

## UK STEEL – SUBMISSION TO THE INDUSTRIAL STRATEGY

Date: 24<sup>th</sup> November 2024

### About UK Steel

UK Steel, a division of Make UK, is the trade association for the UK steel industry. It represents all the country's steelmakers and a large number of downstream steel processors.

### Submission to the consultation on the Government's industrial strategy

#### Sector Methodology

#### 1. How should the UK government identify the most important subsectors for delivering our objectives?

UK Steel welcomes the opportunity to respond to this consultation on the Government's Industrial Strategy. The Industrial Strategy must be aligned with other Government policies, and, in particular, the Steel Strategy, which DBT is currently developing. The two strategies must work in unison, ensuring that the Industrial Strategy supports the Steel Strategy and vice versa.

In identifying the most important subsectors, Government should assess the strategic importance of a sector, its position and significance within the wider supply chain and, therefore, the associated multiplier effects from growing the industry, both in value and employment terms.

While the Government has already recognised the importance of the steel industry by creating a separate, dedicated strategy for the sector, it is worth emphasising the importance of the steel industry to the overall aims of the Industrial Strategy:

- Steel is a foundational industry, serving as a critical input across numerous downstream sectors. It plays a vital role in construction, transport, infrastructure, defence, energy, and manufacturing, amongst others<sup>1</sup>.
- While the Industrial Strategy has identified advanced manufacturing as a key sector within the Industrial Strategy, it has left out foundation industries, such as steel, glass, chemicals, ceramics, and mineral products, which all support and are essential to advanced manufacturing. Particularly as the world becomes increasingly fragmented, it is more than ever vitally important to have strong domestic foundation industries and access to critical materials. From rare earths and semiconductors to battery gigafactories and energy, there is an increasing realisation that supply chains are exposed and have become overly dependent on few sources. While some of these newer industries have more hype around them today, they still depend on and are highly interlinked to the more traditional foundation industries such as steel. Traditional does not mean outdated – steel and broader manufacturing drive considerable technological advances and innovation, supporting skills and economic growth.
- Strengthening the UK's steel industry bolsters economic resilience and national security. Disruptions caused by the pandemic and the war in Ukraine demonstrated the importance of robust domestic supply chains. A strong domestic steel industry would shield critical sectors from global events and contribute to a more resilient economy. Without a homegrown steel industry, the UK's construction, automotive, engineering and defence industries would be at the whim of global events.
- The link between economic growth and manufacturing output is well established, and steel sits at the foundation of a large proportion of manufacturing activity. Nearly every economy in the G20 boasts a robust steel sector, which is a testament to the critical role it plays as the bedrock of a strong economy. Governments worldwide recognise the strategic importance of their steel industries in driving economic growth, productivity and resilience and take the necessary actions to support their domestic sectors when needed.
- The UK's steel industry contributes significantly to the economy and supports high-paying jobs, particularly in regions outside London and the South East. The £1.8bn direct and £2.4bn indirect contribution to GVA and, finally, £3.4bn contribution to the balance of trade demonstrate its economic importance. Prioritising steel aligns with the government's objective of improving regional economic equality.

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<sup>1</sup> UK Steel, Why the UK need a Strong Steel Sector, 2024

- Steel is also crucial for achieving the UK's net-zero targets. It is a key material in renewable energy technologies and infrastructure and, therefore, plays a central role in decarbonising other sectors. The UK steel industry is committed to reducing its own emissions and achieving net-zero production, while the sector has committed to 80% carbon reduction by 2035.
- The UK has unique strengths in steel scrap, renewable energy, and innovation, which positions it to become a leader in green steelmaking. The UK generates significant amounts of steel scrap, a vital resource for low-carbon production methods, and has an abundance of renewable energy, which combined enhances the potential for green steelmaking.

The Government has already recognised the importance of the steel industry through its plans for a Steel Strategy, so it must also ensure this is aligned with the Industrial Strategy. It should also assess the importance of other foundation industries, as there is a risk of merely relying on advanced manufacturing without recognising the interconnectedness with chemicals, steel, ceramics, glass, cement, and other foundation industries. It would be a mistake not to include industry within an industrial strategy.

