

Written evidence from InoBat (BEV0037)

Business, Energy and Industrial Strategy Select Committee Call for Evidence: Batteries for Electric Vehicle Manufacturing

Introduction

InoBat is a European electric battery research, development and manufacturing company which has a portfolio of cells tailored for the underserved areas of the e-mobility market (performance and premium cars, bus and light commercial vehicles, off-highway vehicles, motorcycle and aviation). InoBat is close to completing an R&D centre and pilot production facility in Slovakia. The company intends to establish a Gigafactory in Western Europe to serve the growing demand from European OEMs and integrators, and has shortlisted sites in the UK and Spain. InoBat is able to provide a unique perspective on the points raised by the Select Committee through our experience of evaluating Gigafactory locations in multiple countries and building the associated value chain of supply partners and offtakers.

InoBat Perspectives Supporting the Call for Evidence

1. *Is there enough UK vehicle manufacturing demand in the UK to support gigafactories?*
 - a) InoBat has conducted an assessment of the e-mobility manufacturing demand that could be served from the UK which is based on data sources including The Faraday Institution (UK Gigafactory Outlook, June 2022) and IHS Markit (Energy Storage Device E-Mobility – Cars and LCV, April 2022), and our own view of offtake demand from our engagement with potential customers. All projections point towards sufficient demand in the UK to support an investment case for battery manufacturers who are able to serve the specific needs of the UK manufacturers. These projections are based on the assumption that (i) manufacturers will continue to operate their existing facilities in the UK; (ii) emerging manufacturers in the UK will manufacture in the UK; and (iii) the phase-out of the sale of petrol and diesel cars by 2030 is sustained. Note that, battery manufacturers will also consider the accessibility of export demand in their assessment of manufacturing locations to maximise both economies of scale and market reach.
2. *Is UK-based battery production necessary to support the manufacture of electric vehicles in the UK?*
 - b) Decarbonisation is a major strategic theme across industry – manufacturers are focused on reducing carbon emissions across the value chain to achieve sustainability targets. A key enabler of decarbonisation is localisation of the supply chain to minimise transport emissions. Localisation has the associated benefits of minimising logistics and inventory costs and reducing manufacturing lead times and the risk of supply chain disruption from transport delays.
 - c) Logistics costs are a further consideration for mainstream OEMs who manufacture significant volumes and who are competing with plants in other European countries to win future production. If UK-based OEMs are reliant on importing batteries from Europe, this will put them at a disadvantage to their European counterparts and risk the viability of their future.
 - d) Aside from the logistics pressures (carbon emissions, costs) to localise battery production in the UK, there is an opportunity to harness the unique advantages of the UK and position the UK as an e-mobility centre of excellence. The UK is home to one of the most diverse e-mobility landscapes in the world with a concentration of low-volume and high-value manufacturers and leaders in innovation (high-performance automotive, motorsport, aerospace). UK-based battery manufacturers who are able to serve the needs of these UK-based manufacturers can leverage the associated areas of UK excellence in chemistry, materials and process innovation and industrialisation. It is an opportunity for the UK to play to its strengths and create competitive advantage rather than compete with the mainstream.
3. *What are the risks to the UK automotive industry of not establishing sufficient battery manufacturing capacity in the UK?*
 - e) The UK automotive industry accounts for around GBP60billion of turnover, GBP30billion of exports and employs around 800,000 people. We see a clear and catastrophic risk to the UK automotive industry if sufficient battery manufacturing capacity cannot be established in the UK. The risk is not just limited to the

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automotive manufacturers if they are not able to establish a cost-competitive position with European counterparts, but also the viability of the associated supply chain and employment base that currently exists within the UK. For example around 1.6million engines are produced annually within the UK and there are many other localised components of the supply chain. If a viable route to safeguarding the future of this industry in the UK cannot be secured now – at this critical juncture of the transition to electrification – then we believe the decline of the UK automotive industry is inevitable.

