

Outstanding PFS results support Vittangi graphite development

- Pre-feasibility Study for Talga's wholly-owned Vittangi Graphite Project in north Sweden **delivers outstanding project economics** including:
 - Pre-tax project **NPV₈ of US\$1,056 million** and strong pre-tax **IRR of 55%**
 - Rapid post Stage 2 commissioning **payback period of 1.5 years**
- Economics based solely on the **Ore Reserve of 1.9 million tonnes at average grade of 23.5% TGC** as a portion of the current global Indicated Mineral Resource Estimate of 10.7Mt @ 25.7% Cg
- **22-year life of mine supports reliable, long-term supply** of fully purified, shaped and coated lithium battery graphite anode product (Talnode[®]-C) to emerging European battery supply chain
- **Staged development approach** to meet near term market demand at low initial estimated capital expenditure of US\$27 million in Stage 1
- Annual estimated **revenue of US\$210m** from Stage 2 steady state **Talnode-C production of 19,000 tpa** via integrated concentrator and refinery in north Sweden
- Stage 2 estimated capital expenditure of US\$147 million (including ~20% contingency) for full-scale **mine-to-anode strategy with growth potential**
- Vertically integrated project captures full anode material production margins with conservatively discounted, independently assessed **Talnode-C price of US\$11,250/t** at estimated **US\$1,852/t production cash cost**
- Commencement of **Stage 1 planned for mid-2020** with initial production in early 2021

Australian advanced materials technology company Talga Resources Ltd ("Talga" or "the Company") (ASX:TLG) is pleased to announce highly positive results of the Company's Preliminary Feasibility Study ("PFS" or "Study") for its 100% owned Vittangi Graphite Project ("Vittangi" or "the Project") in Sweden.

The Study confirms the Project is technically and financially robust with outstanding economic returns as a market focused, high margin vertically integrated operation producing a high-performance fully engineered and coated lithium-ion (li-ion) graphite battery anode product, Talnode[®]-C, for the global li-ion battery supply chain.

The PFS proposes a staged conventional open-pit mining operation with on-site concentrator and coastal anode refinery to produce, at final design, approximately 19,000 tonnes per annum (tpa) of Talnode-C. The initial stage is designed as a low capex toll processing operation over 2 years to feed the Stage 1 anode refinery for output of approximately 2,500 tpa Talnode-C prior to scaling up to steady state full-scale production in Stage 2.

Key project metrics include an estimated pre-tax Net Present Value (NPV) of US\$1,056 million at an 8% discount rate and a pre-tax Internal Rate of Return (IRR) of 55%, with a rapid pay-back period of 1.5 years from commencement of Stage 2 commissioning.

Talga Managing Director, Mark Thompson: *"The outcomes of the PFS support Talga's move to produce fully value-added graphite products for li-ion batteries. This is the most immediate path to significant revenue for Talga and aligns with our vertically integrated business that sets us apart from peers. Next steps include a Stage 1 Definitive Feasibility Study (DFS) to further optimise scale, in line with growing li-ion battery anode demand, and progress discussions with customers and potential strategic partners toward the targeted 2020 commencement of Stage 1."*



Pre-feasibility Study Estimated Key Outcomes (All in USD)

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	100,000
Average annual production of Talnode-C	tonnes	19,000
Life of Mine (LOM)	years	22
Pre-tax NPV ₈ (real)	\$M	\$1,056
Pre-tax IRR	%	55%
Capex Stage 1	\$M	\$27
Capex Stage 2	\$M	\$147
Payback*	years	1.5
Talnode-C average price**	\$/t product	\$11,250
Revenue (LOM)	\$M	\$4,148
Cash cost of production of Talnode-C	\$/t product	\$1,852
EBITDA (LOM)	\$M	\$3,254
Net profit before tax (LOM)	\$M	\$3,133

* From Stage 2 commissioning ** Pricing is based on a Talga commissioned report by Benchmark Mineral Intelligence, a globally recognised leader in research data specialising in independent price assessments of lithium-ion battery raw materials, including graphite anode. The price used is based on Talnode®-C high-performance specifications discounted by 20-30% to allow for long term offtake pricing and other marketing and agency costs.

Positive Project economics are driven by vertical integration capturing full margins of the anode supply chain, the Project's high resource grade and the high product performance. The PFS demonstrates an approximate life of mine (LOM) revenue of US\$4,148 million over 22 years of steady state commercial production, with an estimated production cash cost of US\$1,852 per tonne of Talnode-C.

The Project benefits further from its favourable location in the existing regional mining and processing infrastructure of north Sweden, with close access to modern roads, ample water supply, nearby container ports and low-cost, low-CO₂ hydropower.

The PFS pricing of Talnode-C, proposed to be sold directly to li-ion battery manufacturers, of US\$11,250/t is based on discounting the recommended pricing provided by independent globally recognised product and market assessors Benchmark Mineral Intelligence. Testing over 12 months by independent institutes and potential customers, from the EU to Japan, supports the market suitability of Talnode-C and confirms high performance results akin to premium priced synthetic graphite.

The Study is underpinned by a maiden Nunasvaara South Ore Reserve of 1.9Mt at 23.5% TGC (Golder UK), which represents only 18% of the current global Indicated Nunasvaara JORC (2012) Mineral Resources Estimate (MRE) of 10.7Mt @ 25.7% Cg. The LOM extraction of an average of 100,000 tpa of graphite ore, and subsequent processing and refining into 19,000 tpa of Talnode-C, is based solely on the declared Ore Reserve.

Pathway to production

Talga will now move to initiate the Stage 1 Definitive Feasibility Study (DFS), aiming for completion by Q1 2020. The Company is continuing to progress all necessary project permitting and approvals, whilst working on a range of funding initiatives with customers and potential strategic partners to take the Project into production, targeting commencement of Stage 1 in 2020.

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About Talga

Talga Resources Ltd is an advanced materials technology company enabling stronger, lighter and more functional products for the multi-billion dollar global coatings, battery, construction and polymer composites markets via graphene and graphite products. The company has significant advantages owing to its 100% owned unique high-grade graphite deposits in Sweden and inhouse processing and product technology. Company website: www.talgaresources.com

Forward-Looking Statements

This ASX release has been prepared by Talga Resources Ltd. This document contains background information about Talga Resources Ltd and its related entities current at the date of this announcement. This is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this announcement. This announcement is for information purposes only. Neither this document nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of shares in any jurisdiction.

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Competent Person Statement

The information in this announcement that relates to Reserve Estimation is based on and fairly represents information that has been compiled by John Walker. Mr Walker is a Principal Mining Engineer with Golder Associates Ltd. who act as consultants to the Company. Mr Walker is a Professional Member of the Institute of Materials, Minerals and Mining (Membership No.451845) a Fellow of the Institute of Quarrying (Membership No.22637) and a Fellow Member of the Geological Society (Membership No.1021044). He has been involved in the mining industry for 30 years acting in various roles including production, project development and consulting.

Mr Walker has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" ("JORC Code"). Mr Walker consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resource Estimate and metallurgical results for the Vittangi Graphite Project was first released to ASX on 27 April 2017 and 10 April 2019 respectively. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Mineral Resource Estimate, that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

