Talga Presentation at Rho Motion's EV Battery Technology Seminar

Battery anode company Talga Group Ltd ("**Talga**" or "**the Company**")(**ASX:TLG**) is pleased to provide a copy of the presentation delivered by the Company's Managing Director, Mark Thompson, during Rho Motion's EV Battery Technology Seminar on 13th July 2021 at 4pm AWST (9am London).

The presentation is available on the Company's website via the link below:

http://www.talgagroup.com/irm/content/presentations.aspx?RID=301

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About Talga

Talga Group Ltd (ASX:TLG) is building a European battery anode and graphene additives supply chain, to offer advanced materials critical to its customers' innovation and the shift towards a more sustainable world. Vertical integration, including ownership of several high-grade Swedish graphite projects, provides security of supply and creates long-lasting value for stakeholders.

Company website: **www.talgagroup.com**

EV BATTERY ANODE TECHNOLOGY

Rho Motion Seminar

Mark Thompson, MD
Talga Group Ltd (ASX:TLG)

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Cautionary Statement and Disclaimer

Talga Group Ltd ACN 138 405 419 (the Company) is the issuer of this presentation.

Niska Scoping Study

The Niska Scoping Study is a preliminary technical and economic study of the potential viability of developing the Nunasvaara North, Niska South and Niska North graphite deposits by constructing an integrated mining and refining operation to produce Talga's anode products for Li-ion batteries. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves or to provide assurance of an economic development case. Further evaluation work and appropriate studies are required before the Company will be in a position to estimate any ore reserves or to provide any assurance of an economic development case or certainty that the conclusions of the Scoping Study will be realised. The Scoping Study is based on the material assumptions outlined in the announcement of 7 December 2020. These include assumptions about the availability of funding. While Talga considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved. To achieve the range of outcomes indicated in the Scoping Study, funding in the order of US$1,000 million plus contingencies may be required. Investors should note that there is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce the Company's proportionate ownership of the deposits covered by the Niska Scoping Study. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

The Company first reported the Niska Scoping Study production targets and forecast financial information referred to in this presentation in accordance with Listing Rules 5.16 and 5.17 in its announcement titled "Niska Scoping Study Outlines Pathway to Globally Significant Battery Anode Production" dated 7 December 2020. The Company confirms that all material assumptions underpinning those production targets and forecast financial information derived from those production targets continue to apply and have not materially changed.

Forward-looking statements

This presentation contains forward-looking statements. Those forward-looking statements reflect views held only as at the date of this presentation. Any such statement is subject to inherent risks and uncertainties. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement, and such deviations are both normal and to be expected. Recipients must make their own assessment about the likelihood of a matter, about which a forward-looking statement is made, occurring. The Company makes no representation about the likelihood of a matter, about which a forward-looking statement is made, occurring. The Company and its directors, employees, agents, advisers and consultants: give no representation or warranty to a recipient of this presentation as to the accuracy or completeness of the statements contained in this presentation or in relation to any other matter; and to the fullest extent permitted by law, disclaim responsibility for and have no liability to a recipient of this presentation for any error or omission in or for any statement in this presentation.

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Not a recommendation or financial advice

The information in this presentation is not a recommendation to subscribe for securities in the Company and does not constitute financial advice. Any person who intends to subscribe for securities must conduct their own investigations, assessment and analysis of the Company and its operations and prospects and must base their investment decision solely on those investigations and that assessment and analysis. Prospective investors should consult their own legal, accounting and financial advisers about an investment in the Company.

