



# NEOMETALS AND SMS GROUP CREATE JV TO RECYCLE LITHIUM ION BATTERIES

## HIGHLIGHTS

- Binding agreement to establish a 50:50 JV (“Primobius GmbH”) to commercialise Neometals proprietary lithium battery recycling process for regeneration of sustainably produced secondary battery materials from growing volumes of scrap and end of life batteries
- Primobius will construct a Demonstration Plant at SMS’s manufacturing site in Germany to validate the process at industrial scale, the final step ahead of a decision to commence commercial-scale operations in Europe, the largest emerging LiB production hub outside China
- The Demonstration Plant will enable potential customers to generate battery materials and cathode chemicals from their own feedstocks and generate process data to guide the design and operation of the first commercial facility
- Commercial operations will target safe processing of a wide range of lithium battery formats and chemistries to generate a responsible source of materials for reuse in the battery supply chain, reducing risk/reliance on primary mineral-based extraction and electric vehicle carbon footprint

Project developer, Neometals Ltd (ASX: NMT) (“Neometals” or “the Company”), is pleased to announce the execution of a formal agreement governing the formation and operation of an incorporated 50:50 joint venture (“JV”) with SMS group GmbH (“SMS group”), called Primobius GmbH (“Primobius”). Primobius will commercialise Neometals’ proprietary lithium-ion battery (“LiB”) recycling technology, which offers a unique and sustainable method for recovering valuable lithium, nickel, cobalt and other materials from spent and scrap electric vehicle and consumer electronic LiB’s. Recovered and refined product materials will be in a form that can be reused in the battery supply chain.

The creation of the JV follows extensive due diligence by SMS group on Neometals scale-up activities for its patent-pending hydrometallurgical process, including its recently completed successful pilot trials (“Pilot”). Neometals previously executed a binding memorandum of understanding (“MOU”) with SMS group (see Neometals ASX announcement dated 17<sup>th</sup> October 2019 for further details) allowing SMS group to complete exclusive due diligence on a transaction to co-fund final stage process evaluation before co-developing commercial LiB recycling operations with Neometals.

SMS group is a highly capable project delivery partner who can accelerate commercialisation of the technology globally. Primobius represents a significant milestone in the generation and realisation of value for Neometals’ battery recycling project and its sustainable materials recovery strategy going forward. The SMS partnership validates both the economic scale and scope of the recycling opportunity, the technical feasibility of the process and the viability of our flexible business models to meet the needs of the entire EV battery supply chain, from cathode through to car makers.

Next steps for the JV will include construction and commissioning of a Demonstration Plant (“DP”) at a SMS group facility in Germany. The DP will rely on Neometals piloted commercial-scale comminution (shredding) and hydrometallurgical circuits. The comminution circuit (20ktpa capacity) is currently en-route from the US and the DP will generate results for a formal feasibility study with commercial feedstock, offtake and financing activities occurring in parallel.

