



HOUSE OF COMMONS

Business and Trade Committee

Oral evidence: Batteries for electric vehicle manufacturing, HC 1070

Tuesday 12 September 2023

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Members present: Mark Pawsey (Chair); Jonathan Gullis; Andy McDonald.

Questions 120 - 172

Witnesses

I: Nusrat Ghani MP, Minister for Economic Security and Investment, Department for Business and Trade; and Fred Perry, Director, Advanced Manufacturing, Department for Business and Trade; Edmund Ward, Deputy Director, Industrial Decarbonisation, Department for Energy Security and Net Zero.



Examination of witnesses

Witnesses: Nusrat Ghani, Fred Perry and Edmund Ward.

Q120 **Chair:** Good morning, Minister, and your officials. Thank you for coming to join us for the final evidence session we are holding in respect of UK battery supply. We have previously heard from a number of automotive manufacturers and a number of people involved in the sourcing of raw materials in the production of batteries. You are very welcome and it is good to see you here, as a former member of this Committee.

We have a whole series of questions, so I would like to make a start on the issue of the EU trade and co-operation agreement. We know that under that agreement, electric vehicles sold both in the EU and the UK will face a 10% tariff if they do not meet strict rules of origin requirements, which are due to come into force in four months' time on 1 January 2024. Minister, what is your assessment of the impact that a 10% tariff would have on our automotive industry here in the UK?

Nusrat Ghani: For the record, it is great to be back, although it is a little bit nerve-racking being on this side of the table. The rules of origin are incredibly important, but we really need to appreciate that this is a challenge not just for us but also for manufacturers over in Europe, especially Germany. It is a two-way issue and will be resolved with solid negotiations and representations made not just by us but by those manufacturers within mainland Europe. Companies that have made representations are Ford, JLR, Volkswagen and Stellantis.

There is a cut-off period, as you mentioned. These terms were negotiated at a period of time pre-covid, before the appreciation of supply chain kinks or issues as well. Negotiations are taking place. My Secretary of State is involved, as is the Foreign Office. We also have all the big manufacturer representative organisations, which you may be aware of because they spend quite a bit of time promoting the sectors on the airwaves. SMMT here in the UK, but, more importantly, its European counterpart, the European Automobile Manufacturers' Association, have made representations to Brussels too.

You have rightly said that there would be a 10% tariff. If we take into account the import of EU cars into the UK—I am just going to look at it to make sure we get it right—a greater proportion of EU cars will face a tariff than UK cars, so we need to get that into perspective as well. The reason that I am confident that this will be resolved is because it seems slightly absurd to have a situation where there would be a tariff on EV cars and combustion engine cars, whereas diesel and petrol, could be, potentially, tariff-free. It seems like a curious situation when we in the UK and many of our counterparts in Europe have a very strong net zero agenda.



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All attention is on this issue. Negotiations will continue. It is incredibly important that not only the UK but those countries within Europe that are concerned about this too make representations to Brussels as well.

Q121 **Chair:** Minister, we do not have a lot of time between now and 1 January. What assessment have you made of the impact on the UK industry if we are not able to put that date back?

Nusrat Ghani: There will be impact on not just the UK car manufacturing industry but also on those car manufacturers in Europe as well.

Q122 **Chair:** Sure, but our concern is for our own domestic industry. What would be the impact on our industry here if we are not able to put the date back from 1 January 2024 for two or three years to give the sector more time to prepare?

Nusrat Ghani: A 10% tariff will have an impact. There is no doubt about that. However, I have every confidence, because it impacts so many countries within Europe, not just the UK, that this will be negotiated appropriately.

Q123 **Chair:** Minister, do you think that would give an advantage to those who produce cars in lower-cost economies? Do you think that if we have a 10% tariff there, we would end up seeing more coming in, for example, from a manufacturing country such as China?

Nusrat Ghani: That has been discussed in lots of mainstream media, not only here but in Europe as well. If there is a 10% tariff that impacts cars not just made in the UK but made in Europe too, potentially this would mean that China would be the biggest beneficiary if the EU does not agree to our request and those requests of other countries as well. It will allow cheaper imports—potentially Chinese-made cars—into the market.

Q124 **Chair:** This arises because the battery is an important component of the electric vehicle. It makes up 40% of the value. If we are having to import the battery, it is very difficult to get to those rules of origin. Have we gone fast enough, in your view, in arranging for domestic supply of batteries here to our automotive sector in the UK?

Nusrat Ghani: I think that we have. We have been discussing this for quite some time within the Department. Obviously I discussed it when I was a member of your Committee as well. We have had some really good news recently on this when it comes to gigafactories in the UK. It is a transition industry, but we had the fantastic news from Tata. We also have Envision.

There is often a debate—forgive me, it is often used by the Labour Party—that we need five gigafactories, for example. It is mostly about the capacity that we need. The APC has said that we need around 89 GW. With both Tata and Envision, we are pretty close to that. Tata is 48 and Envision is scaling up to 12.



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Fred Perry: We would be over 60% of the way towards that 89 GW target with investment decisions already made so far and in the public domain.

Nusrat Ghani: We are not going to stop there. We want to secure more and go beyond the 89 that has been forecast by APC as well.

Q125 **Chair:** We have had good news, in that we know that Tata is planning to build batteries here in the UK. We heard only yesterday that BMW is committed to manufacture its Mini at Oxford, although we do not yet know the source of those batteries. How are those pieces of good news going to help us in creating an automotive sector of the size and importance that it has traditionally been?

Nusrat Ghani: In the UK we have the most diverse supply chain for the automotive sector. The recent commitments to not only gigafactories but manufacturing of new cars shows you how strong the supply chain is. It shows you how strong the skilled workforce is. Every time a new investment is made, it provides even more resilience to the overall supply chain as well.

