### 2020 Annual General Meeting

### **Talga Resources Ltd**



© TALGA RESOURCES LTD, ANNUAL GENERAL MEETING, 12 NOVEMBER 2020

Talga (ASX:TLG)

A highly integrated producer of advanced battery anode materials and graphene additives

Building a European supply chain of advanced materials critical to our customers' innovation and the shift towards a more sustainable world

Vertical integration with 100% ownership of mineral resources, processing and product provides security of supply for customers and creates long-lasting value for stakeholders

Our strong in-house expertise spans mineral exploration and development, processing technology, product R&D and marketing



### **Corporate Overview**

### ASX:TLG SHARE PRICE (YEAR TO DATE)





### SHAREHOLDERS

- Board & Management
- Smedvig
- European Investors
- Other

### **CAPITAL STRUCTURE**

ASX Listing Code:	TLG
Market Capitalisation:	\$469M
Listed Shares:	265.1M
Unlisted Options:	7.0M
Cash:	\$12.6M

### **MAJOR SHAREHOLDERS**

Smedvig – Family Office	9.7%
JP Morgan Nominees	8.8%
Mark Thompson – M. Director	5.4%
Citicorp Nominees	4.4%
BNP Paribas	3.9%
Pelmer Securities	3.5%
TOP 20 SHAREHOLDERS	52.5%

### **Our Journey So Far**

- 2010 Talga founded by Mark Thompson and listed on ASX (code *TLG*)
- 2011 Acquires first graphite permits in Sweden
- **2012** Acquires Teck subsidiary to gain control of Vittangi graphite project. Drills out world's highest grade JORC graphite resource
- 2014 Develops breakthrough graphene electrochemical process
- **2015** Trial mining starts in Sweden and German pilot processing facility comes online. Trial mine expanded in 2016
- 2017 Product development division established in Cambridge, UK
- 2018 Breakthrough battery anode results and start of Talnode® range
- **2019** Vittangi Anode Project PFS shows outstanding economics >US\$1B NPV
- 2020 Talnode<sup>®</sup>-C progressing through >36 battery customer engagements including 6 global auto OEMs. Graphite mineral resources increased to >50Mt. Mitsui and LKAB sign LOI on project development.



### **Europe Operations**

European-based 100% controlled supply chain to serve global markets





## **In-house Expertise**

Deep industry knowledge enables direct commercial customer relationships and competitive advantage

Talga develops high performance Lithium-ion battery anodes and graphene additives using its unique:

- natural carbon source
- processing technology
- in-house product technology

Growing team of over 20 material scientists and engineers with energy product experience including ex-Toyota, Tata, Dyson and Cambridge University alumni and advanced material patent holders.



## **Graphene Additives**

Functionalised fit-for-purpose graphene additives targeting global large volume applications with performance and sustainability as key drivers

Talga's graphene (Talphene<sup>®</sup>) products continue commercialisation in a multitude of applications

## *Emerging market for graphene in batteries, including silicon anode composites and cathode additives*

Route defined to produce graphene for Talnode<sup>®</sup>-Si from Talnode<sup>®</sup>-C anode process

Talphene<sup>®</sup> production expansion to progress in step with commercial demands and contracts. Talnode<sup>®</sup>-Si graphene to be included in Niska scoping study.

### **Anode Products**

Well positioned for future growth with current and new anode technologies

- Strong range of anode products designed to position Talga ahead of evolving market demands
- Positioned to capitalise on expansion of multiple technologies which will command premiums



### **Growing Partnerships**

Talga's unique assets and commercial potential attracts reputable industry partnerships



## **2020 Strong Performance**

Delivering milestones and advancing towards higher value



#### ASX:TLG SHARE PRICE (A\$/SHARE)

- ✓ 25,000t trial mine permit approved
- ✓ 100,000tpa mine permits submitted
- ✓ 19,000tpa anode DFS commenced
- ✓ LOI signed with LKAB and Mitsui
- ✓ 15% increase in Vittangi graphite resource
- ✓ Expansion options/Niska Scoping Study underway
- ✓ Fast-tracking of mass producible silicon anode
- ✓ Support from UK Government for UK anode