4. *What can the UK learn from investment in other countries in the establishment of gigafactories?*

- f) InoBat has evaluated and developed a number of potential Gigafactory locations. Supporting activity has included engagement with customers, suppliers, energy providers, academic institutions and governmental authorities. Based on our experience, we conclude that the following areas are where UK needs to focus to improve its appeal to investors seeking to establish gigafactories:
- i. Competitive energy mix and costs: Battery manufacture is an extremely energy intensive business. Cell manufacturers will include in their assessment of locations both the green energy mix (how much of the energy consumption will be generated from renewable sources – in particular, wind and solar) and the cost of that energy. On energy mix, the UK is in a relatively competitive position against much of Europe with clear plans to deliver homegrown green energy. In the evaluation of energy costs, InoBat has used public data sources for energy costs (Eurostat, Statista) which show UK to be at a consistent disadvantage to other European countries. Whilst there are schemes in place to support energy intensive businesses (Energy Intensive Industry exemption scheme, Climate Change Levy relief), these are difficult to navigate for potential investors. We believe that there is an opportunity for Government trade departments to be better equipped to provide proactive support (information and financial) to ensure that the UK can demonstrate a sustainable competitive position versus Europe.
 - ii. Export opportunities: The UK exports more than 80% of its car production. Export is critical to ensuring economies of scale and international competitiveness. In order to achieve the ambition to be a global leader in electrification and attract investment, the UK needs to ensure high-value export trade routes are protected and developed. Gigafactories represent significant investment and need to be underpinned by sustainable offtake demand. One of the enablers to sustainable offtake demand is the ability to reach export market demand as well as domestic demand. InoBat's experience from other European countries is that the opportunities in key export markets are fully integrated into the discussion and investment case for the destinations. We believe that the UK can do more to incorporate, develop and promote the export trade routes for cell manufacture, and not just limit focus to how a UK gigafactory can support UK customers.
 - iii. Government support: InoBat has engaged with municipal, regional and national governments across a number of countries. Our experience is that there is a marked difference between the UK approach to attracting investors compared to other countries. European governments view the transition to electrification as key component of the route to economies becoming more sustainable and resilient, and better prepared for the challenges and opportunities of the green and digital transformations. The Recovery and Resilience Facility makes significant funds (>EUR700billion) in loans and grants to help implement investments that support the strategic priorities and therefore enables significant funds to be allocated to individual EU countries to drive the economic transformation. This appears to foster a strong appetite to attract EV investments. In Spain, for example, the Strategic Projects for Recovery and Economic Transformation (PERTE) initiative has allocated EUR4.3billion to drive the development of electric and connected vehicles in the country (PERTE VEC) establishment of the value chain in the region. This translates into strong encouragement and active engagement from the national, regional and municipal authorities to potential investors, including facilitation of discussions between potential value chain partners, and the ability to provide meaningful financial support to players across the value chain. In comparison, in the UK the key funding mechanism is the Automotive Transformation Fund, which will make available up to GBP1billion (currently GBP850million) to businesses within the EV value chain. The lower level of funds available drives an associated funding allocation approach to protect against extant market failure, rather than actively

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drive the establishment of a thriving e-mobility value chain that is based on the inherent strengths in the UK. In essence, the funding constraints in the UK versus other countries in the European Union lead us to conclude that the UK's hands are tied when it comes to competing for investment. Alternative approaches to attracting investment and supporting investors needs to be developed for the UK to compete with countries which are able to offer strong incentive packages.

5. Conclusions

- g) The UK has an ambition to be at the forefront of global markets in electrification. The UK offers an interesting investment proposition for battery manufacturers with the combination of a unique group of e-mobility manufacturers, and inherent capabilities in chemistry, materials and process innovation. Cell manufacturers who are able to serve the specific needs of the UK manufacturers need a compelling and sustainable investment case with regard to energy mix, energy costs, domestic demand, export opportunity and government incentive packages. Without a competitive offer, the UK risks losing the automotive industry to European countries that have the resources and appetite to invest into the development of a thriving e-mobility platform.