These are really good news stories. There is Stellantis. We have Ford, Mini and the two gigafactory investments. I would argue that it has been a really positive period of time for the automotive sector, but we are not at all complacent. There is much more that we will continue to do with the sector as well.

Q126 **Jonathan Gullis:** Before the rules of origin were agreed, what, if any, assessment was made to determine the amount of time the industry would need to localise the supply chain for electric vehicles and batteries?

Nusrat Ghani: Forgive me, because I was not in the Department when these were negotiated. I may quickly turn to Fred to see what discussions has taken place at that time.

Fred Perry: In terms of policy advice to Ministers, advice was given in terms of the negotiations on the trade and co-operation agreement about what would be a realistic timeframe. Since then, of course, we have had global supply chain disruption as a result of the covid pandemic, but also then the semiconductor shortage, which has affected the ability of industry, both on the UK side and in EU member states, to be able to meet the timelines that were originally envisaged, hence why we are now looking, in terms of discussions with EU member states and the Commission, to extend the timelines for the rules of origin requirements.

Q127 **Jonathan Gullis:** How much longer do you think is needed for a local supply chain across the UK and EU to develop?

Fred Perry: We are still in discussions with the Commission. At the minute, we are looking at technical fixes. At the minute I could not give you a timeframe, due to those ongoing discussions being in train.



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Q128 **Jonathan Gullis:** What are the barriers in terms of the European Union side of things that you are finding at the moment? Are there barriers on the UK side that are concerning us as well?

Nusrat Ghani: Barriers in what way?

Jonathan Gullis: Barriers in a sense that those negotiations have been going on for a while now. What is the blockage to getting this over the line? What is the reason that we are not able to get this done?

Nusrat Ghani: When we talk about negotiations with the EU, they always tend to happen at the very last minute. This tends to be a pattern here. What is important is that this is an issue not just for us but for European countries too. Just as much attention is paid to the impact on the UK manufacturing sector, the same concerns and challenges are being raised in mainland Europe.

Because, as we have spoken about, they import more into the UK, they would also have concerns about cheaper imports coming in from other countries. That will be worrying them too. Why would you undermine supply chains that are now setting up and being boosted post covid? One would hope that they would realise the impact and have solid results by the end of the year.

Q129 **Jonathan Gullis:** When was the Department first made aware that some of the UK automotive manufacturers would fail to comply with the rules of origin requirements being phased in from next year?

Nusrat Ghani: I might turn to Fred on when this conversation would have taken place.

Fred Perry: We have a regular Automotive Council, chaired jointly by industry and Ministers. Over several of those meetings over the last year or year and a half, rules of origin has been on the agenda as a key issue for industry in terms of being able to meet the requirements set out. We have been feeding that business perspective into policy advice, the Ministers and negotiations with the EU.

Q130 **Jonathan Gullis:** Do you have a specific date when that first started, in terms of when those concerns were raised? Was it early in the year? Was it January or February this year?

Nusrat Ghani: Since I have been the Minister, they have been raised the moment I co-chaired the Automotive Council. It was obviously a topic of discussion and I have been feeding that into all the appropriate Whitehall Departments.

Q131 **Jonathan Gullis:** How frequently have officials and Ministers met with their counterparts in the EU to discuss the matter since? Obviously you have the broad meeting, but are there other side meetings that have taken place?



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Nusrat Ghani: It is one of those policies that sits between a number of Departments. The Foreign Office leads on this, so it has meetings. Our Secretary of State has met too on this. I do not underestimate that a number of equivalent Ministers in other countries that have similar challenges have met with Brussels officials as well.

Q132 **Jonathan Gullis:** When do you expect to agree a workable solution?

Nusrat Ghani: The Foreign Office, as I said, leads on this. I know, you know and we all know that when we are negotiating with the EU, the results tend to come through quite late. Obviously we would like them sooner rather than later, but we will continue to make representations. We will ask the SMMT and its sister organisation in Europe to continue to make representations as well.

Q133 **Jonathan Gullis:** The concern would be that if we do not get to a workable solution, it creates more concern in industry. Surely, as you say, Ms Ghani, with the fact that the EU imports so much, there must be some sort of red line or date in mind for when a deal gets over the line here.

Nusrat Ghani: I would have wanted it resolved as soon as I raised it, but unfortunately these decisions take quite a period of time when you are negotiating with an organisation over in Europe as well. I would like it to be as soon as possible. The pattern of these discussions always tends to go to the wire. I appreciate fully that we need more certainty, but there is no doubt that Ministers in my position in Europe will be asking for the same too.

Q134 **Andy McDonald:** You referred to some of these wonderful successes, which we are all celebrating with JLR, the expansion at Envision and indeed the BMW announcement. Of course, they will depend predominantly on Chinese batteries in the first instance. I think that that is right. In the course of our inquiry, there has been quite a range of views, and certainly some of the OEMs are expressing their concerns that we have been late to this. It might be difficult for us to even catch up, but with a view to future technologies that might be more attractive to us. There is a range of views about this.

In terms of the supply chain itself, you also remarked that you were very confident about that, and that it was strong. Are you that confident that we can put in place a resilient supply chain to give us the 100 GW of manufacturing capacity that we are going to need for 2030? Are you totally confident about that? Or do you have any concerns?

Nusrat Ghani: There are a couple of things to note. It is 89 GW by 2030. We have already secured a substantial amount. The more that you secure, the more interest you attract, the more resilient that supply chains get, the more people who want to come here, invest and grow. These conversations are commercial, but we are having conversations and I am confident that more will come online too.



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The technology is a new technology. At the moment, EV vehicles are 70% of the UK market and worldwide they are 10%. This is how new this technology and this product is. I do not think that we are behind, considering how much we have secured already when it comes to gigafactories' commitments in the UK. Often people say, "Europe has X amount of gigafactories." Actually, it is how much energy they are producing that matters and how much capacity is needed.