Photographs and images

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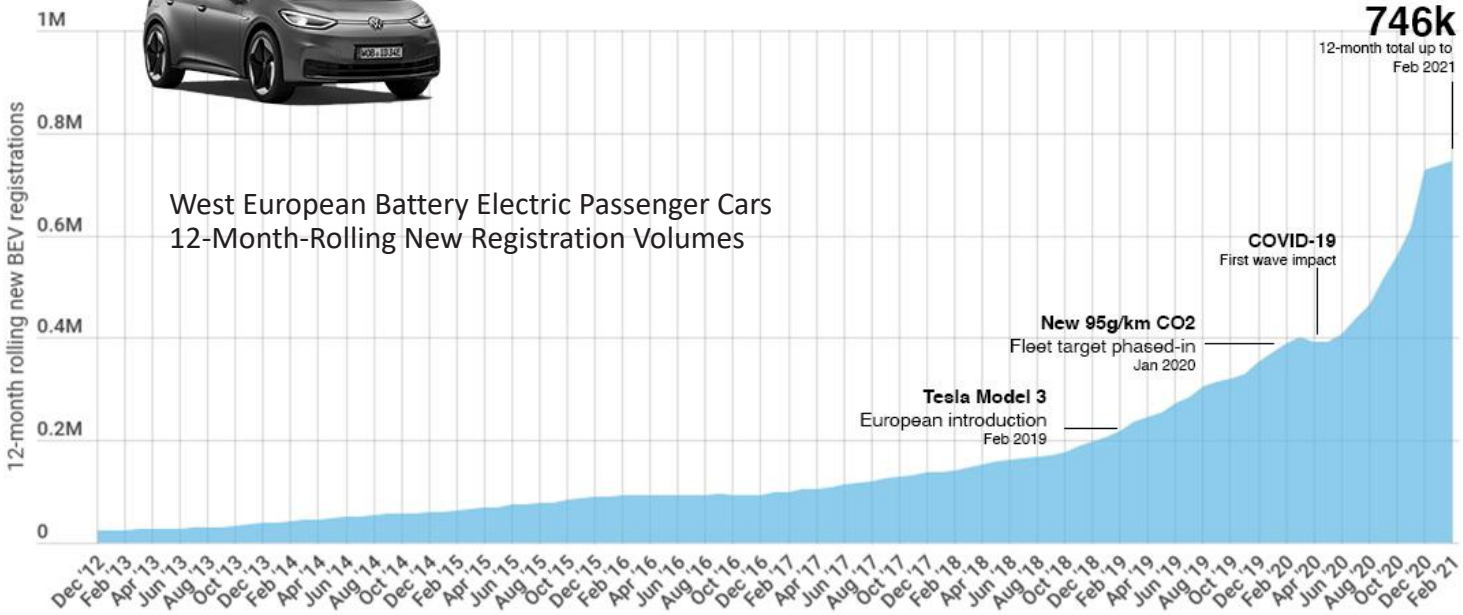
The data is in – EV sales taking off

EV sales have rapidly increased in spite of COVID-19 pandemic, showing change is underway



SOURCE: SCHMIDT AUTOMOTIVE RESEARCH - WESTERN EUROPE 18 MARKETS (FEB 2021).

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Battery Manufacturers Respond

northvolt	**Germany, 2024** 16 GWh, later 24 GWh
MORROW	**Norway, 2024** 8 GWh, later 32 GWh
CATL	**Germany, 2022** 14 GWh, later 100 GWh
Envision AESC	**United Kingdom, 2010** 2.5 GWh, later 14 GWh
BRITISHVOLT	**United Kingdom, 2023** 35 GWh
Leclanché Energy Storage Solutions	**Germany, 2020** 1 GWh, later 2.5 GWh
ACC AUTOMOTIVE CELLS Co	**Germany & France, 2023** 8 & 16 GWh, later 64 GWh
SVOLT 蜂巢能源	**Germany, 2023** 20 GWh, later 24 GWh
FAAM	**Italy, 2021** 300 MWh, later 2.5/3 GWh
Panasonic	**Norway, 202X** Capacity unknown
amte	**United Kingdom, 2023** 10 GWh, later 35 GWH
VERKOR	**France, 2023** 16 GWh, later 50GWh
ROSATOM	**Europe, 2025** 2 GWh
VARTA	**Germany, 2024** 10 Gwh

northvolt	**Sweden, 2021** 32 GWh, later 40 GWh
FREYR Renewable energy storage	**Norway, 2023** Ramp up to 40 GWh
InoBat	**Slovakia, 2024** 10 GWh
microvast	**Germany, 2021** 1.5 GWh, later 6 GWh
FARASIS	**Germany, 2022** 16 GWh
LG Chem	**Poland, 2018** 15 GWh, later 65 GWh
SK innovation	**Hungary, 2020** 10 GWh, later a second 30 GWh
SAMSUNG	**Hungary, 2018** 10 GWh, later 15 GWh
BYD	**Europe, 202X** Capacity unknown
TESLA	**Germany, 2021** Up to 100GWh
GS YUASA	**Hungary, 202X** Capacity unknown
CALB	**Europe, 202X** Up to 200 GWh
ITALVOLT	**Italy, 2024** 70 GWh

Europe total capacity ~ 613 GWh

SOURCE: CIC energiGUNE, APR 2021 AND PUBLIC SOURCES, JUL 2021.