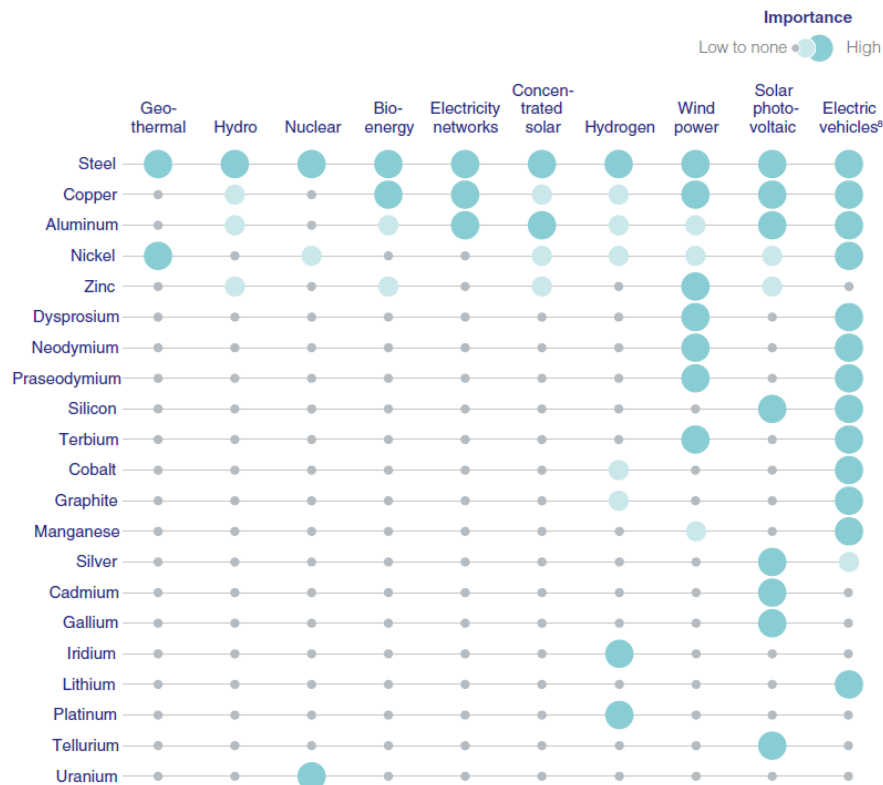
**2. How should the UK government account for emerging sectors and technologies for which conventional data sources are less appropriate?**

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**3. How should the UK government incorporate foundational sectors and value chains into this analysis?**

In incorporating foundational sectors into its analysis, the UK Government should recognise the interconnected nature of the UK economy, where foundational sectors, like steel, act as crucial inputs for a vast network of downstream industries. Understanding these linkages is vital for assessing the broader economic impact of supporting a particular sector. The steel industry underpins most critical manufacturing and is crucial to all new energy sources and Net zero technologies. Steel is the building block of modern society, feeding into everything from construction to transport, critical national infrastructure, defence, energy pipelines, wind turbines, household goods, food packaging, and medical, industrial, and agricultural equipment. Steel is the bedrock of the UK's supply chains and is fundamental to the future of the UK economy and its economic resilience. However, it is not merely a material of the past but essential to the modern Net Zero economy, as illustrated by the McKinsey analysis below.