## EV sales set to grow 700% by 2030

Long-heralded shift to Electric Vehicles underway, driving new demand for Li-ion batteries

EV sales by company





## **Battery Material Demand**

Graphite is the largest volume active material in Li-ion battery



- EV demand and legislative pressure on internal combustion engines creating huge new demand for battery materials on top of rebounding industrial demand
- There is ~10x graphite than lithium in a Li-ion battery
- ~3.2 million tonnes graphite anode required by 2029, up from ~600 thousand tonnes today

## **EU: Fastest Growing Battery Market**

🛞 northvolt	<b>Germany, 2024</b> 16 GWh, later 24 GWh	Sweden, 2021 32 GWh, later 40 GWh	northvolt
MORHOW	<b>Norway, 2024</b> 8GWh, later 32 GWh	Norway, 2023 Ramp up to 32 GWh + 2 GWh	
CATL	<b>Germany, 2022</b> 14 GWh, later 100 GWh	Slovakia, 2024 10 GWh	īnoBat
	<b>United Kingdom, 2010</b> 2.5 GWh	Germany, 2021 Ramp up to 8-12 GWh	microvast
amte	<b>United Kingdom, 2023</b> 10 GWh, later 35	Germany, 2022 16 GWh	<b>EARASIS</b>
Energy Storage Solutions	<b>Germany, 2020</b> 1 GWh	Poland, 2018 15 GWh, later 65 GWh	🕒 LG
	Germany & France, 2022 16 GWh, later 64 GWh	Hungary, 2020 7.5 GWh, later 23.5 GWh	SK innovation
SVOLT 蜂巢能源	<b>Germany, 2023</b> 20 GWh, later 24 GWh	Hungary, 2018 3 GWh, later 15 GWh	SAMSUNG
	<b>Germany, 202X</b> 4 GWh, later 8 GWh	Europe, 202X Capacity unknown	BYD
<b>?</b>	<b>Germany, 202X</b> Capacity unknown		



# **Battery Opportunity**

Build a new anode supply chain outside of Asia to serve the European and North American markets

Production of the most sustainable and lowest-cost anode for Li-ion batteries would use:

- natural graphite (not synthetic)
- sustainable electricity
- locally produced (not imported)

"We prefer separator and anode segments over other segments in EV battery value chain due to 1) concentrated supply structure, 2) high technical entry barrier, and 3) customized feature of products"

Morgan Stanley Equity Research

### **Building the Solution**

Talga is building a wholly owned fully integrated anode supply chain in Sweden with development of its anode refinery fed by graphite from Talga's Vittangi project

Planned **19,000tpa of anode production for 22 years** from 2023 following Electric Vehicle Anode (EVA) pilot plant in 2021

PFS shows strong financial potential with pre-tax **annual revenue of US\$188m and IRR 55%**. Life of mine net profit before tax is US\$3,133m and current **NPV<sub>8</sub> (real) is US\$1,056m** 

Expressions of interest received for >300% of planned capacity, so **expansion being scoped for significantly larger scale in near future** (ASX:TLG 24 Jun 2020 re Niska Scoping Study)

SEE: ASX:TLG 23 MAY 2019. 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



### **Project Advantage**

Vittangi Project has a range of inherent competitive advantages

- ✓ Highest grade graphite resource
- ✓ 100% anode flake (no industrial products)
- ✓ Exceptional anode yield (90%+)
- ✓ Located in Tier-1 investment jurisdiction
- ✓ Access to sustainable low-cost power
- ✓ Proximal to the European EV supply chain



SEE: ASX:TLG 23 MAY 2019 and JORC GRAPHITE RESOURCES AND RESERVES TABLES IN THE APPENDIX.

### **Low Cost and Low Emission Leader**

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



SOURCE: NODE POLE, BASED ON EUROSTAT AND EEA DATA. SEE: <sup>1</sup>ASX:TLG 23 MAY 2019. SOURCE: <sup>2</sup> 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. <sup>3</sup> RECRUIT REPORT: 'SYNTETHIC' REFERS TO COATED ANODE MADE FROM SYNTHETIC GRAPHITE SOURCE e.g. NEEDLE COKE.