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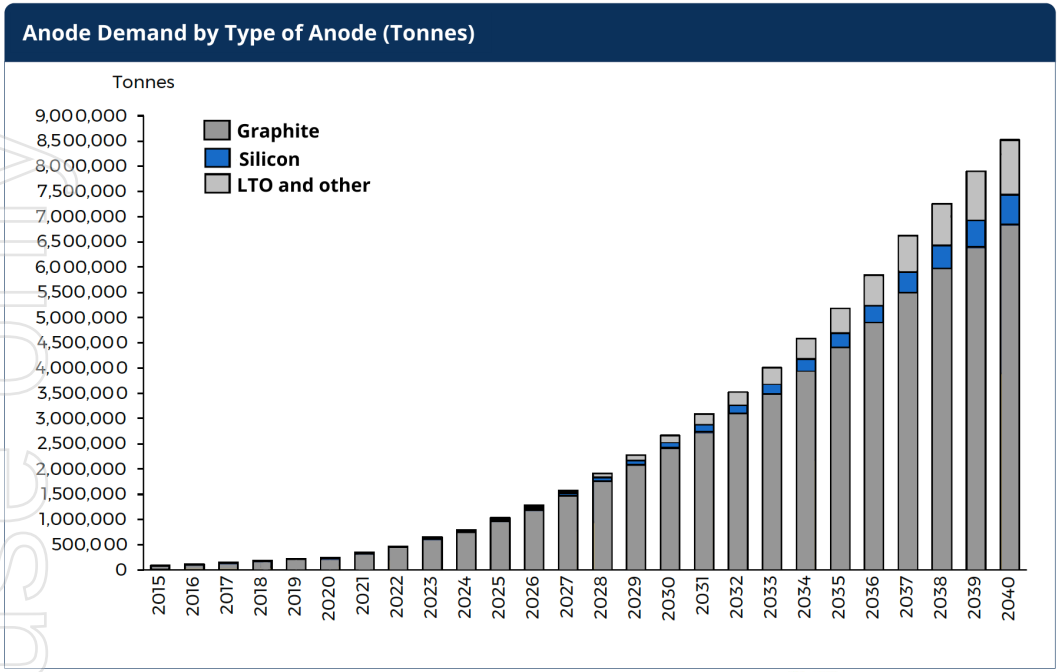
Graphite Demand Driven by Anode



- Industry forecasts show strong demand for graphite as an anode product, dominating volumes for decades
- While currently split 50:50, natural graphite anode is expected to increase market share due to its favourable environmental footprint as cost of synthetic feedstock increases and OEMs become increasingly focused on the environmental footprint of the supply chain
- Silicon will largely be used as an additive to graphite-dominant anode blends
- New technologies are expected to take time to commercialise and will see limited mainstream uptake until the mid-2020s, but more likely beyond 2030 (solid state)

SOURCE: ADAPTED FROM BENCHMARK MINERAL INTELLIGENCE, TALGA - MARKET EVALUATION FOR GRAPHITE, MAY 2021.

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VITTANGI GRAPHITE PROJECT ORE

Greener Batteries

Production of the greenest lithium-ion batteries would use anode made with:

- **Responsibly extracted natural graphite**
  - not oil or coal-based synthetic graphite
- **100% sustainable electricity processing**
  - not fossil fuel-powered production
- **Locally produced materials**
  - shortest and strongest supply chain

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Talga Group

Talga is a **clean technology and materials company**, building projects to produce innovative graphitic products for greener batteries and consumer materials

Full in-house technology capability with 100% controlled mine-to-product supply (vertically integrated)

Talnode® range of anode products developed and piloted since 2018

Under the Company's initial major development, the **Vittangi Anode Project**, a DFS outlines 19,500tpa coated anode production in Sweden

