feedstock and offtake dialogues with industry. Securing feed for the DP and for future commercial plants is a high priority and with feed for the DP now secured from automotive sources, the focus is now 100% on scrap and end of life LIB cell sourcing for commercial activities. Specific to this objective, Primobius recently entered into a memorandum of understanding with Slovakian LIB cell manufacturing company, InoBat Auto j.s.a. (“**InoBat**”), for joint recycling activities using feed sourced from InoBat pilot and commercial activities

(refer to Neometals ASX announcement dated 3rd November 2020, titled “Primobius JV enters into recycling MOU with European Battery Producer”).

EU Battery Regulation

On the 10th December, the European Commission announced a proposal for upgraded regulations to replace prior legislation governing collection and recycling of batteries.

The battery regulations aim to:

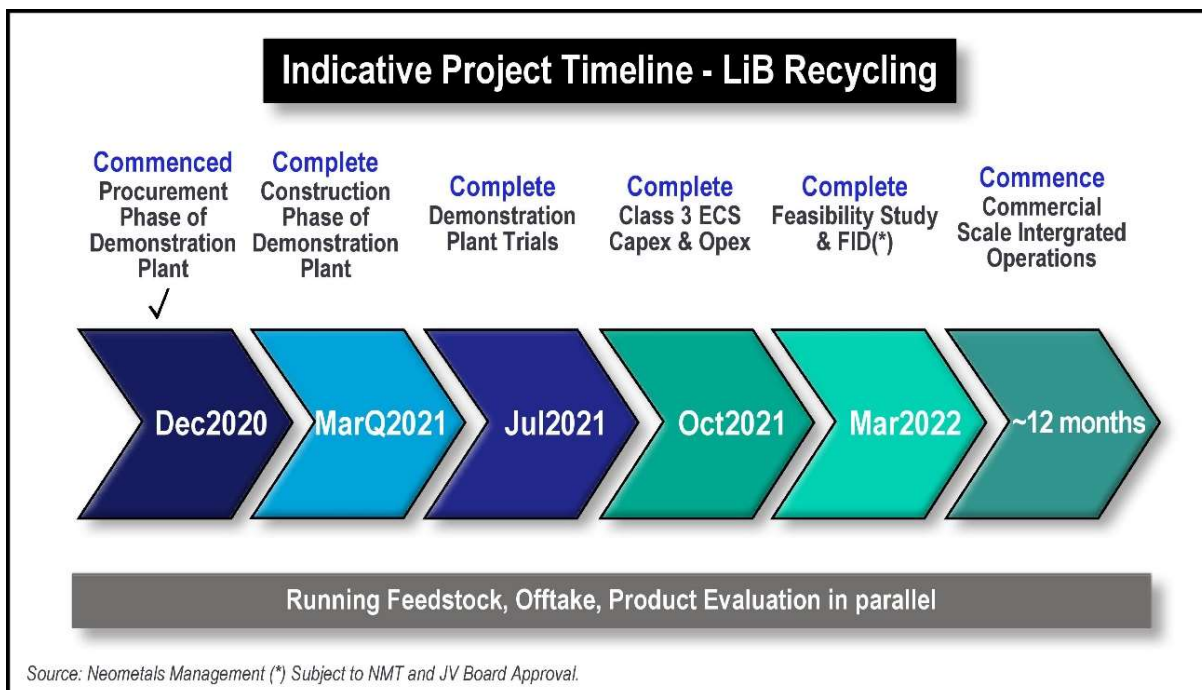
- Harmonise product requirements for batteries;
- Minimise environmental impact of batteries;
- “Close the loop” by improving battery collection and sustainable recycling of materials; and
- Provide legal certainty to promote investments and boost the production capacity of sustainable batteries in Europe and beyond.

The key commercial points from the perspective of Primobius / Neometals are detailed below:

- Mandatory recycling of industrial and EV batteries within 12 months of adoption by EU Parliament (expected Q4CY2021);
- Mandatory CO₂ life-cycle disclosure on all batteries by 2024;
- Increased recycling efficiency and collection targets;
- Minimum use of recycled materials in batteries by 2027; and
- Compliance labelling via the ‘Battery Passport’ to include traceability and provenance disclosure.

This regulatory development bodes well for Neometals / Primobius commercialisation aspirations, particularly because our recycling technology and business model are so closely aligned with the EU’s decarbonisation and clean energy objectives. These clean energy objectives are supported by a projected 30 million EV fleet powered by sustainable batteries.

Next Steps



Authorised on behalf of Neometals by Christopher Reed, Managing Director

ENDS

For further information, please contact:

Chris Reed

Managing Director
Neometals Ltd
T: +61 8 9322 1182
E: info@neometals.com.au

Jeremy Mcmanus

General Manager - Commercial and IR
Neometals Ltd
T: +61 8 9322 1182
E: jmcmanus@neometals.com.au



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 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 mid-2021 with potential 50:50 JV partner IMUMR.