### **Graphite Anode Moat**

Full in-house technology capability with 100% controlled deposit-to-product supply chain



High quality production using natural graphite from unique high grade graphite resource

+ Strong processing and in-house product technology to bridge battery anode moat and enter supply chain

*High barrier of entry for other new market participants* 

## **Anode Supply Chain**

Talga is an integrated battery material supplier comparable to chemical providers in EV value chain



SOURCE: RECRUIT, AVICIENNE. NOTE: SELECTED LI-ION SUPPLY CHAIN COMPANIES/NOT ALL MARKET PARTICIPANTS ILLUSTRATED. THE COMPANY CAUTIONS THAT IT IS NOT PRESENTLY PARTY TO SUPPLY AGREEMENTS WITH ALL THE PARTIES NAMED ABOVE. HOWEVER, ON THE BASIS OF THE COMPANY'S ENGAGEMENTS WITH THESE OR SIMILAR PARTIES, THE COMPANY CONSIDERS THAT IT HAS A REASONABLE BASIS FOR THE VIEW THAT IT CAN FILL THIS POSITION IN THE SUPPLY CHAIN. THE COMPANY CAUTIONS INVESTORS AGAINST APPLYING UNDUE WEIGHT ON THE ABOVE.



## **Talga Growth Strategy**

Growing in line with our target market and our customers

### 2023 **COMMERCIAL**

- European megafactories online -
- Nunasvaara South production
- 19,000tpa refinery anode capacity
- Niska expansion permits & development

- 2020-22 DEVELOPMENT
  - EVA Plant -
  - Talnode<sup>®</sup>-C qualification
  - Secure mining permits \_
  - Project partnerships, finance & purchase agreements -

### European megafactory growth

2025

**EXPANSION** 

- Niska expansion
- Next generation anodes

## **Significant Recent Developments**

LOI with LKAB & Mitsui for Swedish project development, plus UK feasibility government support



E92 million investment places automotive industry at centre of green recovery

£92 million investment places automotive industry at centre of green recovery £49 million uplift drives automotive industry towards green future

Government awards funding to low carbon automotive projects across the UK.

Published 3 November 2020 From: <u>Department for Business, Energy & Industrial Strategy</u>, <u>Department for</u> <u>Transport</u>, <u>Nadhim Zahawi MP</u>, and <u>Rachel Maclean MP</u>





PRESS RELEASE Date: 02/11/2020

1 (2)

Talga, Mitsui and LKAB confirm intent for joint development of the Vittangi graphite mine and battery anode production

Talga, Mitsui and LKAB have signed a non-binding Letter of Intent (LOI), with the intent to jointly develop the Talga project to realisation, after delivery of a Detailed Feasibility Study in 2021.

Talga is the 100% owner of the Vittangi graphite project and proprietary technology for anode battery production. Permit applications for the graphite mine was filed in May 2020. Milsu is one of the largest global trading and investment companies whose global headquarters are in Japan with subsidiaries globally, including Mitsui Europe.

 The Advanced Propulsion Centre (APC) welcomes £92 million commitment to 49 innovative automotive projects in the latest round of Government funding Funding is across three streams which includes a fast-start recovery competition and an Automotive Transformation Fund accelerating delivery on net-zero targets

• Support will accelerate decarbonisation of the automotive sector and the realisation of a net-zero ambition

LKAB PHOTO CREDIT: FREDRIC ALM/LKAB SOURCES: www.apcuk.co.uk/news/apc-funding-announcement-nov20/, www.gov.uk/government/news/49-million-uplift-drives-automotive-industry-towardsgreen-future and www.lkab.com/en/news-room/press-releases/talga-mitsui-and-lkab-confirm-intent-for-joint-development-of-the-vittangi-graphite-mine-and-battery-anode-production/?aid=16447

