

What is a Gigafactory?

Summary

- A Gigafactory is a facility to manufacture batteries for electric vehicles and a range of other applications at scale. The term Gigafactory has been made famous by Tesla, but has since been adopted to refer to any factory building batteries at such a scale
- There are no such facilities of this scale in the UK currently, although Gigafactories have been delivered in the United States, Europe, and Asia
- Without developing Gigafactories in the UK we risk fatally undermining our automotive and other battery enabled sectors, including the jobs and supply chain which sit alongside it
- The UK Government has identified Gigafactories as critical to the UK's automotive sector, future economic growth, and Net Zero targets
- Given the West Midlands' mature automotive sector, and emerging specialism in battery technology, the region has been identified as a potential location for a UK Gigafactory

Protecting our automotive sector

A Gigafactory is a facility which can produce batteries for electric vehicles at scale.

The transfer to fully electric vehicles is happening now. This is both an existential threat to the UK's automotive sector, and a once in a generation opportunity to take a global lead in automotive technology.

Driven by Government policy, and the target to reach Net Zero by 2050, sales of petrol and diesel cars will end by 2030. This means decisions which will impact future automotive production are being made today.

Within an electric vehicle, the battery makes up 40% of the overall value of the car. Batteries are also expensive and difficult to transport. Future manufacturing and supply chains will be fundamentally re-configured – and potentially re-located – in response to the location of a Gigafactory.

According to the Faraday Institution, a leading national independent research institute, without a UK Gigafactory to produce batteries and support wider electric vehicle manufacturing, the UK will lose out on 105,000 jobs in the automotive sector.

Securing a Gigafactory in the West Midlands is critical to protect our automotive sector and the people it employs.

A critical piece of national infrastructure

Securing Gigafactory capacity in the UK has been identified by the Government as critical for the future of UK manufacturing, economic growth, and achieving Net Zero. The commitment has been included in the Conservative Party manifesto and has also been backed by the Labour Party.

There is currently no large-scale battery production in the UK although other Gigafactories are either operational, or in production, in Europe, the US, and Asia.

The Faraday Institution has predicted that the UK will need multiple Gigafactories over time and could require up to seven in the coming years.

Supporting the 4th Industrial Revolution

The fourth industrial revolution is set to usher in a new era of manufacturing and production based on emerging technologies, Artificial Intelligence, and clean energy. Gigafactories will be at the forefront of this transition and encompass cutting-edge manufacturing technologies, including automation.

As well as being fundamental to electric vehicle production, battery manufacturing will also become critical in all aspects of our lives. Over time batteries are predicted to power our homes, factories, and workplaces. A Gigafactory at Coventry Airport will place the West Midlands at the heart of this exciting new wave of technology and power things that we do not even know about yet.



Indicative CGI of the Gigafactory proposals

Frequently Asked Questions

Why has the West Midlands been identified as a potential location for a Gigafactory?

The West Midlands has several strategic advantages. Firstly, the region is home to an advanced automotive sector, skills eco-system, and supply chain. This includes the UK largest car maker – Jaguar Land Rover.

Secondly, much of the research and development being undertaken in battery manufacturing is happening in our region. This includes at the UK Battery Industrialisation Centre and Warwick Manufacturing Group, in Coventry.

Thirdly, the region is centrally located within the UK which offers major advantages to supplying the entire country.

How many jobs will a Gigafactory create?

Our early estimates suggest that a Gigafactory at Coventry Airport will create at least 4,500 new jobs directly on site. This is likely to be in a range of roles with most jobs being highly skilled. In addition, the facility will create or protect tens of thousands more jobs across the automotive supply chain both in the West Midlands and the UK. Significant further employment will be created through construction.

Why can't we simply import the batteries we need?

With an electric vehicle, around 40% of the value is the battery. They are also expensive and difficult to transport. If we do not secure battery manufacturing in this country, over time automotive manufacturing will coalesce around battery production and the UK sector would be significantly depleted.

We must also consider the impact of new trading rules because of the UK's new trading relationship with the EU. As a result of 'Rules of Origin' cars will be subject to tariffs unless a significant proportion of the vehicle is manufactured in the UK. If batteries were imported, our automotive sector would be at a significant international disadvantage.

Who will manufacture batteries at Coventry Airport?

Discussions have been ongoing with several potential battery manufacturers and continue to take place. However, no final decisions have yet been made. Any investor in the Coventry Airport site will need to work closely with our region's existing automotive manufacturers and we are collaborating with industry to develop the plans.

Who will be the customer for batteries produced at Coventry Airport?

The West Midlands partnership has been collaborating closely with all the car makers based in the West Midlands, as well as several further afield. However, no final decisions have been made.

How many batteries will be manufactured on the site?

At this early stage, we cannot predict exactly how many batteries will be produced. This will depend on several factors, including market demand at the time. It will also depend on the end users, and the mix between the automotive sector and other battery enabled applications.

Does the Government back the proposals?

The Government has made £500m available to back proposals for UK Gigafactories and is inviting bids from interested groups and parties. The West Midlands partnership will be submitting a bid in due course and by securing planning permission for the site we will be at a significant advantage to achieve Government backing and investment.

There are proposals for a Gigafactory in Blyth, do we need more than one?

It is likely that the UK will need several Gigafactories in the future and the Government is inviting bids from regions across the UK. The proposed Gigafactory in Blyth is a separate proposal which, if it comes forward, would progress alongside the Coventry Airport site.