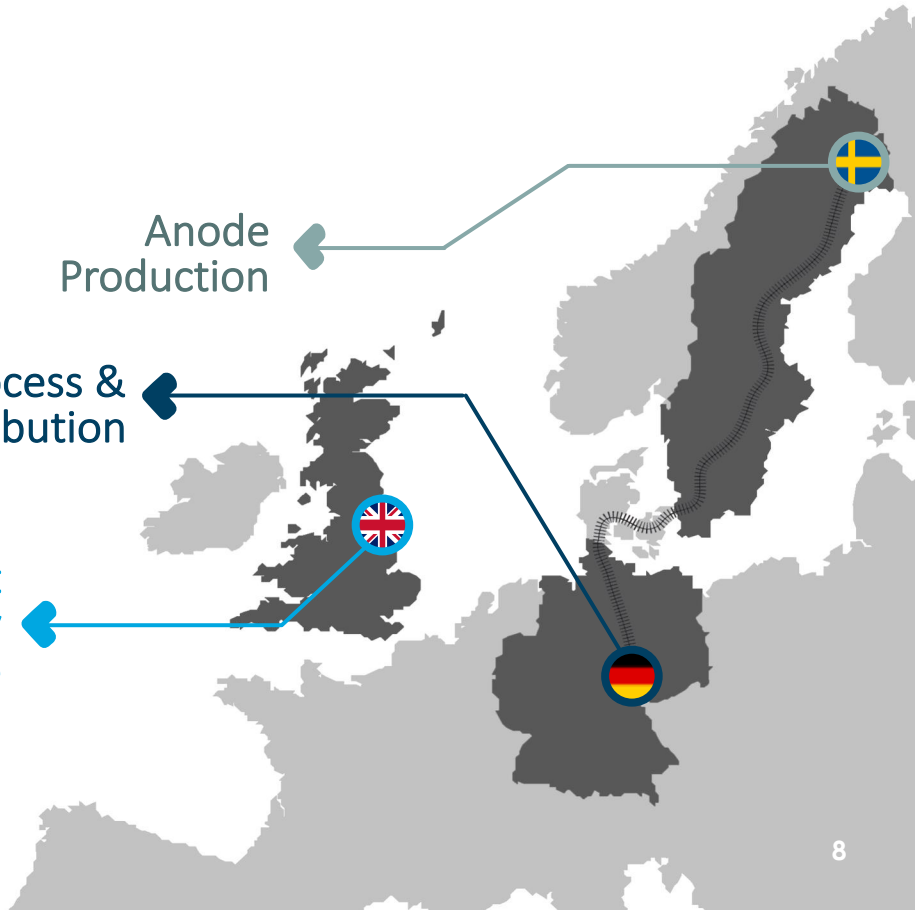
Further developments in expansion options and other products across multiple battery components under way

SEE: ASX:TLG 7 DEC 2020 and 1 JUL 2021. NOTE: TALGA CONFIRMS ALL MATERIAL ASSUMPTIONS UNDERPINNING THE PRODUCTION TARGET AND CORRESPONDING FINANCIAL INFORMATION CONTINUE TO APPLY AND HAVE NOT MATERIALLY CHANGED AS PER LISTING RULE 5.19.2.

Talga Operations

100% controlled supply chain

- **Talga Sweden**
  Integrated graphite mine
  & anode production
- **Talga Germany**
  Metallurgical process pilot facility & EU customer network
- **Talga UK**
  Battery anode product & technology centre in Cambridge
- **Talga Japan**
  Commercial office & product development
- **Talga Australia**
  Corporate head office



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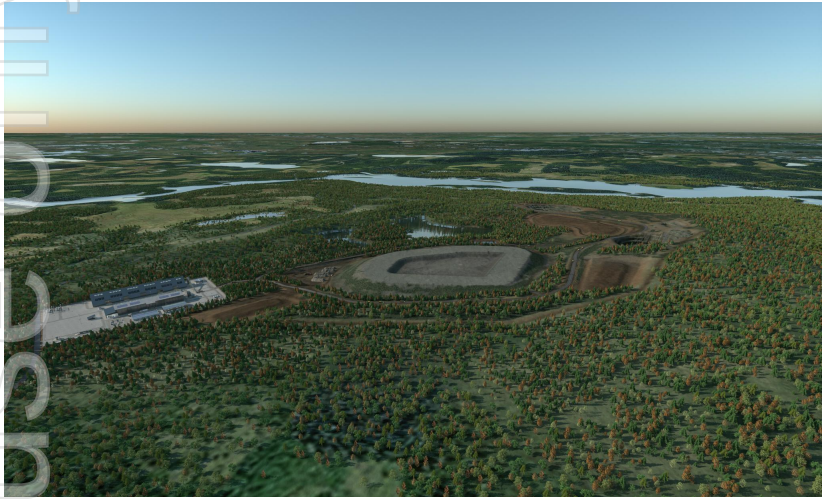
Talga's Vittangi Project Sweden