APPENDIX A: PICTORIAL UPDATE

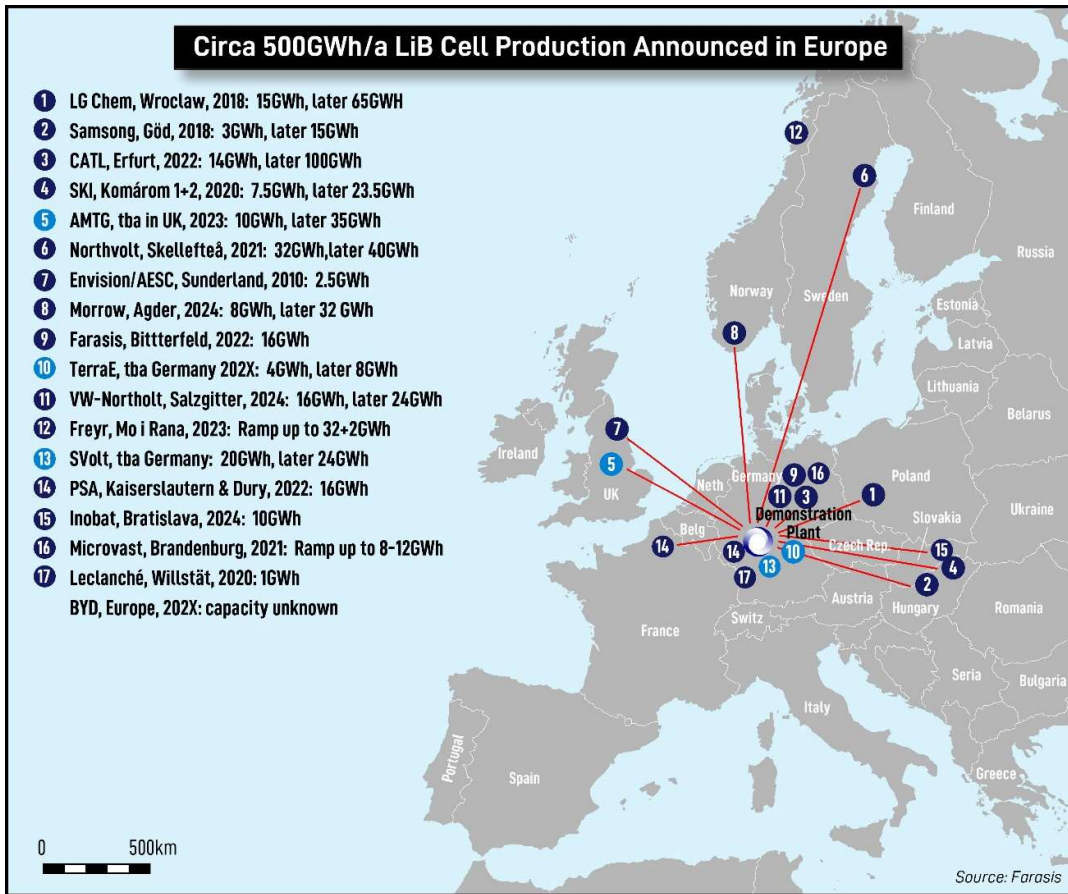


Figure 1 - Location of lithium-ion battery gigafactories



Figure 2 - Demonstration Plant location at SMS, Hilchenbach



Figure 3 - Demonstration Plant building at SMS Hilchenbach, pre-fitout



Figure 4 - Rendering of projected plant after completion of fitout

Key equipment images:



Figure 5 - Crystalliser in China – expected end Jan 2021



Figure 6 - Black mass dryer in Hilchenbach

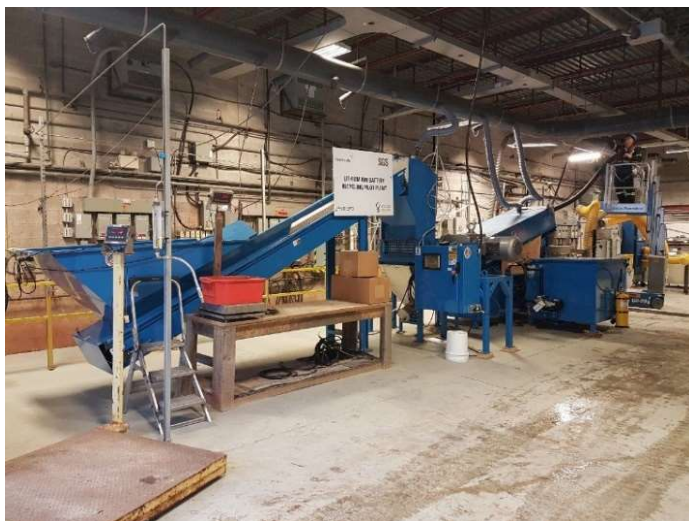


Figure 7 - Two-stage commercial shredder now relocated to Germany