

ASX Release 9 August 2023

Talga's battery anode sustainability underpins leadership position in European market

- In a new peer-reviewed Life Cycle Assessment, manufacture of Talga's flagship anode product Talnode[®]-C has 92% less global warming potential than existing EV anodes imported into Europe
- LCA shows potential savings of 1.6 tonne CO₂-eq in production of an EV battery¹
- Strong green credentials underpin Talga's leadership position in European market where new battery regulations are increasing sustainability requirements for battery manufacturers²

Talga Group Ltd ("**Talga**" or "**the Company**") (**ASX:TLG**) is pleased to announce a new peer reviewed Life Cycle Assessment ("**LCA**") of Talnode[®]-C, the Company's natural graphite battery anode, which demonstrates a 92% lower emissions profile than incumbent synthetic technology used by industry.

These strong environmental credentials underpin Talga's engagements with both customers and finance partners, including the European Investment Bank which recently approved €150 million senior debt funding to underpin Talga's Vittangi Anode Project ("**Project**") (ASX:TLG 20 June 2023), a vertically integrated mine-to-anode project based in northern Sweden.

The LCA shows substantial environmental benefits are possible by avoiding the use of fossil-fuel power to either produce natural graphite anode or graphitise petroleum/coal derived feedstocks for energy intensive synthetic graphite anode production, as is the case with anode technology currently imported into Europe from Asia.

The industry leading LCA estimate for Talnode[®]-C is achieved through Talga's use of 100% Swedish renewable hydropower, high-grade natural graphite ore (naturally graphitised with high mine-to-anode yield ratio) and proprietary anode production technology (ASX:TLG 1 July 2021).

Figure 1 Comparison of Talga anode global warming potential against incumbent products (kg of CO₂-eq / kg of battery anode). Source: Global warming potential data from Talnode[®]-C LCA prepared by Minviro Ltd.



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Talga Managing Director, Mark Thompson, commented: "The LCA result is a strong endorsement of Talga's sustainability and provides a baseline for European battery makers to consider, as the new EU battery regulations² require declaration of a battery's carbon footprint from 2025.

Battery producers and auto OEM's will increasingly seek transparent and rigorous assessments of environmental impact in the manufacture of anodes, which comprise the largest volume of mineral in an EV battery."

The LCA, undertaken by leading sustainability consultancy Minviro, estimates production of 1kg of Talnode[®]-C produces 1.7kg CO₂-eq. This is equivalent to a potential reduction of 1.6 tonne of CO₂-eq per produced EV¹.

The LCA is a cradle-to-gate study, meaning the product was assessed from mining (cradle) up to Talnode[®]-C delivery (gate). In accordance with best practice and to ensure continued compatibility with European regulations, the report considers Scope 1, 2 and 3 emissions.

Emissions directly related to Talnode[®]-C production processes (Scope 1) comprise just 0.7 kg CO₂-eq, with the remainder (Scope 2-3) relating predominantly to external suppliers.

Talga continues to assess opportunities to further reduce Talnode[®]-C's already low emissions profile. Investigations include mining fleet electrification and extraction options; electrified concentrate transport and optimisation of production waste management; and recycling.

The LCA is an update on a previous assessment by Hitachi Energy (formerly Hitachi ABB Power Grids) (ASX:TLG 12 August 2021). The updated LCA is based on the Project DFS (ASX:TLG 1 July 2021) and incorporates more recent data from engineering and the advanced stages of development of the Vittangi Anode Project. The LCA was conducted according to ISO 14040:2006 and ISO 14044:2006 standards and underwent critical peer review to test comparative assertions.

This peer reviewed work was completed amongst a number of independent studies supporting debt financing activities. Talga expects future reports on Talnode[®]-C emissions will be calculated from production data gathered at the Luleå Anode Refinery once it is in commercial operation.

Authorised for release by the Board of Directors of Talga Group Ltd.

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1 Assumed battery pack size of 65kWh per EV. Note 1kWh = 1.2kg anode, Benchmark Mineral Intelligence report. 2 https://www.consilium.europa.eu/en/press/press-releases/2023/07/10/council-adopts-new-regulation-on-batteries-and-waste-batteries/



About Talga

Talga Group Ltd (ASX:TLG) is building a European battery materials supply chain to offer products critical to the green transition. Talga's innovative technology and vertical integration of 100% owned Swedish graphite resources provides security of supply and creates additional value for stakeholders. Website: www.talgagroup.com

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