There is obviously much more work to do. It is incredibly competitive. I would also argue that certain geopolitical issues are in place. That gives me even more confidence that we will have the supply chain even more resilient. IRA has been profound in how it has impacted advanced manufacturing around the world, so it has focused attention. We are even more determined to understand supply chains and have them even more resilient going forward, so much so that I set up a taskforce with industry. I will be producing an import supply chain strategy by autumn to provide certainty to many of the sectors that require energy, including batteries. There is a huge amount of work taking place.

Q135 **Andy McDonald:** What are those areas that you are looking at within the supply chain? This is a subject that comes up very regularly in this Committee—where the weaknesses and deficits are. Within that strategy document you will be focusing on certain areas that you want to see movement on. Are you able to tell the Committee what those areas are?

Nusrat Ghani: I can. Even more, I will let Edmund do some of the talking because Edmund is actually responsible for our battery strategy, which we launched a consultation on over the summer. Other than Norway, I do not think there is any other European country that has even considered putting together a battery strategy. That is what we are working on at the moment to deal with some of the concerns you have raised.

Edmund Ward: Yes, part of our call for evidence, which is still open so we would still encourage further industry sponsors, is about identifying those areas where we have strategic opportunity and advantage. Already, through our Faraday Institution, we are investing in upgrades to existing lithium technologies. We also have projects such as, through the Faraday Institution, a £35 million portfolio in beyond lithium ion battery technologies. This is looking at things such as sodium ion battery technologies and solid state lithium sulphur. Those have applications for electric vehicles but also in, for example, energy storage applications. Those are some of the areas that we see as areas of strategic opportunity for the UK.

Q136 **Andy McDonald:** People are pursuing the solid state, so it is like the big prize that people are pursuing. As we currently stand, China dominates the scene. How do you perceive that risk and what steps are the UK Government taking to mitigate the role that China plays in this space?



Nusrat Ghani: China dominates the scene when it comes to critical minerals too, if you just go one process back. There are lots of challenges about how we secure a resilient supply chain. One reason why we have a supply chain strategy coming out is, on the back of the work that we have been doing on critical minerals, and as something you have spoken about previously, we refreshed our critical minerals strategy to look at where we need to work even faster and harder to get hold of the base minerals that are required for batteries.

As you will know, a typical electric car battery contains around 40 kg of lithium alongside 10 kg of cobalt. Some 80% of battery-making for EVs is controlled by Chinese firms worldwide. That is why we have put our critical minerals refresh strategy in place and are working with like-minded countries to ensure that we have not only resiliency in supply chains but are looking at making sure we are involved in countries that are mining with good standards. We are looking at where these are refined and manufactured to give more confidence to the UK automotive manufacturing sector, but also to make sure that we are resilient as a country.

Q137 **Andy McDonald:** It is not feasible, and perhaps even not desirable, to even entertain the notion of onshoring the entire supply chain. Are there specific areas within that supply chain that you think you can focus on about onshoring and returning to UK?

Nusrat Ghani: We can reference the work that we have done with lithium in Cornwall recently. There are far more base minerals in the UK, which you are probably aware of. Do you want to touch on the project with lithium, Fred?

Fred Perry: There is also refining capability. If we look recently, we have had investments from Green Lithium, British Lithium and Cornish Lithium as well. In terms of going back to the electric vehicle side, we are looking at EV components, including from Ford on their Halewood site and Stellantis as well—their production started last week after an investment from the ATF, and they specialise in electric drive units as well. We are looking not only at the raw materials but further upstream in terms of the advanced manufacturing technology.

Q138 **Andy McDonald:** Could you say a little bit more about that? You have British Lithium in Cornwall. You have Cornish Lithium and Green Lithium Refining Ltd, which is in my part of the world in Teesside. These are all fascinating projects around refinery. Could you give the Committee an update as to when they are likely to come onstream. Certainly in terms of the latter operation that I have mentioned, I think a final investment decision is still awaited. Is that the position?

Fred Perry: We have already been able to provide an offer in principle. We are working with the company on its investment raising and financing to support and ensure that we can give it, beyond the ATF grant, as much support as we can, so that it can get its operations commenced.



Q139 **Andy McDonald:** Is there any thought about what proportion of the supply chain will be home-based by 2030? Is there a target for that? Can you express it in those terms?

Nusrat Ghani: We have not determined that we need X amount to fulfil our need by 2030. We are trying to make sure that we are supporting as much home-grown mineral capacity as we can. I am putting in place relationships with like-minded partners. I sit on a number of international mining or mineral groups. There is one with the United States, which is about minerals security, and one in South Africa. We are also signing agreements with other countries—recently with Indonesia and one with Saudi Arabia. I believe that there is one in Australia.

I am doing everything I can to stand up our critical mineral refresh, which is saying, “Who can we work with?” If we are not involved in the refining, possibly in the manufacturing, who can we work with, ensuring that if they are involved in mining in those home countries, they are doing it to the highest standards that they can? We know that we need lithium and cobalt. How do we give the confidence to the UK manufacturing sector that we have the right relationships and partnerships to ensure that they have access to these minerals going forward?

Q140 **Andy McDonald:** You are presumably taking steps to attract manufacturers of cathodes and anodes. Is that happening? What is happening in that space?

Nusrat Ghani: We have two big funds that Fred can talk about, along with how we are trying to attract investment to the UK in those spaces.

Fred Perry: We have the automotive transformation fund as well as a number of research and development funds that we run via the Advanced Propulsion Centre. We have a healthy pipeline and a number of prospective investments that we are considering. Of course, I cannot speak about sensitive commercial discussions that are still in train, but we are speaking with a number of companies across the supply chain, including anode and cathode manufacturers.