Vertically integrated mine-to-anode production

Detailed Feasibility Study completed for Talnode®-C shows robust economics including LOM EBITDA US$4,081 million on 19,500tpa coated anode starting 2024 with **additional expansion options**



Vittangi Mining Operation

Luleå Anode Refinery

*Artist schematic illustrations

SEE: ASX:TLG 7 DEC and 1 JUL 2021 NOTE: TALGA CONFIRMS ALL MATERIAL ASSUMPTIONS UNDERPINNING THE PRODUCTION TARGET AND CORRESPONDING FINANCIAL INFORMATION CONTINUE TO APPLY AND HAVE NOT MATERIALLY CHANGED AS PER LISTING RULE 5.19.2.

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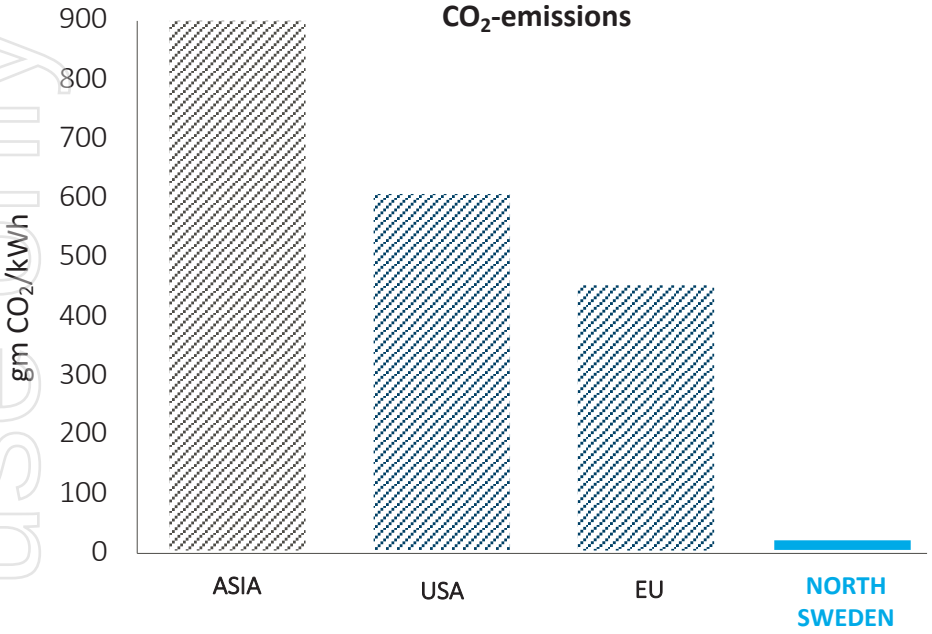
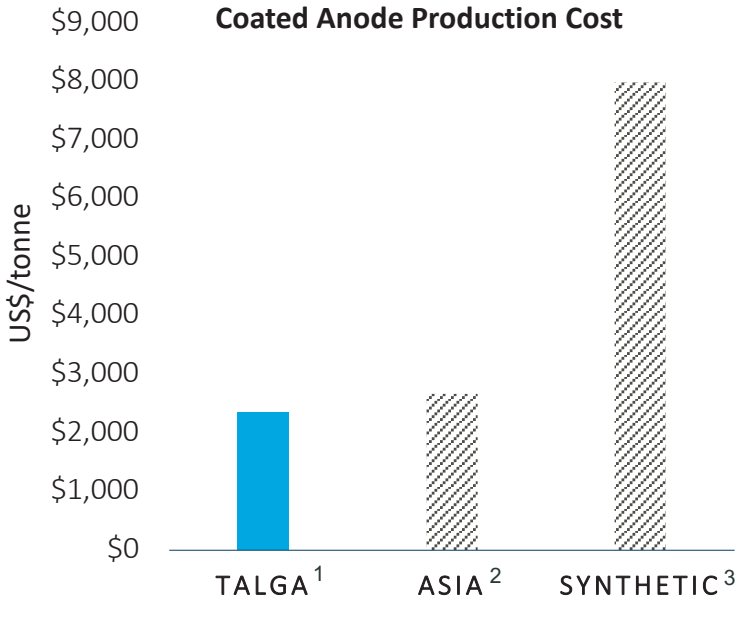
For Talga it Pays to be Green