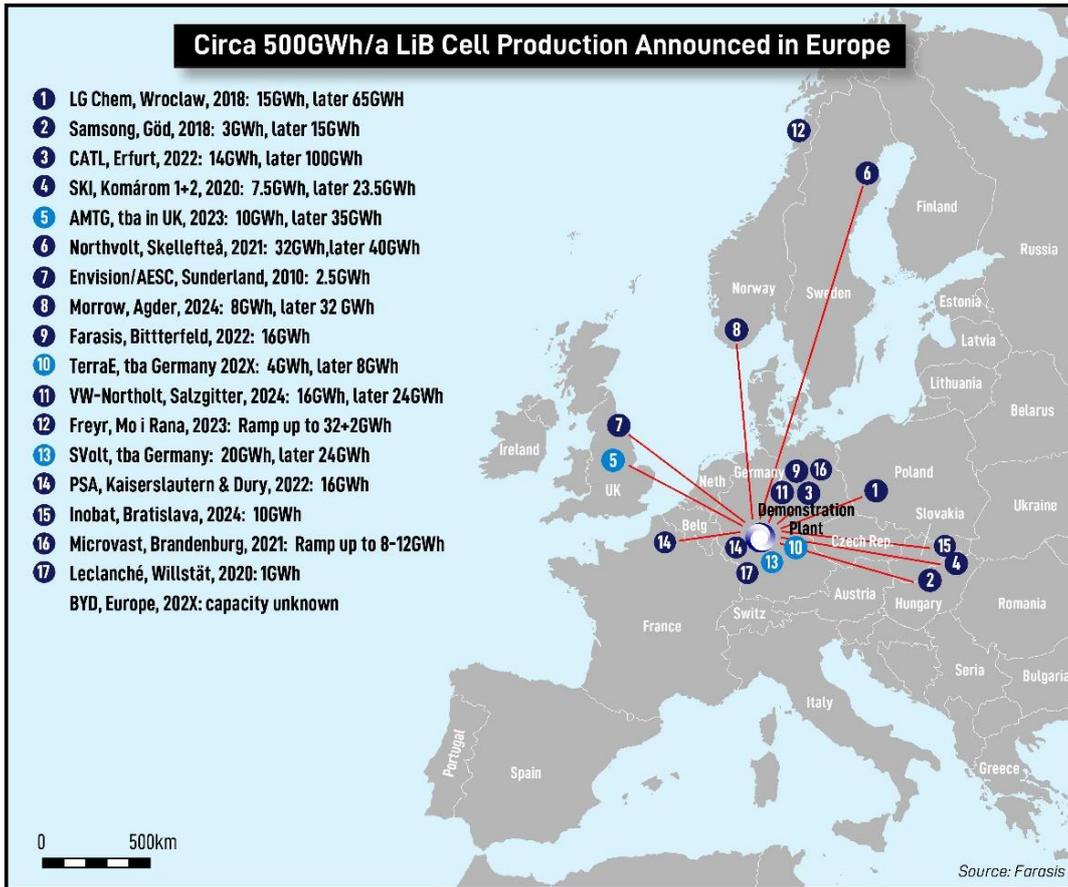


Figure 1 - Lithium-ion Battery Cell Production Capacity – in operation, construction or planning stages.

