

SMMT RESPONSE TO THE BUSINESS, ENERGY AND INDUSTRIAL STRATEGY SELECT COMMITTEE INQUIRY

BATTERIES FOR ELECTRIC VEHICLE MANUFACTURING

February 2023

ABOUT SMMT AND UK AUTOMOTIVE

1. The Society of Motor Manufacturers and Traders (SMMT) is one of the largest and most influential trade associations in the UK. It supports the interests of the UK automotive industry at home and abroad, promoting the industry to government, stakeholders and the media.
2. The automotive industry is a vital part of the UK economy and integral to supporting the delivery of the agendas for levelling up, net zero, advancing global Britain, and the plan for growth. Automotive-related manufacturing contributes £67 billion turnover and £14 billion value added to the UK economy, and typically invest around £3 billion each year in R&D. With more than 182,000 people employed in manufacturing and some 780,000 in total across the wider automotive industry, we account for 10% of total UK goods exports with more than 150 countries importing UK produced vehicles, generating £77 billion of trade.
3. More than 25 manufacturers build over 70 models of vehicles in the UK, plus an array of specialist small volume manufacturers, supported by some 5,000 supply chain businesses and some of the world's most skilled engineers. Many of these jobs are outside London and the Southeast, with wages that are around 14% higher than the UK average. The automotive sector also supports jobs in other key sectors – including advertising, finance and logistics.

SUMMARY

- a) The UK is home to more than 25 vehicle manufacturers (across volume production, premium, sport and specialist, light commercial, heavy commercial and bus and coach) building over 70 models of vehicles in the UK, supported by some 5,000 supply chain businesses and some of the world's most skilled engineers. In 2022, the UK produced over 875,000 vehicles and current production outlooks suggest the UK will produce over one million units by 2025, making it a significant producer in Europe.
- b) For the UK to remain competitive in a global automotive market which is transitioning at pace to the production of zero emission vehicles, the need to upscale our domestic battery production and associated supply chain at pace is key. The UK will require access to 60-90GWh of battery production capacity per annum if it is to manufacture at least one million battery electric vehicles (BEVs) by 2030 for both the domestic and export markets. Existing UK capacity is currently about 2.5GWh, with current commitments likely to increase the total capacity to about 11GWh by 2025 and, depending on demand, potentially 25GWh by 2030.
- c) The need to rapidly upscale the pace of development and production of battery manufacture and the associated supply chain in the UK is driven by:
 - a) forthcoming changes to rules of origin requirements in the UK-EU Trade and Cooperation Agreement (TCA)
 - b) the increasing competitiveness of competitor markets such as the US, EU, and Asia-Pacific, where significant investment is growing battery production and reducing associated costs in key areas such as energy

- c) the need to maintain a highly skilled and productive workforce, which is having to transition away from the manufacture of conventional engine vehicles to new battery electric and hydrogen powered vehicles
- d) the need to maintain the UK's international competitiveness and successful contribution to decarbonisation of road transport under the Government's economic and net zero strategy.

SMMT RESPONSE TO THE COMMITTEE'S INQUIRY QUESTIONS

4. *Is there enough UK vehicle manufacturing demand in the UK to support gigafactories?*

