

UK's first magnet refinery given huge financial boost as first ever strategy for supply of critical minerals published

- Government backed Pensana to build the second-largest magnet materials refiner outside of China, in East Yorkshire, creating jobs and boosting UK's electric vehicle supply chain
- new Critical Minerals Strategy sets out measures to improve the resilience of critical mineral supply chains
- critical minerals – like those used in magnets – are essential to economic and national security and capitalising on growing industries

A multi-million pound investment in the UK's first-ever magnet materials refiner was launched today (Friday 22 July 2022) – securing hundreds of jobs in East Yorkshire, and a strong foothold for Britain in the international market.

This comes as the government publishes the UK's first ever '[Critical Minerals Strategy](#)' to bolster the resilience of supply chains and seize on the economic opportunities of growing industries, such as electric vehicle manufacturing and offshore wind.

Speaking at the official opening of Pensana's £145 million Saltend site today, Business Secretary Kwasi Kwarteng confirmed that the facility will be developed to process the critical minerals used in magnets, a key component for manufacturing electric vehicles (EVs). Pensana expects operations to begin at the end of 2023.

The facility is backed by the government's Automotive Transformation Fund, an £850 million programme to electrify Britain's automotive supply chain and protect our nation's competitiveness in the global market. It will make the UK one of the only places in Europe to have the facility to refine the rare earth oxides used in the creation of magnets, and will also lead to the creation of 126 new and skilled jobs in the area.

As set out in the new 'Critical Minerals Strategy', minerals such as graphite, lithium and silicon are vital to the economy, as they are key components of products ranging from laptops to aircraft. But supply chains are complex and markets are volatile, with most critical minerals sourced from just a handful of countries, particularly China. This leaves UK jobs and industries reliant on minerals vulnerable to market shocks and geopolitical events. Ensuring UK firms have a resilient and sustainable access to critical minerals will be vital for the growth of future industries such as EV manufacturing, which will support jobs across the UK for decades to come, and national security.

That's why today's strategy sets out plans to develop more robust supplies of these minerals for the vast range of industries reliant on them, protecting Britain's interests into the future. The measures include bolstering domestic production, building the UK's skills base, carrying out world leading research and development, and enhancing reuse and recycling. It also notes the importance of working with international partners and like-minded allies to build trading relationships and diversify supply chains.

Business and Energy Secretary Kwasi Kwarteng said:

With rising geopolitical threats, Britain needs to move quickly to secure the rare earth minerals necessary to supply our future industries. Most of these minerals are sourced from just a handful of countries, leaving Britain vulnerable to market shocks. We need to develop and strengthen our own supply chains to protect our national security into the future.

Russia's illegal invasion of Ukraine is a timely reminder of how global events beyond our control can impact supply chains, with profound consequences for the economy. To boost our domestic resilience, today's Critical Minerals Strategy lays out our plan to bring high value manufacturing back to the UK to protect our country's future access to supplies.

Our support for Pensana's new facility in Yorkshire shows we are already putting the Strategy's aims into action to diversify our supply chains away from dominant market players.

Pensana Chairman Paul Atherley said:

Pensana is delighted to have secured funding from the UK government's Automotive Transformation Fund, which demonstrates the government's support for Pensana's role in securing the UK's magnets metals supply chain.

Our Saltend rare earth processing hub will be the world's first independent and sustainable rare earth separation plant, with plans to produce 5% of the global magnet metals in 2024. This will play a vital role in transforming the UK's EV and Offshore wind industries, as well as creating high value local jobs in the Humber region.

Production of critical minerals is expected to rise sharply – some as much as 500% by 2050. They are often irreplaceable in the products people rely on for their daily life, in clean technologies and national security – from electric vehicles and mobile phones to wind turbines and fighter jets.

The new strategy sets out an 'ACE' framework, with plans to accelerate growth of the UK's domestic capabilities, collaborate with international partners,

and enhance international markets. Work to develop the UK's onshore supply chains forms just one part of what is planned domestically, with a focus on rebuilding skills, boosting research, and recycling and reusing more as well.