## **Looking Ahead**

Potential near to medium term catalysts

- Release of Niska (expansion) scoping study
- Mine and refinery Approvals
- Funding for full-scale development
- Off-take and commercial partnerships with key customers
- > JVs for project development and Talnode commercialisation
- Release of Nunasvaara South DFS
- Construction of EVA plant and production scale-up
- > Talnode-C and Talnode-Si UK feasibility studies



# A Greener (Battery) Future

Talga is building a responsible and globally competitive anode production business in Europe

### Disclaimer

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

#### **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 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.

#### **Reliance on presentation**

A recipient of this presentation must make their own assessment of the matters contained herein and rely on their own investigations and judgment in making an investment in the Company. This presentation does not purport to contain all of the information required to make an informed decision whether to invest in the Company. Specifically, this presentation does not purport to contain all the information that investors and their professional advisers would reasonably require to make an informed assessment of the Company's assets and liabilities, financial position and performance, profits, losses and prospects.

#### 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**

Photographs, maps, charts, diagrams and schematic drawings in this presentation are owned by and have been prepared or commissioned by the Company, unless otherwise stated. Maps and diagrams used are illustrative only and may not be drawn to scale. Unless stated otherwise, all data contained in charts, graphs and tables is based on information available at the date of this presentation.

#### Authorisation

This presentation is authorised for release by the Board of Directors.

### TALGA RESOURCES LTD ASX Code: TLG

Head Office: 1st Floor, 2 Richardson Street, West Perth WA 6005, Australia

Phone: +61 8 9481 6667 Email: info@talgagroup.com Website: www.talgagroup.com



#### **GLOBAL OPERATIONS**

Talga Sweden: Vänortvägen 2, 981 32 Kiruna, Sweden Talga Sweden: Storgatan 7, 972 38 Luleå, Sweden Talga UK: The Bradfield Centre, 184 Cambridge Science Park, Cambridge CB4 0FQ, UK Talga Germany: Prof.-Hermann-Klare-Str. 25, 07407 Rudolstadt, Germany Talga Japan: Takatsuki, 569-1046, Osaka, Japan





### **Board of Directors**

Substantial commercialisation experience across resource, innovation and development projects



**Terry Stinson** Non-Executive Chairman

Over 35 years' Executive and Non-Executive Director experience, working for global innovation companies across a range of industry segments

A proven track record of forming and leading international business collaborations and joint ventures.

Formerly the CEO and Managing Director of Orbital Corporation, VP for Global Fuel Systems at Siemens AG and CEO of Synerject.

Currently the Non-Executive Chairman of Carnegie Clean Energy Limited and Non-Executive Director of Aurora Labs.



Over 30 years' global experience in the mineral industry including resource project development. technology and management

Founded Talga in 2009 and listed the company on the Australia Securities Exchange in mid 2010.

A member of the Australian Institute of Geoscientists and the Society of Economic Geologists.

Previously founded and served on the Board of ASX listed Catalyst Metals Limited.

Mark Thompson Managing Director & Founder

Director Strong corporate advisory

background with extensive experience in equity capital markets, corporate governance and M&A transactions

A member of the Institute of Chartered Accountants in Australia.

Currently the Non-Executive Director of several ASX listed companies including Carnegie Clean Energy Limited, Aurora Labs Limited and mineral resources companies Barra Resources Limited, Riedel Resources Limited. Accelerate Resources Limited and Gibb River Diamonds Limited.



Steve Lowe Non-Executive Director

Strong business management and taxation background with more than 20 years' experience consulting to corporate and high wealth clients

Holds a Bachelor of Business and a Masters of Taxation from the UNSW.

A Fellow of the Taxation Institute of Australia and a member of the Australian Institute of Company Directors.

Currently a Non-Executive Director of Coziron Resources Ltd.



**Ola Rinnan** Non-Executive Director

Extensive commercialisation and leadership experience across the energy, banking and finance sectors

Has held numerous board positions for European listed companies and financial institutions including Non-**Executive Directorships in Smedvig** group companies and DFCU Bank.

Formerly the Chairman of Avinor AS, CEO at Eidsiva Energi AS, CEO at Norgeskreditt AS and CFO for Moelven Industrier AS

Currently the Chairman of Nordavind DC Sites AS. Hamar Media AS, Espern Eiendom AS and Gravdahl AS.