- d) We believe there is sufficient manufacturing volume to support UK based battery production. The UK already has a battery manufacturing plant supporting UK based vehicle manufacturing in Sunderland, and this plant has already announced further investment which demonstrates the UK currently has enough manufacturing demand. In 2022, the UK produced over 875,000 cars and commercial vehicles and our latest production outlook out to 2025 shows the industry is expected to produce over one million units as supply constraints ease and we return to more normal capacity utilisation. This places UK production volumes above those in Italy and broadly comparable with Slovakia, although still currently below Germany, Spain, France and the Czech Republic.
- e) The UK is home to a diverse and relatively large number of producers, from volume manufacturers to small volume and premium / luxury producers located across every nation of the UK. The UK produces a huge range of vehicles with almost unrivalled diversity, from passenger cars and commercial vehicles, buses, coaches, and a thriving aftermarket sector. The automotive industry delivers these world-renowned goods for the domestic market and predominantly for export, to more than 150 markets worldwide. The UK has more than 30 manufacturers building approximately 70 models of vehicle in the UK, supported by over 2,500 automotive specific component providers and a highly skilled workforce. Many of the OEMs are already building zero emission vehicles across multiple technologies, including battery electric vehicles, hybrid and hydrogen fuel cell technologies.
- f) It is critical to maintain the competitive conditions that will support OEMs and manufacturers to invest and produce in the UK, who will anchor the demand for UK battery production and wider supply chain. If so, the breadth of automotive manufacturers and their supply chains offer plenty of opportunity, especially as batteries are large heavy objects that are typically expensive or challenging to transport. An improvement in the domestic supply and supply chain could support lower costs, better logistics, and improved environmental footprints. However, due to the intrinsically global nature of automotive supply chains, it is no way assured that UK producers will source their batteries from the UK. The majority of UK plants are part of multinational businesses with overseas headquarters, and for some of the larger brands there are plenty of sourcing opportunities overseas if the UK is uncompetitive.
- g) For Small Volume Manufacturers often sourcing more locally – but benefiting from the wider automotive ecosystem volume manufacturing fosters – it may very quickly become even more difficult to source batteries locally, particularly in niche or performance products, as global production of electric vehicles increases, trade rules become more stringent or protectionist, and pressure on battery supply chains rises in general.
- h) By its very nature, battery manufacturing is energy intensive and with increasingly sustainable near shore logistics, the cost competitiveness of energy versus Europe becomes critical to the equation, where today the benefits of near logistics are not sufficient alone to offset against the disadvantages of the energy cost gap. While an acute issue for battery manufacturing, this sentiment is strongly echoed across the entire UK advanced manufacturing footprint (notably, this was already a pre-existing industry challenge prior to the current energy crisis). Therefore, the UK needs to ensure it actively supports and works with OEMs and major battery producers to create the competitive framework and automotive ecosystem to produce

batteries and support wider EV supply chains which add value in the UK, across the full diversity of our sector.

5. Will the UK have sufficient battery production supplies by 2025 and 2030 respectively to meet the government phase-out plans for petrol and diesel vehicles?

- i) While government phase-out plans for petrol and diesel vehicles are essentially a market-side policy that is agnostic to the origin of the vehicles, UK production of EVs for both the domestic and export markets could be affected should there be insufficient access to battery production in the longer term – particularly battery production that ensures access to tariff free trade with preferential trading partners. The full scale of the impact may not be seen until 2035, when both the UK and EU will allow only zero emission vehicles to be placed on the new car and van market and demand for batteries and zero emission vehicles increases globally.
- j) UK-manufactured battery electric vehicles (BEVs) are a critical contributor to the future prosperity of the country, with their export value up more than 1,500% since 2017, from £81.7 million to £1.3 billion last year. The UK will require access to 60-90GWh of battery production capacity per annum if it were to manufacture at least one million BEVs by 2030 for both the domestic and export markets. Existing UK capacity is only about 2.5GWh, with current commitments likely to increase the total capacity to about 11GWh by 2025 and, depending on demand, potentially 25GWh by 2030. By comparison, The Faraday Institute estimates of operational capacity in Europe show Slovakia with 10GWh battery capacity expected to come on stream in 2024, Germany at 10.5GWh (with significant capacity under construction or announced), and other major automotive markets Spain (12GWh), France (33GWh) and Italy (56GWh) all with major plans announced by 2025 growing again significantly through existing public announcements through to 2030.
- k) The UK automotive industry is committed to the delivery of zero emission mobility, ensuring both private consumers and businesses are provided with desirable, practical and affordable products. Success, however, will not be solely in the industry's gift as there needs to be a huge societal shift that encompasses significant changes to consumer behaviours, technologies, and infrastructure. All stakeholders must play a part. Government has made clear its policy ambition for net zero, while providing a draft regulatory pathway which must now be delivered with urgency as decisions to meet 2035 are taken today and by the time the full picture emerges it may be too late to fully capitalise.
- l) The focus must be on developing an internationally competitive business environment, providing regulatory certainty, securing investment and a clear investment pathway, and on the successful delivery of these plans in a way that works for consumers, the environment and the automotive industry which will deliver healthy markets, vibrant production and the halo effect on economic prosperity that success will generate. Alongside significant market reform, total focus must be given to UK manufacturing opportunities to ensure the UK has both a healthy market and vibrant production capabilities to deliver on climate ambitions as well as generating UK wealth and prosperity through inward investment, innovation, highly skilled and well-paid jobs – positioning the UK as a global leader in future mobility.
- m) The United States Inflation Reduction Act and forthcoming EU Net Zero Industry Act demonstrate a huge political demand for zero emission mobility, clean technology and advanced manufacturing which will be highly influential in attracting mobile capital and investment in future industrialisation and localisation towards these markets at the potential expense of the UK. The Government's next Budget (15 March 2023) presents the ideal opportunity to build a framework of competitiveness that stakes the UK's claim for its share of this growth opportunity and secure our future prosperity for decades to come, just as the UK faces the most profound international challenge to its industrial future. Government, in particular, must urgently and carefully consider the UK's vision and position in the rapidly evolving international funding landscape, and adapt its approach to subsidy control, to ensure the UK has access to sufficient battery capacity as measures by competitor markets will be highly effective in attracting mobile capital and