The same factors that make Talga cost competitive also drive lower emissions





SOURCE: NODE POLE, BASED ON EUROSTAT AND EEA DATA. SEE: (1) ASX:TLG 1 JUL 2021. SOURCE: (2) BENCHMARK MINERAL INTELLIGENCE PRESENTATION: 'CHINA' REFERS TO COATED NATURAL GRAPHITE ANODE PRODUCED IN CHINA, BASED ON BULK SALES AND MID-POINT AVERAGE COSTS AS OF H1 2018. (3) RECRUIT REPORT: 'SYNTETHIC' REFERS TO COATED ANODE MADE FROM SYNTHETIC GRAPHITE SOURCE e.g. NEEDLE COKE.

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Talnode®-C

Talga's flagship green graphite anode product

Talga has developed premium coated natural graphite anode product with high ionic diffusivity leading to:

- *Low internal resistance*
- *Easier thermal management*
- *Fast charge*
- *High power*
- *Excellent low temperature performance*

Talnode®-C is currently undergoing qualification processes with numerous battery manufacturers and auto OEMs towards commercial supply agreements

SEE: ASX:TLG 21 MAR, 26 MAR 2019, 17 JUL 2020 and 1 JUL 2021.

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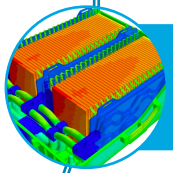
Talnode®-C properties

Provides a range of class-leading attributes

Low temperature performance for quicker start, better charging and greater range

High power, faster acceleration for E-bikes, motorbikes, drones and power tools



Reduced heat generation for cheaper thermal management and lower cost

Fast Charge Performance for reduced charge time (capacity is retained)

SEE: ASX:TLG 21 MAR, 26 MAR 2019, 17 JUL 2020 and 1 JUL 2021.

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Talnode®-Si silicon anode

Talga design strategy for silicon composite anode

Silicon anode design strategy **starting 2018** under UK Government funded Talga-led program with **Johnson Matthey**, the **University of Cambridge** and manufacturing research group, **TWI**

Targeted gains in energy density sought by **customers battery roadmaps** rather than **theoretical maximums**

Particle design enables a range of loadings in existing commercial anode blends **without re-tooling, avoiding pre-lithiation and using existing commercial electrolytes**

Particle design to enable **high volume production process** and off-the-shelf equipment. **Metallurgical silicon** base used to lower costs and expand potential strategic sources

Talga Vittangi drillcore on Talnode®-Si silicon source material

SEE: ASX:TLG 19 FEB 2019 and 14 OCT 2020.

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Talnode®-Si

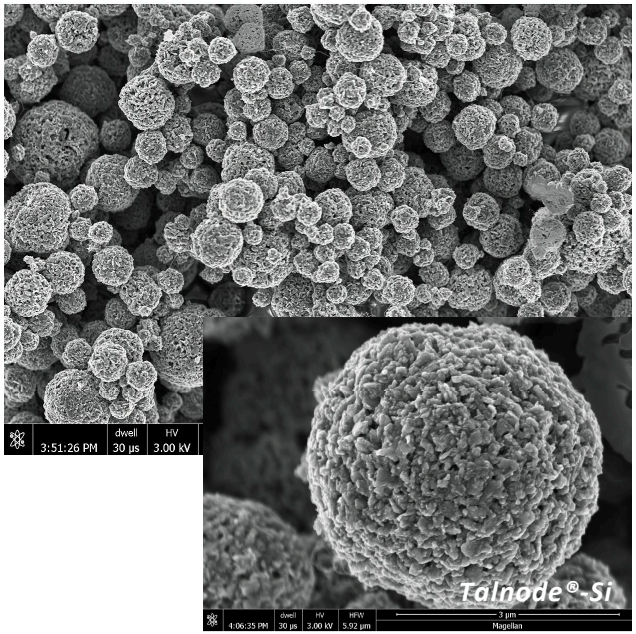
Talnode®-Si is a graphene silicon composite electrode additive with ~30-50%Wt silicon

Talga's graphene additives and production technology enables silicon-loaded anodes to stabilize/not pulverise

Graphene and graphite components of Talnode®-Si can be produced as byproduct from Talga's Talnode®-C process

Graphene works in various modes including protective coatings and nano-structures to control pulverization issues, retain kinetics and moderate SEI formation

Customer testing and piloting underway and feasibility studies on UK production options completed and being further investigated



SEE: ASX:TLG 19 FEB 2019, 5 AUG, 14 OCT and 4 NOV 2020.