Nusrat Ghani: If I may just put this on the record, because it is quite a large sum of money, the Advanced Propulsion Centre is £1.4 billion to accelerate the development and commercialisation of strategically important vehicle technologies. Within that, we have the ATF that Fred has just mentioned, which is £850 million in total as well.

Q141 **Andy McDonald:** Finally on that, will that extend to the recycling of the component parts? Obviously that is going to be critical going forward.

Nusrat Ghani: It will be. Also, within the battery strategy we are going to be looking at recycling. We want to make sure we are doing the whole life-cycle of batteries.

If I can, I will just extend the conversation very quickly. It is not just about energy going in. It is about how we manage that energy as well.



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One project that I visited recently that we support is Domin, which is near Bristol. This is looking at how we manage energy and use less of it. Forgive me, I am not an engineer, but I looked at their hydraulic active suspension, which is a tiny little piece of equipment that reduces the need for energy going into vehicles and lowers the impact on the environment. This technology that it has developed increases efficiency by 90%, saves a billion tonnes of CO₂ every year and reduces the need for energy going in.

We are trying to think about all sorts of technologies that we can support and promote, and not only about attracting gigafactories here and making sure we have the critical mineral supply chain behind there, but also how we can be sure that we are using them in the most efficient way possible.

Q142 Chair: I want to come back to the availability of capacity. You said that you are confident that there will be 89 GW of capacity by 2030. We know, because we have visited it, that Envision is building 12 GW in Sunderland. There is the possibility of expanding that at a later stage. We know that a deal has been done for a 40 GW plant with Tata in Somerset, but there are not yet spades in the ground on that, which is a recent announcement. How confident are you that we will have that capacity available to support our automotive industry in time to meet the challenge of delivering electric vehicles once we are no longer able to purchase those powered by an internal combustion engine?

Nusrat Ghani: Envision has ambitions to scale up to 38.

Chair: Are you in discussions with them? How likely is that to happen? What support are you giving them to make certain that that expansion takes place?

Nusrat Ghani: I believe that the officials are going to be having a much more private briefing with you after this session to talk about some of the decisions that are slightly more commercially sensitive. I hope they will provide you with some more information then.

It is such good news to have one of the largest gigafactories in Europe here in the UK. Because of that investment, we are reminded of the circumstances of the UK, not just the space that we have but the energy that people can get hold of and the skilled labour they can get hold of as well. There are the two funds we have spoken about that can be supporting these initiatives.

I am confident that we will attract more investments, which we can talk about shortly, as they come through. We are in constant negotiations with companies that are attracted to come to the UK. These are always complex because they always try to balance off the support they could get in the UK versus support in Europe, getting confidence in levels of manufacturing. Of course, the Mini commitment yesterday reminds investors and the industry that this is a growing sector in the UK.



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Q143 **Chair:** Minister, are you confident that we have the necessary level of urgency here? There is a race on, is there not? We know that there are overseas manufacturers—Chinese manufacturers—seeking to come into our market with already proven and established UK models that they have not yet marketed here. It took two years in the negotiations to get Tata to commit to the site in Somerset; why did it take so long?

Nusrat Ghani: These negotiations always take time because firms are trying to balance out other parts of the world that they could be committing to. There was a complete change in energy costs, for example, with Putin invading Ukraine. That would have changed the circumstances completely. There was also a change in the cost of some of these base mineral products. Everyone was rearranging their business plans the whole time.

We were in negotiations—I think there will be a much freer conversation happening privately after this session—about this supply and the package that we can provide with companies that come and invest here. Every conversation I have with the automotive sector is focused on, fundamentally, supply chains. We know that this is a major factor in production, so we need to make sure that our supply chains are solid. With that, we need to make sure we have gigafactories in the UK.

Q144 **Chair:** We know that other Governments around the world, in the United States with the Inflation Reduction Act and in the EU, are providing support for people who want to establish gigafactories. We know that those are going to be the base for where vehicles are assembled. Are you happy that we are proceeding with this at sufficient pace to ensure the viability of our own automotive industry?

Nusrat Ghani: The Inflation Reduction Act is a remarkable piece of legislation that changes the circumstances for all automotive manufacturers worldwide. It is good that the Americans have finally come on board with dealing with the issue around the environment and achieving net zero. We have the ATF budget. It is £850 million. That is a part of the Advanced Propulsion Centre, which is £1.4 billion.

We have appropriate support, but it is not just about support in the UK. It is about making sure we have the right circumstances. That is what we are trying to provide to investors, to give them the confidence to come and support the car sector in the UK.

Q145 **Chair:** Is it important for us to match the generosity of the US and the EU, or do we have other things going for us that mean that, while we need to give some support, we do not need to go quite as far as that?

Nusrat Ghani: IRA is billions of pounds. I do not think we can get into a subsidy race. It is about showing what we have that is unique in the UK. What has attracted Mini recently and Tata is not just about the funds that are available. It is fundamentally about the skills and the technology that is being exploited and then commercialised here in the UK.



Q146 **Andy McDonald:** On this critical issue of attaining those targets on battery manufacturing capacity, there would be an alternative. The Government are quite clearly committed and that is the trajectory. If the alternative would have been saying, "Let other people get on with it and we will just carry on," thank goodness we are not doing that. What would be the consequences for us if we do not hit the targets that are set out? The Chair has referred to the time it has taken to actually get spades in the ground. If we do not do that, what is it going to mean for the country, the wider economy and other sectors? What would the impact be for us if we did not achieve those targets?

Nusrat Ghani: We will continue to import those products in, but we do want that to happen. We want to make sure those products are manufactured here in the UK. It creates thousands of jobs and upskills workers in the workforce. We know that this transition is taking place. We would rather have ownership of that market here in the UK versus overseas.