Actions are also planned to use the City of London's unique position as a global trading hub for metals and minerals to make global markets more effective in delivering the minerals we need. Part of this will be to push for better environmental, social, transparency and governance standards in critical mineral markets worldwide. Holding the market for critical minerals to higher standards helps reduce the likelihood of unforeseen events causing supply problems.

The UK's mineral mining heritage dates back to the Bronze Age. Cornish tanners, for example, were renowned and exported their innovations and expertise around the world. The UK has pockets of mineral wealth including lithium, tin, tungsten and others, found from the Highlands of Scotland to the tip of Cornwall, as well as clusters of expertise in refining and material manufacturing.

This follows the creation of the UK's first Critical Minerals Intelligence Centre (CMIC) based in Nottingham. The Centre will improve the resilience of the UK's critical mineral supply chain by providing policymakers with up-to-date data and analysis on supply, demand, and market dynamics.

1. Government support for the Pensana Saltend facility was provided through the Automotive Transformation Fund, the automotive pillar of the Global Britain Investment Fund. The Automotive Transformation Fund is an £850 million programme to industrialise the EV supply chain. This includes unlocking private investment in gigafactories, battery material supply chains, motors, power electronics, and fuel cell systems. It is being delivered by the Advanced Propulsion Centre, based in Coventry.

2. The situation surrounding critical minerals – and which minerals are considered 'critical' – is constantly evolving. In January, the British Geological Survey (BGS) undertook the first [UK criticality assessment](#). The BGS have now been appointed by the government, to run the [Critical Minerals Intelligence Centre](#), which will regularly update this assessment and provide policymakers with a range of up-to-date data and analysis on supply, demand, and market dynamics.

3. The government draws on expert knowledge on critical minerals from across academia, finance, and industry, through the [Critical Minerals Expert Committee](#). The Committee will continue to meet, to advise on the delivery of the Critical Minerals Strategy.

4. The government is also supporting businesses that are working on access to new, innovative sources of raw materials found in the UK.

5. Cornish Lithium and Geothermal Engineering are collaborating to build a zero carbon, lithium extraction pilot plant at an existing site in Cornwall. This £4 million project will be part supported from the government's 'Getting Building Fund', via a £14.3 million allocation to the Cornwall and the Isles

of Scilly Local Enterprise Partnership (LEP).

6. Cornish Lithium, alongside the Natural History Museum and Wardell Armstrong, were awarded over £350,000 for the project 'Securing a Domestic Lithium Supply Chain for the UK (Li4UK)'.

7. In August last year, British Lithium Limited (BLL) was awarded an Innovate UK Smart Grant, with match funding of up to £500,000 from the government to progress its research and development of hard rock lithium extraction in the St Austell area of Cornwall.

8. The UK is already working with international partners through groups like the Minerals Security Partnership, and the International Energy Agency's Critical Mineral Working Group, to responsibly develop global supply chains.

9. The government is also working closely with likeminded international partners to strengthen supply chain resilience.

10. The UK has a leading role in developing global standards in the critical minerals supply chain through work with the European Partnership for Responsible Minerals, the Extractives Industry Transparency Initiative, the UN, the G7 and others.

Industry support for the Critical Minerals Strategy

Jeremy Wrathall, Founder and CEO of Cornish Lithium said:

Cornish Lithium is delighted that the UK's first-ever Critical Minerals Strategy has now been published. This outlines the way forward for a new, domestic, supply chain of the minerals that enable industrial and social decarbonisation. Cornish Lithium is proud to play its part in accelerating the development of this domestic supply chain and looks forward to building a sustainable source of lithium and other critical minerals in Cornwall.

The UK is particularly fortunate that Cornwall has historically been shown to have many of the critical elements needed for the move to Net Zero and sustainable extraction of these minerals in Cornwall builds on the County's tradition of mineral extraction that dates back to the Bronze Age. The Strategy highlights that a domestic source of these critical minerals generate greater resilience for the UK economy as we move away from the fossil fuels on which we have relied for so long.

