

Talga enters solid state battery race with anode technology under Innovate UK ‘Faraday’ Project

- **Talga to develop graphite-based anode for solid state batteries (Talnode®-E) under a consortium project co-funded by the UK’s innovation agency - Innovate UK**
- **The consortium partners Talga with multinational speciality chemicals and sustainable technologies company Johnson Matthey and leading battery research and development institute Sheffield University**
- **Talnode-E aims to replace metallic lithium anode in solid state batteries, enabling Talga growth across current and emerging battery markets**

Advanced battery anode materials and graphene additives provider Talga Resources Ltd (“**Talga**” or “**the Company**”) (**ASX:TLG**) is pleased to announce that its UK subsidiary, Talga Technologies Limited, has gained funding under the UK Government’s ISCF Faraday Battery Challenge (“Faraday”) initiative to develop Talga’s graphitic anode for solid state batteries.

Faraday represents a £246 million UK Government funding initiative for battery research, development and scale up of facilities to help create a new supply chain for battery production in the UK and income from battery technologies.

Introduction and Opportunity

Solid state batteries are an emerging form of rechargeable battery technology with potential to combine high energy and high power with improved safety. They work by using a solid state electrolyte made of polymer, ceramic or glass material instead of the (more flammable) liquid electrolyte of today’s lithium-ion (“Li-ion”) batteries.

A range of automotive manufacturers including Toyota, Volkswagen, Hyundai and BMW have declared their goal is to incorporate solid state batteries into their vehicles by 2025.

Other companies such as Dyson and Bosch are active in this space through various investments in start-ups. A report by IDTechEx predicts the solid-state battery market to be worth in excess of \$4bn by 2026.

Talga Anode Product

While solid state batteries are theoretically capable of very high performance, in practice they can suffer a range of technical and commercial issues that have hindered development, particularly for larger scale applications such as electric vehicles (“EV’s”). None of the solid state batteries reported to date exceed all of the performance and economic requirements of today’s best Li-ion batteries in EV’s.

A major bottleneck of solid state development is the anode, where the use of metallic lithium can cause a range of issues leading to slower charge/discharge characteristics, safety issues both within the battery and in mass production, and higher cost.

Talga aims to overcome these issues with a new high capacity graphitic carbon composite anode, Talnode-E, designed to have multiple advantages including faster charge and higher power, easier processability, safer handling, highly scalable industrial manufacturing and lower costs.



Faraday Project

The Faraday project titled “Cathodes, Anodes, and Solid-state Electrolytes for Lithium Ion Batteries” (CASE LIBs) aims to address the industrial and fundamental challenges of solid state batteries by bringing together Talga’s innovative technology arm at Cambridge, UK with Johnson Matthey, a multinational speciality chemicals and sustainable technologies company, and Sheffield University one of UKs leading battery materials groups.

The consortium partners have secured significant funding support under the ‘Innovation’ aspect of Faraday, to support the project. Talga shall receive a 70% reimbursement of its eligible costs, including salaries, consumables, equipment and contractor expenses.

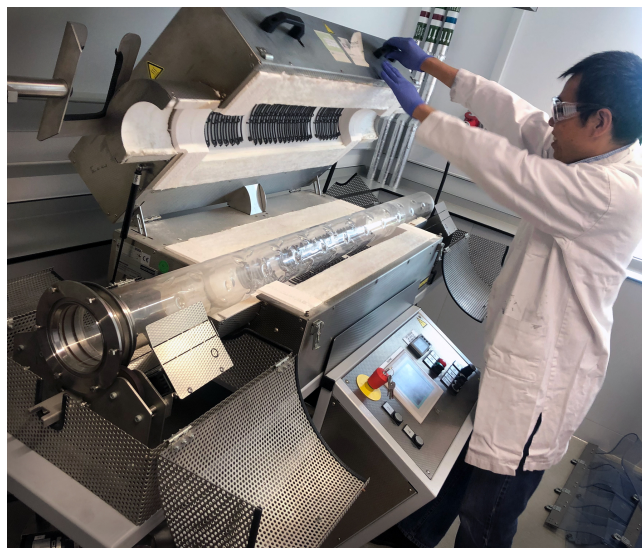


Figure 1 Talga Senior Battery Scientist, Dr Fengming Liu, working in the Company’s battery lab located at the Maxwell Centre, University of Cambridge, UK

Talga Managing Director, Mr Mark Thompson: *“Securing this grant and partnerships with both commercial and R&D partners is another solid step in Talga’s advancements as a battery material and technology supplier. This new anode product, Talnode-E, joins our range of advanced battery materials designed to provide leverage to current and emerging battery technologies, delivering ongoing opportunities for growth.*”

Again we are partnered with brand names in the battery supply chain, well funded and with access to state of the art facilities, having utilised our well-developed network of innovative energy storage technology and material companies from our technology centre in Cambridge, UK.

We are seeing increased customer demand for solid state batteries, and have attained non-disclosure agreements with leading electronic and automotive companies looking to test our anodes based on our 100% owned Swedish graphite supply.”

Next Steps

Now that the funding winners have been announced, joint development agreements between the consortium partners have been executed and project activities commenced, Talga will update the market at significant milestones and in conjunction with official newsflow from partners and the ISCF Faraday Battery Challenge and Innovate UK.

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About Talga

Talga Resources Ltd (ASX:TLG) is building a European source of advanced battery anode materials and graphene additives, to offer graphitic products 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. Joint development programs are underway with a range of international corporations. Company website: www.talgaresources.com

About Innovate UK

Innovate UK drives productivity and economic growth by supporting businesses to develop and realise the potential of new ideas. We connect businesses to the partners, customers and investors that can help them turn ideas into commercially successful products and services and business growth. We fund business and research collaborations to accelerate innovation and drive business investment into R&D. Our support is available to businesses across all economic sectors, value chains and UK regions. Innovate UK is part of UK Research and Innovation.

For more information visit: www.innovateuk.ukri.org

About the Industrial Strategy Challenge Fund (ISCF)

The Industrial Strategy Challenge Fund aims to bring together the UK's world leading research with business to meet the major industrial and societal challenges of our time. The fund was created to provide funding and support to UK businesses and researchers, part of the government's £4.7 billion increase in research and development over the next 4 years.

It was designed to ensure that research and innovation takes centre stage in the Government's Industrial Strategy and is run by Innovate UK and the Research Councils on behalf of UK Research and Innovation.