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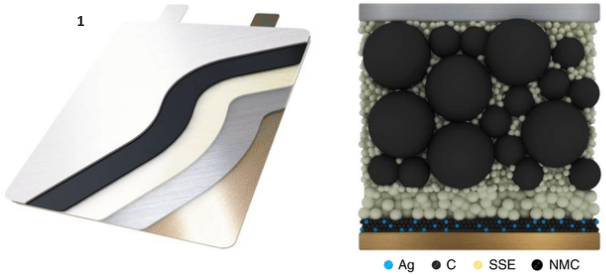
Next Generation Technology

Talnode®-E (solid state battery)

- Solid state batteries suffer a range of technical and commercial issues, particularly for larger applications (EVs)
- Talga is developing a graphitic-metal composite for easier processability, safer handling, scalable industrial manufacturing and lower costs to make solid state work



Motor and Drivetrains

- Talga is developing graphitic materials to deliver the ultimate single unit e-axle solution designed specifically to meet Bentley Motors performance specifications via optimised electronics technology and materials
- Talga's graphene materials aim to deliver an aluminium-based solution aimed at replacing the copper windings currently used

(1) SCHEMATIC OF ALL SOLID STATE BATTERY WITH CARBON NANOCOMPOSITE ANODE LAYER THAT DOES NOT REQUIRE EXCESS LITHIUM. LEE ET AL (SAMSUNG) HIGH-ENERGY LONG-CYCLING ALL-SOLID-STATE LITHIUM METAL BATTERIES ENABLED BY SILVER–CARBON COMPOSITE ANODES 9 MAR 2020. SEE: ASX:TLG 2 OCT 2019 and 13 MAY 2020.

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Talga partnerships for a greener future

Working with respected battery customers and technology and development partners

SEE: ASX:TLG 30 OCT 2015 and 5 FEB, 26 MAR, 4 SEP 2018 and 15 JAN, 2 OCT, 8 OCT, 24 OCT 2019 and 31 JAN, 20 MAR, 13 MAY, 27 MAY, 24 JUNE, 2 NOV, 24 NOV 2020 and 22 JUN, 28 JUN 2021.

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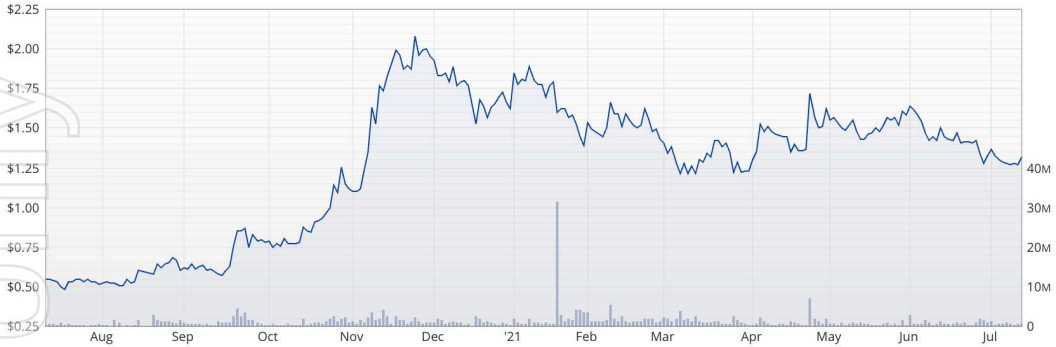
Corporate Overview

ASX:TLG PERFORMANCE (12 MONTHS)



STOCKMARKET CODES/TICKERS

Primary listing in Australia on the ASX (TLG)
with OTC trading in Germany (TGX) and US (TLGRF)

CAPITAL STRUCTURE

ASX Listing Code:	TLG
Market Capitalisation:	$385.1M
Listed Shares:	303.2M
Unlisted Options:	13.4M (1)
Cash as at 31 March 2021:	$58.4M

MAJOR SHAREHOLDERS

Mark Thompson – M. Director	4.7%
Kinetic Investment Partners	4.5%
UBS AG	2.9%
UBS Securities Australia	2.4%
Yandal Investment Pty	1.6%
TOP 20 SHAREHOLDERS	**31.3%**
Total number of shareholders	10,576

NOTE: MARKET CAPITALISATION AS AT 12 JUL 2021, SHAREHOLDERS AS AT 28 APR 2021.
(1) UNLISTED OPTIONS INCLUDE PERFORMANCE RIGHTS SUBJECT TO VESTING CONDITIONS.