investment in future industrialisation and localisation towards these markets at the potential expense of the UK if left unanswered.

- n) Getting the basics right to make the UK an attractive place to invest in EV production and the associated supply chains, including battery plants, is critical. In the first instance, the Government must allocate the full £1 billion worth of funding for the Automotive Transformation Fund (ATF) and expand the scale, scope and pace of deployment of the fund to leverage investment and boost supply chain transformation. Reflecting the rapidly evolving international situation, this must be allied to a strategic investment framework, a competitive business environment, and stable regulatory frameworks which secures commitment to future zero emission vehicle and battery manufacturing in the UK.
- o) The energy intensive nature of the production of EVs and their components will also mean energy costs will be key. Currently, SMMT members report that UK electricity prices are more than twice the levels they pay on average at other vehicle plants in the EU, with gas prices some 60% higher. Having low cost, low carbon, energy supplied securely could be a huge influencer in investment decisions.
- p) We need to build confidence, consistency, and competitiveness. Action now will drive economic growth in the years to come. With the right support on business costs, on supply chain security, on skills, innovation and investment, our industry can repay investment many times over and thrive in the global economy.

6. Is UK-based battery production necessary to support the manufacture of electric vehicles in the UK?

- q) The UK automotive industry is a key contributor to jobs and wealth creation, notably having a broad cross regional footprint. Maintaining what we have in the UK will be critical to our ability to support the broader economy. Anchoring vehicle production in the UK supports greatly the ability to draw in development of battery production. Given the increased value of the battery, motor and power electronics as a proportion to a vehicle – often making up 30-50% of the vehicle cost – compared with an internal combustion engine (ICE), grasping the opportunity to attract that supply to the UK could bring significant economic benefits and competitive advantages, as well as securing vehicle manufacturers to the UK. The Advanced Propulsion Centre (APC) believes there is a £24 billion supply chain opportunity over the next five years in 12 key areas, notably batteries, motors and power electronics, but maintaining existing vehicle manufacturing is key to securing even more value.
- r) It should be noted that it may not be critical to have battery production solely in the UK to maintain existing EV production volumes, given supplies could be imported and put into UK-built vehicles, as is already happening with several EV models currently built and planned to be built in the UK. Currently, this also happens with engines (noting in this scenario the UK is a net exporter of engines). However, there is a risk that EV production volumes may never reach at least one million units per annum if there is insufficient domestic cell production capacity and, by implication, offtake agreements with vehicle manufacturers.
- s) UK-based battery production also opens additional benefits and opportunities to deliver tariff-free or reduced-tariff treatment on exports of electrified vehicles to free trade agreement (FTA) trading partners (the UK exports 80% of the vehicles it manufactures), create economies of scale and reduce manufacturing costs. Recently concluded trade agreements, such as those with Australia and New Zealand, do not provide the option to cumulate EU content to meet rules of origin requirements and therefore qualify for preferential treatment. To avoid tariffs under these agreements, businesses can only count on materials and value-added content originating in the UK or in the territory of the preferential trading partner. These deals might set a significant precedent for future negotiations with other new trading partners or for renegotiation of existing deals.
- t) Given that batteries can represent a significant share of the value of finished electrified vehicles, in particular purely electric vehicles and plug-in hybrids (PHEVs), sourcing UK-made batteries would place UK automotive manufacturers in the best place to avoid tariffs on outbound shipments of zero emission