I do not buy that we are behind the curve, considering all the new announcements we have had from car manufacturers committing to producing EV vehicles in the UK. Even though it may seem as though it is only Envision and Tata, it is about the capacity they are providing. I am just trying to think how that compares to the capacity in other countries. The gigawatt capacity they will provide in the UK is remarkable.

Q147 **Andy McDonald:** Minister, we have those expressions from the car manufacturers that we either have been or still are behind the curve. That is a matter for you to explore with them directly. Have there been any rumblings from these manufacturers that if there is not sufficient battery manufacture capacity in the UK, they will have no alternative other than to take their plants elsewhere?

Nusrat Ghani: Supply chains is more important than just factories. It is around other issues. Semiconductors come up quite a bit, so it is much broader than just battery capacity. If that was the case, we would not have had the good news we have had so far. Having said that, it is incredibly competitive on a number of fronts. It is a very tight labour market. There are always challenges around energy costs. We are always having conversations about what more we can do better to continue to give them to confidence to invest here as well.

Fred Perry: Yesterday at the Automotive Council we were discussing with industry general competitiveness, including the price of energy as another key issue. In terms of the Government response for advanced manufacturing industries, we are working on a plan for advanced manufacturing with Ministers and our Secretary of State to bring forward at the autumn statement, which the Chancellor had outlined as one of his five key growth sectors as well. In that we plan to set out how the business environment in the UK can remain competitive.

Q148 **Andy McDonald:** I do not think it is any secret that we have had



evidence around the issue of skills as well. That is perceived by the industry as being a very important deficit. There is little sign of that being addressed adequately. What steps are you taking to address those concerns? When some of these OEMs are advertising for skilled workers in these particular sectors, they are finding that there is little by way of supply of appropriate skills.

Nusrat Ghani: The tight labour market is a challenge and we are working with the Department for Education in particular, but within industry as well, doing our best to not only promote but to retain. With the manufacture of new EVs, there is the opportunity to retrain as well.

One issue that we have is that there is a perception of what it is like to work in the automotive sector. Actually, it is very diverse and dynamic. These are very well-paid jobs. The sector is on an upward spiral, but it is about getting people to think about coming to the automotive sector versus other sectors they could work in or sectors that they think are more technologically advanced, which is also not an honest representation. We know how advanced these factories are, to be honest.

Q149 **Andy McDonald:** With respect, that is an assessment with which I agree, but what I am trying to find out is what is actually happening to address that gap. Could you give me some examples? There might be a geographical focus to it, but surely we are looking at certain opportunities to promote those skills and sustain them. That is the important thing, because people are not coming through.

Nusrat Ghani: We talked about the council that I co-chair. The UK automotive workforce is highly productive—something else I know you are going to agree with—and second only to Germany at a large-manufacturer level. At the moment, manufacturing employers have developed 149 high-quality apprenticeship standards to meet their skills needs. We are working with them and the Department for Education to ensure that we have apprenticeships in place that will encourage people into the workforce. Edmund, do you have anything else on the battery manufacturing technician apprenticeships?

Edmund Ward: Again, the importance of skills at every level is really important. There are apprenticeships at level 2 and some of those courses are at manufacturing engineer level 6. That is really important. We have things such as the UK Battery Industrialisation Centre as well, as part of the Faraday battery challenge, which is developing the next generation of technologies. By developing the technologies here, we are developing the skills in the manufacturing as well as the product, so that helps to support the supply chain.

Q150 **Andy McDonald:** We are clearly not developing those skills in a timely fashion because you would not have OEMs saying that we have a skills deficit if that was happening. Why on earth are we in this position where we have these opportunities that we all want to embrace yet we do not have the skilled workforce coming through? Why has that not been



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identified much sooner? What discussions are going on with the DfE to make sure that there are opportunities within the curriculum to bring our young people into these industries?

Nusrat Ghani: It was always identified, since I picked up the brief. There was a very regular communication with the Department for Education. We are aware of it. It has been in place for a while. One of the challenges that the advanced manufacturing sector has, not just in the automotive space, is being able to attract and retain a labour force. That is not just a challenge for the automotive sector, but we have put in place apprenticeships. We are doing everything we can to promote how advanced these factories are and how dynamic work can be, especially if you end up in a place where they are producing electric vehicles as well.

Q151 **Andy McDonald:** Are you making representations about the better utilisation of the apprenticeship levy?

Nusrat Ghani: Oh my goodness, yes. This is not something new. When I was a Transport Minister, dealing with a lot of construction firms, the apprenticeship levy came up as a challenge for many of them. There are constant representations to the Department for Education.

Q152 **Andy McDonald:** May I ask a little bit about Britishvolt? That was a very significant opportunity. We know the story and the history. What are the lessons that we can learn from that endeavour? What do we take away from it?

Nusrat Ghani: It is to appreciate, regardless of what you read in the newspapers, that the ATF has quite strict criteria because we have to be able to showcase how we spend taxpayers' money. A number of checks and balances are put in place before any funding is handed over, including an assessment of management capability.

If a firm comes forward but is unable to meet the milestones that that firm itself agrees with officials, there is no guarantee that support will be provided, however brilliant a firm may think that its idea is. It has to be backed up by a solid process that it has to showcase to officials to make sure it is meeting those milestones. My takeaway from that is that we should not be talking too soon about any collaborations or support we provide to firms until we confidently know that they have reached the milestones and that support will be provided.

Q153 **Andy McDonald:** When the Committee visited Sweden, we talked to Northvolt. It was self-evident from those discussions that the reason for its success is that it had a product and a customer. Do you think that that applies to the Britishvolt experience? Tata and Envision are not the end of the story, so how do we take that forward?