## Materials critical for transition to a low-carbon economy, by technology type<sup>2</sup>



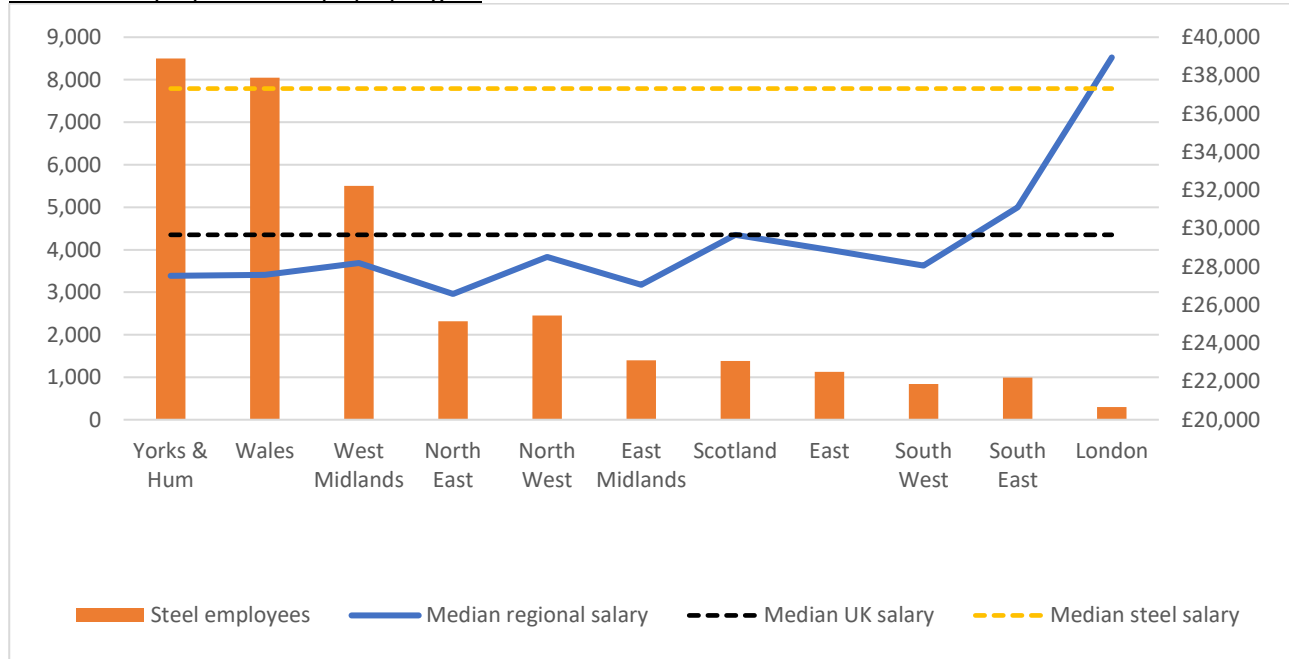
To emphasise the point again, the Steel Strategy and Industrial Strategy must, therefore, work in lockstep, as the steel industry is essential to the success of the Industrial Strategy’s ability to generate growth and support its wider aims. Specifically, the strategy lists as its aims to “Reduce supply chain and other vulnerabilities in growth-driving sectors which could harm their long-term growth or ability to deliver critical outputs” and “Ensure national security risks inform the approach to driving growth in these sectors” alongside the aim of driving growth. The steel industry is excellently positioned to address these two aims, as a domestic steel industry is essential to reducing supply chain vulnerability and underpins national security. As the world becomes increasingly fragmented, it is more than ever vitally important to have strong domestic foundation industries and access to critical materials. Supply chains have been put to the test in recent years with the Covid-19 pandemic and the war in Ukraine. For steel, the impact on downstream sectors was moderated by the fact that the UK still has at least one producer of each major steel product category – disruption would have been far more severe had there been a complete dependence on imports. The experience of delays, shortages and price increases prompted manufacturers to look for suppliers closer to home in order to reduce the risk to their operations. The trend is likely to remain given geopolitical developments – Russia is already cut off by the West, while relations with China have come under tension in recent years. The second Trump presidency will see tariffs applied on a wide scale, which will, in turn, trigger protectionist responses by other countries. Increasing barriers to international trade, coupled with trade defence measures or carbon border adjustment mechanisms and other carbon-based arrangements, are likely to further fragment markets. The world is, therefore, moving towards a new paradigm where resilience to shocks and sustainability are prized over lowest cost. Increased self-sufficiency for certain core goods, such as energy and basic materials, is at the heart of this.

Finally, when considering the other aims of the Industrial Strategy, such as supporting high-quality, well-paid jobs, while simultaneously supporting the Net Zero objectives, the steel industry again can deliver. The domestic steel industry plays a crucial role not only in shielding our supply chains but also in generating considerable value for the UK economy, supporting thousands of well-paid, highly-skilled jobs, and helping rebalance the economy towards regions outside of London and the South East. The UK steel industry makes

<sup>2</sup> Critical raw materials for strategic technologies and sectors in the EU, A foresight study, European Commission, March 9, 2020; The role of critical minerals in clean energy transitions, IEA, May 2021; McKinsey analysis

a £1.8 billion direct contribution to UK GVA and supports a further £2.4 billion in its supply chains. It further contributes £3.4 billion to the UK's balance of trade. Steel jobs are concentrated in Wales, Yorkshire, and Humberside, paying wages 35% higher than the regional median and 26% higher than the UK national median. This is clearly hugely significant not only for the 33,700 people directly employed by the sector but also for some 42,000 jobs in supply chains, from fabricators to stockists, input suppliers, processors, and logistics.