vehicles to Australia and other preferential trading partners and meet key trade provisions in the UK-EU TCA more easily. Sourcing UK-made could also reduce the administrative burden associated with collecting supporting documentation to apply cumulation of EU content and benefit from continuity deals with a large number of the UK's trading partners. Sourcing batteries originating in third countries outside of the UK/EU region is likely to result in tariffs being applied on exports of finished vehicles to UK's FTA trading partners.

- u) Today, some key decisions on where EVs will be built from manufacturers with UK production facilities and where they source their EV supply chains remain undecided or are evolving – but will be taken imminently with the accelerated timetable to decarbonise passenger and light commercial road transport in the UK and Europe by 2030/2035, and heavy duty vehicles soon after. Only with the right competitive and investment conditions can this timely and valuable opportunity to secure UK manufacturing in zero emission technologies be realised. Once established, those supply bases could then attract further investments to maintain and enhance already sunk high capital costs, support other existing plants' transition to EVs or ability to switch their sourcing back to the UK, and build the case for attracting new players to the UK, which will further support UK-made exports to the EU and rest of world.

7. What are the risks to the UK automotive industry of not establishing sufficient battery manufacturing capacity in the UK?

- v) Automotive manufacturing is a global industry and highly competitive. Firstly, the overall competitive conditions needed to maintain and invest in vehicle manufacturers must be secured, which anchor the industry and will drive demand. This will help to create and realise some of the opportunities identified – such as by the Advanced Propulsion Centre – across manufacturing and the supply chain. The loss of vehicle manufacturing volumes could create risks with the associated loss of value generation if production is located elsewhere as a result of an inadequate domestic framework that attracts UK and international investment, including in the electrified supply chain. The vast majority of UK finished vehicles today are manufactured by groups with European footprints. There is a preference to source battery packs local to vehicle production to avoid costs associated with shipping high-voltage packs long distances, especially at volume. With a greater critical mass of committed battery production capacity on the continent there is a risk that the UK will lose out to Europe for vehicle line placement without more domestic capacity.
- w) Conversely, the opportunity is obvious. Batteries are the most expensive component within an electric vehicle, making up between 30%-50% of the vehicle cost, while the manufacturing cost of cells and assembly through to packs makes up about 50% of the total battery value. It is the single largest prize in future vehicle production where the UK can create a potential competitive advantage. With the right upfront support, from grant funding, capital allowances and full expensing, R&D tax credits, to planning reform, fiscal and regulatory levers can act as a catalyst for investors. The scale and pace of support needed now to catalyse innovation and investment would be vastly outweighed by the long term reward, whereby the industry can repay investment many times over, contributing back to the Exchequer and creating high skilled, high wage jobs in the UK, and products which can compete internationally. The benefit of domestic capacity extends to both increased supply chain resilience and contribution to the UK's energy security ambitions by diversifying reliance on any single market or predominant supplier, building on the lessons that the impact of the pandemic and rapidly changing trade environment has had on the sector.

8. What other domestic end uses for batteries would provide a market for UK battery production?

- x) Second-life opportunities should be considered in this regard. Lithium-ion batteries in EVs are considered end-of-life once they drop below around 80% operational capacity. However, at this stage they have

potential to be usefully repurposed for alternative applications. The potential for such a second-life market will, to a degree, depend on the relative trade-off between the value of the raw materials able to be recovered at EV end-of-life and the continuing value of the repurposed battery itself in other applications. The forthcoming EU Battery Regulation introduces specific targets for recycled content in newly manufactured batteries. In creating a market value for recycled content, the market emphasis is potentially shifted towards the recovery of raw materials at end-of-life, rather than second-life repurposing of batteries. This trade-off will change as the EV and EV battery markets mature. In seeking to introduce equivalent legislation in the UK going forward, Government should be clear about the outcomes which, ultimately, it is seeking to achieve in terms of recovery and repurposing.