Sinead Kaufman, Chief Executive, Minerals at Rio Tinto said:

Rio Tinto welcomes the publication of the UK government's Critical Minerals Strategy as an important component in the path to net zero. We are delighted to have contributed as a member of the Critical Minerals Expert Committee along with an informed and

diverse range of representatives from academia, finance, industry and government. We now look forward to helping implement parts of the strategy as a partnership with government. As a UK headquartered company with global operations in more than 35 countries, Rio Tinto is well placed to support the UK government in securing the critical minerals needed for net zero.

Duncan Wanblad, Chief Executive of Anglo American said:

Vital to delivering the technologies and infrastructure required for a low carbon future is a sustainable and responsibly sourced supply of critical metals and minerals. The secure supply of those future-enabling metals and minerals will only be possible through the collaboration of the government, businesses, including in the mining sector, and other key role-players. We welcome this UK Critical Minerals Strategy which outlines many key elements of how such partnerships can deliver to support the UK's strategic objectives.

Isobel Sheldon OBE, Chief Strategy Officer at Britishvolt said:

It is an absolute imperative that the UK has a clear and concise strategy when it comes to the critical materials required for the energy transition. UK government's foresight of creating a world-class battery cell ecosystem, from R&D to mass production, is being matched with policy to help ensure we have the right materials required to successfully produce battery cells at scale. This is a hugely impressive piece of work, incorporating the need for localised materials conversion, where possible, and also recognises the need to create skills and train the talent of the future. ESG requirements have also been accounted for, to ensure the minimal environmental footprint. It's great to also see that recycling has been captured in this detailed future-looking policy. The UK is redefining benchmarks and setting the standards for a successful energy transition, that will result in renewable energy independence.

Maurits van Tol, Chief Technology Officer at Johnson Matthey said:

The critical minerals strategy is key to ensuring the supply of technology metals to UK manufacturing industries. Metals such as iridium and the other platinum group metals are essential to the sustainable technologies Johnson Matthey is developing for global markets, which will advance the UK government's net zero decarbonisation strategy.

Paul Atherley, Chairman of Pensana said:

Pensana welcomes the government's Critical Minerals Strategy. The strategy underlines the importance of establishing in the UK a secure magnet metals supply chain to drive the green energy transition. Pensana's Saltend rare earth processing hub will be the world's first independent and sustainable rare earth separation plant, with plans to produce 5% of the global magnet metals by 2024. We are grateful for the government's support for this project and look forward to continuing to work together to position the UK at the forefront of the green industrial revolution.

Nitesh Shah, CEO of Metalysis said:

Metalysis welcomes the UK's first Critical Minerals Strategy. Through our unique midstream processing technology, we are seeking to revolutionise the design and application of metals and alloys in a range of sectors critical to the UK's economic, energy and national security. We share government's ambition to position the UK as a strategic location for midstream materials manufacturing. Being based in South Yorkshire, we are keen to support the 'levelling up' agenda in the process.

Sir Mick Davis, CEO of Vision Blue Resources said:

I welcome the proactive approach that the UK government is setting out to facilitate responsible investment across critical minerals value chains.

Vision Blue Resources was founded to accelerate the responsible supply of resources necessary to facilitate the transition to clean, green energy. Having recently made a strategic investment in Cornish Metals, this strategy should enhance the prospects for wider investment in this crucial sector for the UK.

Simon Moores, CEO of Benchmark Mineral Intelligence said:

This is a crucial strategy to build critical mineral supply chains for the biggest industrial engines of the 21st century, especially lithium-ion batteries, electric vehicles, and energy storage.

Karen Hanghøj, Director of the British Geological Survey said:

The new Critical Minerals Strategy represents a strong commitment from the government to ensuring the UK has secure and sustainable

access to the raw materials needed to ensure economic prosperity, and the transformation to net zero. In hosting the new UK Critical Minerals Intelligence Centre, BGS is proud to be playing a key role in delivering this new strategy.

Neil Glover, President of the Institute of Materials, Minerals and Mining (IOM3) said:

The Institute of Materials, Minerals and Mining (IOM3) welcomes the UK government taking a strategic view on critical raw materials. We look forward to continuing to contribute to the evidence-based policies that will play a vital part in the achievement of our net-zero commitments and in supporting the future of manufacturing in the UK.