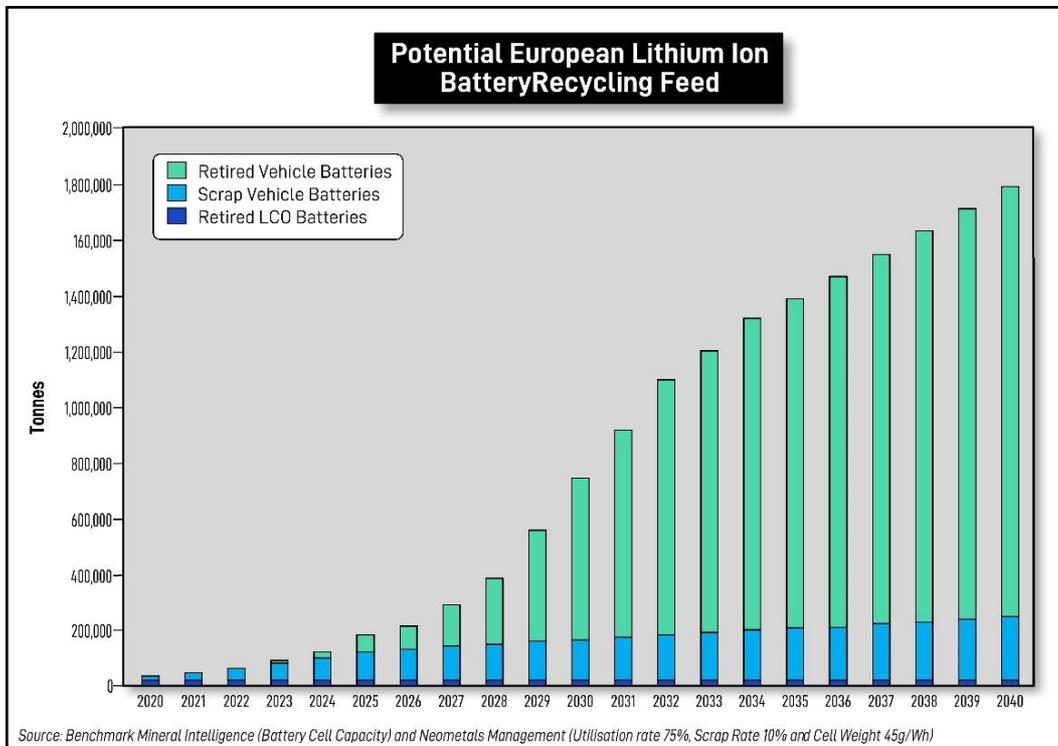


Figure 2 - Potential LiB Recycling Feedstock Volumes for Europe

Neometals Managing Director Chris Reed commented:

*“Neometals is proud to partner with SMS group in the Primobius JV. We have a clear path to commercialise this Australian technology, developed by our technical team in Perth, to meet the needs of the burgeoning European lithium battery and EV makers. The entry of Primobius comes at a time marked by major confluence of regulatory initiatives to stimulate the electric vehicle sector to decarbonise transportation, secure battery material supply chains and support circular economies generally. Our recycling solution plays strongly to this theme by offering responsible recovery and ethical battery material supply. It also lowers the carbon footprint of battery manufacturing and contribute broadly to the sustainability of the lithium battery materials supply chain”.*

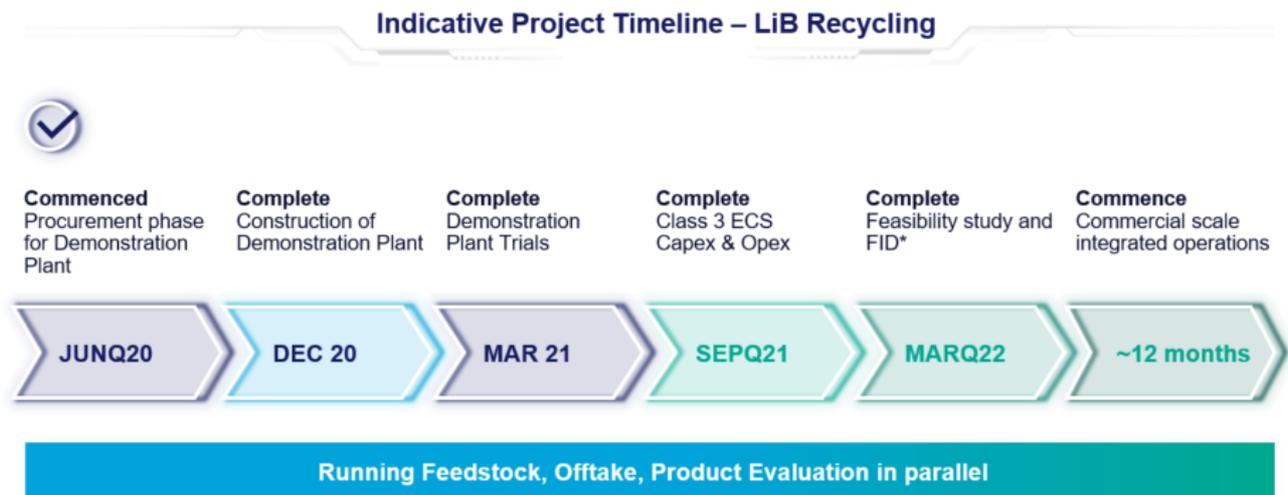
SMS group Senior Vice President Strategic Project Development Herbert Weissenbaeck said:

*“The SMS group looks forward to the next stage of its engagement with Neometals and to apply our metallurgical plant and engineering expertise to fast track commercialisation. SMS group sees compelling growth and opportunity in the sector. The timing is good to secure a foothold and build credibility with OEMs who value closing the loop in the battery value chain. There is a groundswell of global, and particularly European, support for sustainability and circular opportunities and this strengthens our commitment to Primobius”.*