- y) Beyond automotive, electrification is likely to create opportunities in other adjacent sectors in transport – including personal and micro-mobility, and in other use cases. This is outside the scope of SMMT expertise. However, measures which support a wider UK battery ecosystem should be welcomed and an indigenous EV industry could enable a wider halo effect in other forms of transport and manufacturing sectors or other domestic applications.

9. Does the UK have a sufficient supply of critical materials to support vehicle battery production?

- z) Save for small quantities of lithium and graphite, the UK does not have sufficient quantities of critical minerals in the earth to be self-sufficient in terms of mining capacity. Lithium is mined largely in Australia and Chile, cobalt in Congo and Australia, and nickel in Indonesia and Russia. However, China dominates in minerals refining capacity, with up to 90% of the world's critical minerals refined and processed in China – with the inevitable result of high embedded carbon in the refined materials due to a fossil-heavy energy mix. Apart from one announced project in the north east of England, there is no minerals refining capacity in the UK.
- aa) There is still a window of opportunity to build a UK battery materials supply chain. The UK should draw on global resource diplomacy with minerals-rich countries with which we have either free trade agreements, enhanced partnerships or good working relationships, such as Australia and Canada, to secure supplies of critical raw materials. We should invest in building minerals refining capacity using renewable energy in the UK to ensure we have adequate feedstock of materials processed using the most sustainable methods for cell manufacturing. However, these activities will only be viable if we also ensure there is offtake demand in the form of cathode active material and cell manufacturing activities in the UK. In the longer term, this must be accompanied by building supply chain resilience and increasing UK based value from recovered critical minerals, which can be reused by the sector (for example, to support our ability to meet rules of origin value thresholds for exported automotive goods).

10. How ready are UK vehicle producers for the EU–UK Trade and Cooperation Agreement (TCA) rules of origin (ROO) phasing in from 2024?

- bb) The TCA has been instrumental in setting the right conditions to fast-track growth in bilateral EV trade. As of November 2022, exports of UK-built BEV, PHEV and hybrid electric vehicles (HEV) to the EU were worth £4.7 billion, far exceeding the £1.8 billion value in exports of internal combustion engine cars, and more than twice as much as the value recorded at the end of 2020, just before the entry into force of the TCA. The value of EV imports from the EU has increased by 81.9% since the entry into force of the TCA, going from £5.1 billion at the end of 2020 to £9.3 billion in November 2022.
- cc) The TCA has created an enabling environment for trade in zero emission vehicles while encouraging additional investment in the EV supply chain by introducing progressively more ambitious content requirements in 2024 and in 2027. However, when the EU and the UK agreed on the terms of the TCA, the parties could not take into account the impact of the coronavirus pandemic and the exponential

increase in raw materials and production costs on manufacturers' ability to meet ambitious origin rules in a very short time span.

- dd) At present, batteries assembled from imported cells and modules can qualify as originating content. Alternatively, manufacturers can incorporate up to 70% of non-originating materials in finished batteries, modules, cells and cell parts or use tariff shift rules to meet the TCA origin requirements for these technologies. From 2024, the more accommodating processing rules for finished batteries will be dropped, the maximum percentage of non-originating materials will be reduced to 40% for batteries and 50% for cells and a change of tariff-heading rule will apply only if manufacturers incorporate cathode active materials produced in the EU or in the UK. In sum, for a battery to gain originating status, manufacturers will need to enter production at the very early stages of cell and cathode manufacturing processes.
- ee) Despite a sharp rise in announced investment in regional battery supply chains, the current manufacturing capability in the EU and the UK does not allow our sector to meet upcoming origin requirements for batteries and battery parts. With the rapid acceleration of demand for EVs, analysis by industry stakeholders such as the European Battery Alliance and the APC show that regional supply capabilities will not be able to satisfy the EU and UK demand for battery-related technologies by 2025, with significant gaps in cathode and anode production.
- ff) Given the lack of production capabilities of critical parts, including cathode active materials, the provision for a change of tariff heading cannot be met by 2024, while the steep increase in prices of raw materials result in very significant challenges to meet overly ambitious value-added rules for the foreseeable future. On average, the battery can be 30-50% of the value of a finished vehicle, therefore failing to incorporate an originating battery would result in tariffs being applied to the vast majority of finished clean vehicles traded across the Channel, with electrified passenger cars, buses and commercial vehicles facing additional duties ranging between 10%-22%. This will also make achieving other regional value content thresholds agreed (or to be agreed in future) in other free trade agreements more challenging if such a proportion of the vehicle cannot be considered as originating content for trade purposes, which must be negotiated accordingly to ensure free trade continues with key trade partners for new technologies.