Nusrat Ghani: You need to have a customer base to provide us with confidence that it is worth us supporting the product that you are going to manufacture. I am not sure what more I can say without it becoming commercially sensitive. I am sure that Fred will come in in a little



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moment. There was a lot of noise about Britishvolt, but you have to meet the agreed standards and be transparent when officials require data on how far you are progressing on your business plan. That, unfortunately, did not take place. Fred, I am not sure how much further I can go.

Fred Perry: It is true that the off-take agreement certainly de-risks any investment. We saw with AESC and Tata that that has been exactly the case. The judgments we make, as the Minister has said, are about what we see through due diligence and being able to protect taxpayers' money, but also trying to have a balance of risk across the portfolio that we invest the ATF into, so that we can try to look at new market entrants as well. In some cases, firms do not meet their drawdown milestones and so on and that leads to failure, but it is a fine line and there is judgment across different cases on that balance of risk.

Nusrat Ghani: I know you are very passionate about this and it matters a lot to your constituents, but I want to put on record that engagement was significant from officials. There was no question about that, but it was unable to meet the conditions that it had agreed to.

Q154 **Chair:** Is there a possibility that somebody else may take up that site with a product and a customer?

Nusrat Ghani: Yes, it is a great site. It is absolutely viable. We know that there are discussions at the moment with another potential firm that is very interested. We cannot go further because of how commercial it is, but the officials are working with it. It is a great site. It is just that Britishvolt was not the firm that was going to take this forward.

Q155 **Jonathan Gullis:** The Faraday Institution told us that the UK is "losing ground to the EU and the US, where domestic battery supply chains are being rapidly established and large-scale government support packages have been agreed." Do you agree? If so, are you confident that we can catch up?

Nusrat Ghani: Who from the Faraday challenge said that?

Jonathan Gullis: I cannot remember exactly the name. That was from when we spoke to the institution itself.

Nusrat Ghani: We provide it with a huge amount of support to try to test and exploit new technology, so I am surprised that it has put that out there. We are working as fast as we can to make sure that we have gigafactories lined up. We have already talked about both Tata and Envision to date. There is no doubt that we would always want to move faster and further than all our competitors and we will continue to do so. I was not sure whether there was anything in particular that the Faraday challenge was concerned about.

Q156 **Jonathan Gullis:** One thing that has become quite apparent to me and other Committee members is that you rightly praised, in part, the Inflation Reduction Act in the United States, but that appears to be



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having an impact on private investment in battery manufacturing and the associated supply chain in the UK. It appears that the Inflation Reduction Act is essentially a grab from the United States to attract the best and the brightest from around the world to make their home in America, rather than stay in the United Kingdom. Out of interest, how are you, as a Department and as a Minister, responding to that challenge?

Nusrat Ghani: The challenge of IRA is global. A lot of these firms are international. They have footprints in Asia, Europe, the UK and America. There is no doubt that because of IRA, many of them are considering globally where they want to continue manufacturing. It is not just a UK issue: it is indeed global.

We are putting together a response for the Treasury to make sure that we reflect the challenges and opportunities that have come about because of IRA. That is also about us being really close with the Americans on the minerals security partnership platform, constantly raising the automotive manufacturing sector when I meet American counterparts, let alone my Secretary of State and other officials. In that response that we put together, the Treasury continues to provide its support to us. We know that the Chancellor has said that the advanced manufacturing sector is a key sector for him to continue to support.

To reflect what is also happening in the UK and the investments that we have been able to secure, we have talked about Nissan. There was a £1 billion investment in the north-east of England. We have had £227 million from Ford in Halewood, £100 million from Stellantis in the Vauxhall plant in Ellesmere and a £2.5 billion investment from Bentley that is coming into the UK. We know that it is competitive, which means that we are in constant negotiations and conversations with firms, encouraging them to come here versus them going anywhere else in Europe.

Q157 **Jonathan Gullis:** All that was really positive in terms of what investment we have secured. What extra investment could have come in that has decided to not come to the UK but to go to the United States instead because of the offer of the Inflation Reduction Act?

Nusrat Ghani: I do not have that to hand. It takes a long time to move a manufacturing base. It would not have happened in this period of time. I know that in conversations that have been a bit broader with manufacturers that have footprints globally—these are conversations, so this is not a fact that I want people to run away with—they have talked about looking at some of their outfits in Asia and seeing whether they could be in North America. Those are broader conversations.

Q158 **Jonathan Gullis:** Do you think that the Inflation Reduction Act is overly protectionist?

Nusrat Ghani: Yes.

Q159 **Jonathan Gullis:** In 2012, the UK was the first country in Europe to open a gigafactory. Why is it that other European countries are now



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further ahead, with more gigafactories either in operation or under development than in the United Kingdom?

Nusrat Ghani: I would not say that it is about the number of factories you open; it is about the capacity. I would argue, considering we need 89, that the fact that we have 40 plus 12, which could potentially be 40 plus 38, is a really good place for us to be at. Having said that, we have to go further as fast as we can.

Q160 **Jonathan Gullis:** Is there anything you have learned from what Europe is doing in order to try to make sure that we remain competitive in this space and do not fall behind?

Nusrat Ghani: They are so competitive and we have to put together wraparound packages for the automotive sector. We have to make sure that support is provided in every sense, whether it is being competitive on energy costs or making sure that planning is as easy as it can be and that we are dealing with labour challenges in that part of the world. We need to ensure that we are a part of any new tech they want to exploit, whether it is through the Faraday challenge or the APC, so it can be tested and exploited here in the UK.

A number of these firms are now looking at the next generation of vehicles, which have a level of autonomy. We are really keen that we are a part of that conversation as well. It is so competitive out there, which is why it is so important that we keep the sector close, which is why I co-chair the Automotive Council.

Q161 **Jonathan Gullis:** We have seen in recent media reports the idea that the Government were apparently not offering enough subsidy in order to attract investment into offshore wind. Is this a space where the Government are making improvements? Or is it a subsidy issue where other European competitors are offering quite large support to companies in order to say, "Come and make your base here"? How are those negotiations going with Treasury in order to get the wallet open so you can make more of an offer?