### Overview of Primobius transaction agreements

- Neometals and SMS group will incorporate a 50:50 JV company in Germany, Primobius GmbH, to conduct evaluation activities in respect of the technology and potentially commercial-scale lithium-ion battery recycling operation.
- Neometals, through its wholly owned subsidiary ACN 630 589 507 (“ACN 630”), owns the battery recycling technology and has granted Primobius a limited licence to undertake the evaluation activities.
- Neometals and SMS group will co-fund the evaluation activities, which include the construction and operation of a Demonstration Plant and a AACE Class 3 Feasibility Study (€3.5 million in total).
- If certain technical and economic criteria are satisfied, SMS group will earn a 50% interest in ACN 630 and the parties will jointly fund commercial activities required for consideration of an investment decision for first commercial-scale recycling plant (€0.5 million in total).
- Following the successful completion of the evaluation activities, Neometals and SMS group will consider a final investment decision regarding commencing commercial operations. If Neometals and SMS group decide to proceed with commercial operations then the parties will jointly fund the recycling plant within agreed capital contribution limits and conduct a battery recycling business in accordance with an agreed business plan. SMS group will have a right of first offer to undertake design, construction, operation and maintenance in respect of each recycling plant. ACN 630 will grant a licence to Primobius to use the technology for commercial operations on pre-agreed terms (with the licence to be granted on an exclusive basis other than in territories in which ACN 630 has already granted licences to use the technology to third parties).
- In the event that only one party decides to proceed with commercial operations:
  - the proceeding party will be granted a licence by ACN 630 to use the technology at a pre-agreed royalty rate; and
  - the non-proceeding party will exit the JV on pre-agreed terms but will either, at its election, retain the ability to re-enter the JV at any stage within an 18 month year period (Grace Period Option) or receive a licence from ACN 630 to use the technology on its own at a pre-agreed royalty rate.
- The payment of royalties under the licences is subject to the grant of the patent applications in respect of the battery recycling technology. If such a grant is made then a discounted royalty accrual will apply for the period prior to grant.
- SMS groups 50% interest in ACN 630 (if earned) will revert to Neometals in certain circumstances, including where SMS group is the sole party to proceed but there is an extended delay in the commencement of development of the first recycling plant or if Neometals is the sole party to proceed and SMS group does not exercise its Grace Period Option.

## Primobius Indicative Development Timeline



Source: Neometals Management(\*) Subject to NMT and JV Board Approval

### Next steps

Neometals and SMS group have commenced an AACE (Association for the Advancement of Cost Engineering) Class 4 Engineering Cost Study of a 20ktpa LiB recycling plant based in Germany, based on outcomes of the Neometals Pilot trials at SGS Lakefield, Canada. The immediate steps for Primobius will include (but are not limited to):

- Complete an AACE Class 4 Engineering Cost Study based on processing 20ktpa battery feed;
- Complete the procurement activities and commence construction of the Demonstration Plant, with commissioning targeted in early 2021;
- Following completion of the Demonstration trial, commence an AACE Class 3 Feasibility Study (based on both 20ktpa and 200ktpa of battery feed); and
- Secure commercial arrangements with respect to battery feedstock, product offtake, key reagents and project financing customer trials / product offtake and for future commercial preparations.

# Primobius

**Battery recycling without limits**

\*See browser link for path to Primobius promotional video: <http://www.neometals.com.au/primobius>

### ENDS

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

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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 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 potential 50:50 JV partner SMS group, working towards a development decision in early 2022; and
- Vanadium Recovery – a 27-month option to evaluate establishing a 50:50 joint venture 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.

## About SMS group GmbH

SMS group is one of world’s leading suppliers of metallurgical equipment and plants, offering state-of-the-art plant solutions across the complete value chain. Headquartered in Dusseldorf Germany and with 95 locations worldwide, the privately-owned SMS group has grown successfully over 140 years, employs more than 14,000 people and turns over approximately €3 Billion per annum.

SMS group is focused on expanding its experience in the field of equipment manufacturing and service operations by developing, amongst other things, new business models enabling sustainable value chains.