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

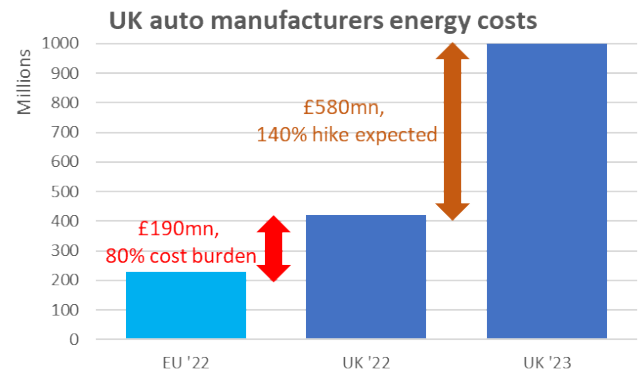
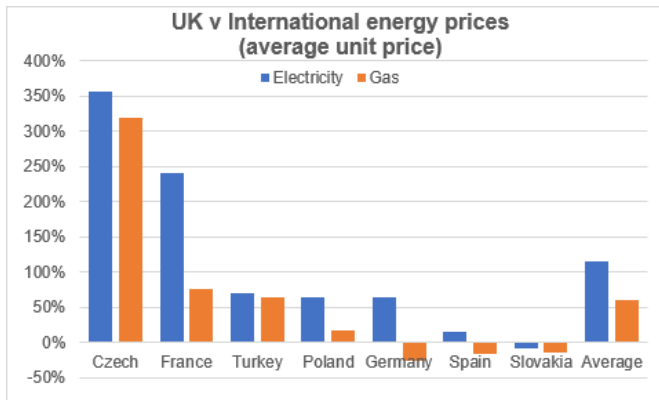
- gg) To attract substantial investments by established large-scale battery cell manufacturers, co-ordinated leadership across government and a partnership between government and industry are essential. Even before the EU's concerted efforts to pump-prime battery production, several European governments were already expending every effort to secure and grow a new battery industry. For instance, Germany in 2018 and France in 2019 announced financial support towards battery production amounting to €1 billion and €700 million respectively. For the UK to become a location of choice for potential investors, the UK Government must create the right conditions urgently, given the immediacy of decision making by global investors looking to build low carbon capability now. This means ensuring we are globally competitive, that there is a streamlined process for obtaining the necessary permits and licences, easy access to skilled and productive labour and competitively priced clean energy.
- hh) The UK must look to the strategies of key peers and competitors to benchmark and adjust its own investment proposition. From the EU's Covid Recovery Fund and new Green Deal Industrial Plan – which places a huge emphasis on clean technology and green transformation – to the US' \$2 trillion pursuit of advanced manufacturing, energy, infrastructure and clean technology (e.g. Inflation Reduction Act, CHIPS Act and Infrastructure Act) there is a concerted effort and major political will to secure long term investment in these future industries. This includes the deployment of various tools equally available for consideration by the UK ranging from direct grant funding, capital incentives and the utilisation of other fiscal levers (such as state aid) to the regulatory environment – such as future battery regulation and expediting planning reform.