Nusrat Ghani: If you are able to provide me with any more strength to my elbow to get money from the Treasury, I will welcome that from you, Mr Gullis, and from the Chair and the Committee.

Having said that, it is not always about the financial support. They want to know where the technology is. They want to know where the IP is. They want to know where there are lots of other small SMEs that can help them with their supply chains as well. They want to know how they can get hold of the labour force that they need. They want to know that we are opening up new markets for them beyond Europe and we are providing that too. They want to know that we have a good relationship with the United States when it comes to critical minerals and minerals security partnership. We are providing that as well.



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Where we need to do much more is to attract investment. Every time we win a new announcement—a new commitment to roll off a new car—it means that supply chain gets even more resilient. Then we have pressure ensuring that we have the minerals and batteries behind that as well.

Q162 **Jonathan Gullis:** On the specific area of energy costs, which you raised earlier, what more do you think the Government can do to give investors confidence that energy costs for energy-intensive industries—I declare an interest as someone who has ceramic manufacturers in their constituency—like battery manufacturing in this instance, will come down relative to our competitors?

Nusrat Ghani: There was an issue about energy costs because of Russia and Ukraine. We supported a number of energy-intensive industries, including those that you campaigned on so well, Mr Gullis. Within the EII there is support for gigafactories. I am constantly campaigning to make sure that as much of my portfolio, if it is energy-intensive, gets the support that it needs.

I must say that as there has been more stability in energy prices and access to energy, that has changed the dynamic of that conversation. It was much more of a painful conversation a year ago. Having said that, when companies are considering where they could roll out their new car or increase their manufacturing, it is interesting, having served on this Committee before, to now see, on this side of the table, how so competitive some of these countries are in Europe. We have to make sure we are matching as much as we can.

Q163 **Jonathan Gullis:** I would support what Mr McDonald was saying earlier about the skills agenda and, as you say, the labour area. When Germany, for example, is producing 54% of young people doing apprenticeships but the United Kingdom is only doing 10%, this is a very concerning statistic when we know that the introduction of the apprenticeship levy has stifled some businesses, not only in the SME space. I appreciate that at some of these larger companies that would not be a problem. There is that levy transfer as well, which I think could also be increased up to 35%. That was in a report released yesterday. These are the types of ideas.

What work is being done with the Department for Education to improve access to skills training, in terms of retraining for adults with the lifelong learning entitlement, but also making this something that is attractive? I totally agree with you about perceptions. We certainly see it in ceramics that people still think of ceramics as a Victorian-era industry. Actually, it is technologically much more advanced now. What are we doing in this space to improve skills? Ultimately, we either have to constantly pull the lever of immigration to fill these vacancies, or we simply will not be able to make that offer and these companies will go to Europe in particular, which is very competitive in this space.

Nusrat Ghani: We are constantly lobbying—can I use that word?—the Department for Education, particularly on the levy, making sure that the



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apprenticeships that are provided are exactly what is needed by the sector. We know that there are gaps in the market. I was at Rolls-Royce recently and they were talking about the gaps in the market there.

These are fantastic firms that provide fantastic careers. We need to ensure that we can communicate well to young people and older people that working in this sector is going to be not only financially rewarding but is going to provide them with a certain amount of security too. We are campaigning, but we do not hold the levers of power. It is the Department for Education.

One Minister in the Department is incredibly focused on the levy issue and will be making representations to the Department for Education, as I am too. I do not doubt that this is something that your report on the back of this inquiry can look at, which will provide us with even more support to encourage the Department for Education to understand exactly what is need by industry.

Jonathan Gullis: I totally agree. Businesses are crying out for much more of an offer and having that flexibility in the system. It is good to hear that Ministers are seeing that too.

Q164 **Chair:** Minister, Mr Ward referred to the call for evidence to inform a UK battery strategy. Given that we opened our first gigafactory 11 years ago, in 2012, and we are moving faster than anybody else into the adoption of EVs and we will not be able to put an internal combustion engine-powered vehicle on the market after 2030, do you not think that it is a bit late to be developing that strategy now?

Nusrat Ghani: It is remarkable that I think only Norway has a battery strategy. I can go back and check. A huge amount of work has taken place, as you said, over a number of years. Edmund may be one of the longest-serving officials within the Department who has been looking at this.

Q165 **Chair:** Why have we not had a battery strategy earlier if it is that important to our automotive sector and we are demanding that people switch to EVs very quickly?

Nusrat Ghani: There has been tremendous work done, as we have mentioned, through the APC, the Faraday battery challenge and within the Department, looking at not just batteries for the automotive sector but for lots of other industries as well. We did the critical minerals work. We did the import supply chain work. We wanted to put in place a battery strategy that looked at the opportunities now and where it is going to go going forward as well. A huge amount of work has been done. We are pulling it together now, working with industry, and we will be able to show the direction of gigafactories and every other reason to use batteries in the UK going forward.

Q166 **Chair:** What are the reasons why a battery manufacturer should invest in the UK? Why should they come here?



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Nusrat Ghani: We have fantastic end-to-end supply chains. If they need a market to sell into, we can provide them with that as well. If they are looking at how they can manage recycling and the life-cycle of a battery, we can provide them with the technology for that too. If they are looking at a skilled workforce—I know that there are challenges—we offer them that as well. We have a fantastic ecosystem in the UK when it comes to the automotive sector. We know that gigafactories are only one component of that.

Fred Perry: The scope of the battery strategy goes beyond automotive and electric vehicles to include other industries as well, including space and aerospace, where, for example, we have leading technology in terms of vertical take-off and so on. Part of the intent of the strategy is to go beyond some of the fundamentals we already have in place on the auto side to look across manufacturing industries.