### **Year In Review**

- Completion of strongly supported Share Purchase Plan (<u>13 December 2019</u>)
- Second commercial scale graphene coating trial (<u>17 December 2019</u>)
- Successful 60 tonne pilot flotation program (<u>30 January 2020</u>)
- Environmental approval received for Talga trial mine (<u>3 March 2020</u>)
- Talga & Mitsui execute MOU for joint anode project development (<u>20 March 2020</u>)
- Talga COVID-19 operational update (<u>2 April 2020</u>)
- Talga in Innovate UK electric drive project for Bentley Motors E-Axle (13 May 2020)
- Battery anode agreement with Farasis Energy (<u>27 May 2020</u>)

### **Year In Review**

- Vittangi project supported by Swedish National Interest demarcation (<u>18 June 2020</u>)
- Talga looks to expand battery anode production capacity (<u>24 June 2020</u>)
- Talga Board changes (<u>17 July 2020</u>)
- Outstanding feasibility work and studies results (<u>5 August 2020</u>)
- A\$10M institutional placement strengthens balance sheet (<u>20 August 2020</u>)
- Sale of Western Australian gold royalties (28 August 2020)
- > Talga boosts European natural graphite resources (<u>17 September 2020</u>)
- Talga fast-tracks mass-producible silicon anode product (<u>14 October 2020</u>)

### **Year In Review**

- Talga appoints CEO of European operations (<u>19 October 2020</u>)
- LKAB, Mitsui & Talga confirm intent to jointly develop anode project (<u>2 November 2020</u>)
- Government supports Talga UK anode refinery study (<u>4 November 2020</u>)
- > Talga silicon anode receives UK Government support (<u>4 November 2020</u>)

### **Project Development Timeline**

Trial mine approved and full scale mining applications submitted for 2023 production



## **PFS Key Outcomes**

### Confirms technically and financially robust project

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	100,000
Average annual production of Talnode <sup>®</sup> -C	tonnes	19,000
Life of Mine (LOM)	years	22
Pre-tax NPV <sub>8</sub> (real)	\$M	\$1,056
Pre-tax IRR	%	55%
Сарех	\$M	\$174
Payback	years	1.5
Talnode®-C average price	\$/t product	\$11,250
Revenue (LOM)	\$M	\$4,148
Cash cost of production of Talnode <sup>®</sup> -C	\$/t product	\$1,852
EBITDA (LOM)	\$M	\$3,254
Net profit before tax (LOM)	\$M	\$3,133

NOTE: PFS STUDY DETAILS FOR THE VITTANGI GRAPHITE PROJECT, ESTIMATED KEY ECONOMIC OUTCOMES ALL IN USD. TALNODE®-C PRICE BASED ON BENCHMARK ASSESMENT REPORT. SEE: ASX:TLG 23 MAY 2019 and 5 AUGUST 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

## **JORC Graphite Reserve & Resources**

Ore Reserve <sup>3, 6</sup>	Tonnes	Graphite (% Cg)
Nunasvaara (JORC 2012)	1,935,000	23.5
Proven	0	0
Probable	1,935,000	23.5
4245700		
Mineral Resources <sup>1, 2, 4, 5, 7, 8, 9</sup>	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: <sup>1</sup> MINERAL RESOURCES ARE INCLUSIVE OF ORE RESERVES.

<sup>2</sup> MINERAL RESOURCES ARE REPORTED AT VARIOUS CUT OFF GRADES: NUNASVAARA AND NISKA 10%Cg, JALKUNEN 5%Cg AND RAITAJÄRVI 5%Cg.

<sup>3</sup> ORE RESERVE IS REPORTED AT A CUT OFF GRADE OF 12%Cg.

<sup>4</sup> ERRORS MAY EXIST DUE TO ROUNDING.

### **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 first reported in the Company's announcement dated 23 May 2019 titled 'Outstanding PFS results support Vittangi graphite development'. 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 'Outstanding PFS results support Vittangi graphite development' dated 23 May 2019. 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.