12. Do we have the skills in the workforce required for the production of batteries? If not what needs to be done?

- ii) The UK is recognised for its highly skilled workforce and is a key competitiveness criterion for investment, but the workforce will continue to evolve now and throughout the decade ahead to meet the needs of a zero emission future for both the existing and future talent pipeline to ensure a smooth transition. For electrification, manufacturers need a workforce capable of working with high voltage and hydrogen systems, as well as with lightweight materials, and to transition high skilled engineers who are specialised in areas which will face technology change. Currently, the UK possess a few hundred battery specialists. The Faraday Institution estimates this will need to increase to at least 3,000-4,000 by 2025 and 7,500-10,000 by 2030, if the UK wishes to become a competitive location for battery production.
- jj) Around 60% of the workforce in battery production facilities is made up of production staff, maintenance and engineering technicians. These roles typically require level 2 or level 3 qualifications, such as a BTEC Level 2 Diploma in Manufacturing or BTEC Level 3 Certificate in Applied Science. The remaining positions within the gigafactory are highly skilled and require degree qualifications, such as systems engineer, database development engineer and thermal management engineer, which would require a very high level of skills and qualifications (e.g., MEng, EngD, PhDs).
- kk) The development and operation of battery production requires a diverse and highly skilled workforce. The Faraday Institution has indicated that by 2040 a thriving industry could provide employment opportunities for 170,000 people in EV manufacturing, 35,000 people in gigafactories, and 65,000 people in the battery supply chain.
- ll) The key skills requirements in battery production and the associated supply chain include engineering, manufacturing, logistics, and management:
 - i. Essential skills in engineering - processing, chemical, mechanical, electrical and automation.
 - ii. Critical skills in manufacturing - process technicians, engineers, quality control, and maintenance technicians.
 - iii. Logistics skills requirements - logistics planning, supply chain management, inventory management and transportation management.
 - iv. Essential management skills - project management, risk management, financial management and general management.
 - v. Additional skills requirements – safety specialists, environmental management, recycling and data analysis.
- mm) To help meet the skills demand, substantial work has been done to create a strategy and clear roadmap for re-skilling and up-skilling the workforce to enable battery production, as evidenced in the National Electrification Skills Framework and Forum, a project which will be continued in 2023 by the Faraday Battery Challenge. The implementation of this strategy will require coordinated support from central government, local government, training providers, and industry, as well as a well-sequenced STEM (science, technology, engineering, and mathematics) curriculum in schools to meet the demand for a future workforce. A skilled workforce will be a significant advantage over European competitors in the race to attract inward investment from global battery manufacturing companies.

13. Will the cost of UK batteries be competitive compared with batteries produced elsewhere?

nn) Battery producing countries will compete based on a range of competitiveness factors including the overall business and tax environment, energy costs, access to renewable and green energy, skills and labour, and logistics. The importance of co-location of vehicle and battery production therefore can enhance competitiveness as well as creating volume demand – demand from which smaller or luxury manufacturers can also source at a more competitive cost. Assuming input costs of raw materials are largely constant globally, as most of these are traded as commodities on the spot market, the cost of UK produced batteries will depend on these wider critical input costs. While the UK may not necessarily be able to compete with low labour cost locations, such as in Eastern Europe, this is often offset by a highly skilled and productive workforce. The UK must consequently compete on factors within its control, and competitively priced renewable and low carbon energy in particular is of paramount importance if UK-produced batteries are to be cost-competitive and available to the full advanced manufacturing ecosystem.



14. What impact will the European Union’s proposed Carbon Border Adjustment Mechanism have on UK production?

oo) We expect the Carbon Border Adjustment Mechanism (CBAM) to have limited direct impact (i.e. automotive is not explicitly covered) on our sector. In the UK, automotive is part of the UK Emissions Trading Scheme (ETS) and the UK has a variety of measures in place to ensure UK producers cover their carbon emissions – the UK already has one of the highest prices of carbon in the world and our ETS allowance price is continually higher than the EU equivalent.

pp) Automotive is unlikely to be captured in any early stages of an EU CBAM, given the complexity of our products compared with other ETS covered sectors. However, we are concerned that it might necessitate administrative costs to prove compliance, drive up the costs of input materials (e.g. steel and aluminium), lead to high-carbon products being pushed into the UK and lead to trade disputes (which could draw in automotive, given our importance to both UK and EU export values).

qq) We await the UK government’s proposals for how it may respond to EU CBAM and proposals for a UK equivalent, with a consultation widely expected in Spring 2023. Ideally the UK system should interact with the EU (e.g. via mutual recognition) to ensure UK producers are not penalised, as well as undertaking our long-standing recommendation to link the UK and EU ETS regimes to improve competitiveness.