Nusrat Ghani: We also, uniquely, have the UK Battery Industrialisation Centre. It is a £130 million national battery scale-up facility, which provides skills for the growing battery sector. It provides even more confidence to investors and industry that this is a good place to invest.

Q167 **Chair:** I have seen the great work that they do at the Battery Industrialisation Centre, which is very close to my constituency as was placed there to support the West Midlands automotive sector. Where do you stand on the proximity of a gigafactory to automotive assembly? We visited Sunderland, for example, and saw the great advantages that Nissan has by having the Envision factory directly next door to it. Is that important going forward?

Nusrat Ghani: This might be a leading question, in a positive way, because I know that you have been interested about where other sites should be applied. Where the sites are set up are always commercial decisions. I know that many members of the Committee are passionate about sites close to their constituency. You are absolutely right: why would a site not want to be very close to the products it needs and have them down the road, as it were?

Q168 **Chair:** We have the Battery Industrialisation Centre in Coventry immediately adjacent to the airport, with a vacant site available for battery manufacture.

Nusrat Ghani: I knew that this was going to come next.

Chair: What is your Department doing? We accept that we need the Somerset capacity. We need what Envision is doing and we need it to expand that. What are we doing about making certain that we get additional sites, and additional sites that are close to the historic heartland of automotive manufacture?

Nusrat Ghani: You are a great advocate for Coventry. I know that you have mentioned it a few times. The ATF is exactly for that: to help the creation of these gigafactories and to ensure that we are able to



showcase the best of the supply chains, as it were, to give them the confidence that they need here in the UK. On Coventry in particular, I might turn to Fred, because he works very closely with the ATF fund.

Fred Perry: These are commercially sensitive matters, but we are in discussion with a number of potential investors across a number of sites as well. The Coventry site is one. We think of the other industrial sites across the UK as well in terms of those that we take to prospective investors to consider. I do not have a specific answer on the shortlist of investors that might be thinking about Coventry, but we approach a number from across different investor locations.

Q169 **Chair:** In terms of the future, the Battery Industrialisation Centre is doing great work in development. There is also some tremendous work being done at Warwick Manufacturing Group under Professor Greenwood there. One thing that we know the UK is brilliant at is our research and development and the ideas that come from our brilliant scientists. Occasionally—too often, in fact—we do not manage to get that into full manufacture. We have the horrible valley of death and the catapult centres set up to deal with that. If we are a little slower in the development of the batteries compared to some of our competitors, how can we make certain that we are the forefront of the new technologies and can be pioneers and get that into manufacture?

Nusrat Ghani: You have talked about the Warwick site, which is absolutely fantastic. It is about ensuring that we are networking them all. We talked about the catapult centres as well, which are meant to be there, in place, to ensure that any new technologies can be exploited quite quickly. We also have Make UK, which looks at how we can ensure that any new technology is then commercialised within firms to deal with their efficiency and costs as well.

We have a unique ecosystem in the UK where some of the best ideas are tested. We have to make sure that they are then commercialised and the IP remains in the UK as well. We are working on the advanced manufacturing plan that Fred spoke about earlier. We are hoping that within that plan we can provide even more support and connectivity between how these ideas are tested and created and how they end up on our advanced manufacturing sites as well.

Q170 **Andy McDonald:** I want to explore very quickly the space for alternative technologies. We have concentrated fully on batteries, for good reason, but a lot of people in the industry are saying that we should be perhaps a little bit more agnostic about our approach to this and leave the space for innovation and development with other technologies. I wonder how alive you are to those voices.

Nusrat Ghani: They are talking about hydrogen, for example. I have filled up a car with hydrogen in Aberdeen. We are completely aware that we need to make sure that we are able, if we need to and the market exists, to exploit alternative fuel as well. I have opened up a number of



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projects in the UK where they have used vans that use hydrogen on construction sites, for example.

There is no doubt that electric vehicles are going to be the space that we need to make sure we are providing a huge amount of support to. We need to get that absolutely right, which means getting more gigafactories up and running and providing the support for all the manufacturers that are turning to electric vehicles and giving their commitment here in the UK. We are not just focused on electric vehicles, even though that takes up some amount of time. We appreciate that there is hydrogen and other alternative energies too. Fred is going to talk about any other options.

Q171 **Andy McDonald:** Yes, and where the infrastructure might be more readily available as well, in terms of the user of the vehicles.

Fred Perry: In terms of the ATF's remit, grant awards are available for hydrogen technologies. As an example, we awarded £60 million to Johnson Matthey for its operation in Hertfordshire on hydrogen technologies. There are other supply chain investments that we are making on hydrogen too. It is not just a battery-led transformation fund.

Q172 **Jonathan Gullis:** To support Mr McDonald, I am very concerned that it feels like we are being pushed down an electric route when there are alternatives out there that should be explored and there should be willingness to look at. Hydrogen and hydrogen combustion is certainly one. I was interested to hear the representations the Department has made to the Department for Transport about allowing hydrogen combustion engines to be deemed to be net zero, as they are currently in Germany but not yet under current UK legislation.

Fred Perry: We are in ongoing discussion with the Department for Transport and, in particular, already exploring for heavy goods vehicles and larger vehicles, where hydrogen technology seems to be the leading technology in being able to decarbonise those forms of transport. It is a constant discussion, which we are updating as the technologies are advancing so quickly.

Nusrat Ghani: Construction sites and any sites with links to ports are very interested in exploring hydrogen. We know that we need to make sure we are mapping that energy resource as well.

Chair: Minister, thank you for your time this morning. We know that this has been a very busy week for you with your shipping responsibilities and this being International Shipping Week. This is the conclusion of our evidence session. We will draw up our report and will be very interested to hear your response to some of the ideas and proposals that I am sure we will come forward with. Thank you once again.