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Building the Solution

DFS completed for mine-refinery in north Sweden to produce **19,500tpa coated anode (Talnode®-C) starting 2024** with refinery feedstock from **Talga's wholly owned Vittangi graphite project** - permitting underway

Additional 85,000tpa production scoped to expand to **total >100,000tpa**

LKAB and Mitsui have signed LOI for potential joint venture and development partnership

Feasibility studies completed on UK expansion opportunities for Talnode®-C and Talnode®-Si

Updates on a range of **commercial developments** and **product technologies** towards greener battery production

SEE: ASX:TLG 1 JUL 2021, 28 JUN 2021, 4 NOV 2020 and 7 DEC 2020. NOTE: TALGA CONFIRMS ALL MATERIAL ASSUMPTIONS UNDERPINNING THE PRODUCTION TARGET AND CORRESPONDING FINANCIAL INFORMATION CONTINUE TO APPLY AND HAVE NOT MATERIALLY CHANGED AS PER LISTING RULE 5.19.2. PLEASE REFER TO THE CAUTIONARY STATEMENT IN RESPECT OF THE NISKA SCOPING STUDY.

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Talga Japan: Takatsuki, 569-1046, Osaka, Japan

JORC Graphite Reserve & Resources

Ore Reserve [3, 6]	Tonnes	Graphite (% Cg)
Nunasvaara (JORC 2012)	**2,260,140**	**24.1**
Proven	0	0
Probable	2,260,140	24.1

Mineral Resources [1, 2, 4, 5, 7, 8, 9]	Tonnes	Graphite (% Cg)
Vittangi Nunasvaara (JORC 2012)	**14,900,000**	**23.4**
Indicated	10,400,000	25.6
Inferred	4,500,000	18.3
Vittangi Niska (JORC 2012)	**4,600,000**	**25.8**
Indicated	4,600,000	25.8
Jalkunen (JORC 2012)	**31,500,000**	**14.9**
Inferred	31,500,000	14.9
Raitajärvi (JORC 2004)	**4,300,000**	**7.1**
Indicated	3,400,000	7.3
Inferred	900,000	6.4
Total Mineral Resources	**55,300,000**	**17.5**

NOTE: [1] MINERAL RESOURCES ARE INCLUSIVE OF ORE RESERVES.
[2] MINERAL RESOURCES ARE REPORTED AT VARIOUS CUT OFF GRADES: NUNASVAARA AND NISKA 10%Cg, JALKUNEN 5%Cg AND RAITAJÄRVI 5%Cg.
[3] ORE RESERVE IS REPORTED AT A CUT OFF GRADE OF 12%Cg.
[4] ERRORS MAY EXIST DUE TO ROUNDING.

SEE: ASX:TLG (5) 17 SEP 2020, (6) 1 JUL 2021, (7) 15 OCT 2019, (8) 27 AUG 2015 AND (9) 26 AUG 2013.

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Competent Person Statements

The Niska Mineral Resource estimate was first reported in the Company's announcement dated 15 October 2019 titled 'Talga boosts Swedish graphite project with maiden Niska resource'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Nunasvaara Mineral Resource estimate was first reported in the Company's announcement dated 17 September 2020 titled 'Talga Boosts European Natural Graphite Resources'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Nunasvaara Ore Reserve statement was reported in the Company's announcement dated 1 July 2021 titled 'Robust Vittangi Anode Project DFS'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Reserve estimate in the previous market announcement continue to apply and have not materially changed.

The Jalkunen Mineral Resource estimate was first reported in the Company's announcement dated 27 August 2015 titled 'Talga Trebles Total Graphite Resource to Global Scale'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Raitajärvi Mineral Resource estimate was first reported in the Company's announcement dated 26 August 2013 titled '500% Increase to 307,300 Tonnes Contained Graphite in New Resource Upgrade for Talga's Swedish Project'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Company first reported the production targets and forecast financial information referred to in this presentation in accordance with Listing Rules 5.16 and 5.17 in its announcement titled 'Robust Vittangi Anode Project DFS' dated 1 July 2021. The Company confirms that all material assumptions underpinning those production targets and forecast financial information derived from those production targets continue to apply and have not materially changed.

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