## UK steel employment and pay by region



Source: ONS Nomis Web, ONS Annual Survey of Hours and Earnings, UK Steel Analysis

As outlined above, steel is central to meeting the UK's decarbonisation objectives, from reducing the emissions of the material itself to its use in energy infrastructure and technologies that will enable a Net Zero economy. Increased reliance on steel imports could lead to higher emissions if imported steel is produced in a more carbon-intensive steel plant. Global carbon intensity varies from 0.29-3.38 tonnes of CO<sub>2</sub> per tonne of crude steel, depending on plant efficiency and production method, with the weighted average being 1.85tCO<sub>2</sub>/tCS in 2018. UK steel production sites are less carbon-intensive than the global average for both blast furnace and electric arc furnace steelmaking, and therefore, import increases will likely lead to a rise in UK greenhouse gas emissions. Higher imports of finished steel products also increase transport-related emissions – for example, shipping a tonne of product from China results in an estimated 0.3 tonnes of CO<sub>2</sub>. By ensuring that the Industrial Strategy integrates the Steel Strategy and addressing the barriers to the steel sector's success, the Government will also facilitate meeting the aims of the Industrial Strategy.

## Sectors

### 4. What are the most important subsectors and technologies that the UK government should focus on and why?

As outlined above steel industry is essential to the overall aims of the Industrial Strategy:

- Steel is a foundational industry, serving as a critical input across numerous downstream sectors. It plays a vital role in construction, transport, infrastructure, defence, energy, and manufacturing, amongst others<sup>3</sup>.
- While the Industrial Strategy has identified advanced manufacturing as a key sector within the Industrial Strategy, it has left out foundation industries, such as steel, glass, chemicals, ceramics, and mineral products, which all support and are essential to advanced manufacturing. Particularly as the world becomes increasingly fragmented, it is more than ever vitally important to have strong domestic foundation industries and access to critical materials. From rare earths and semiconductors to battery gigafactories and energy, there is an increasing realisation that supply chains are exposed and have become overly dependent on few sources. While some of these newer industries have more hype

<sup>3</sup> UK Steel, Why the UK need a Strong Steel Sector, 2024

around them today, they still depend on and are highly interlinked to the more traditional foundation industries such as steel. Traditional does not mean outdated – steel and broader manufacturing drive considerable technological advances and innovation, supporting skills and economic growth.

- Strengthening the UK's steel industry bolsters economic resilience and national security. Disruptions caused by the pandemic and the war in Ukraine demonstrated the importance of robust domestic supply chains. A strong domestic steel industry would shield critical sectors from global events and contribute to a more resilient economy. Without a homegrown steel industry, the UK's construction, automotive, engineering and defence industries would be at the whim of global events.
- The link between economic growth and manufacturing output is well established, and steel sits at the foundation of a large proportion of manufacturing activity. Nearly every economy in the G20 boasts a robust steel sector, which is a testament to the critical role it plays as the bedrock of a strong economy. Governments worldwide recognise the strategic importance of their steel industries in driving economic growth, productivity and resilience and take the necessary actions to support their domestic sectors when needed.
- The UK's steel industry contributes significantly to the economy and supports high-paying jobs, particularly in regions outside London and the South East. The £1.8bn direct and £2.4bn indirect contribution to GVA and, finally, £3.4bn contribution to the balance of trade demonstrate its economic importance. Prioritising steel aligns with the government's objective of improving regional economic equality.
- Steel is also crucial for achieving the UK's net-zero targets. It is a key material in renewable energy technologies and infrastructure and, therefore, plays a central role in decarbonising other sectors. The UK steel industry is committed to reducing its own emissions and achieving net-zero production, while the sector has committed to 80% carbon reduction by 2035.
- The UK has unique strengths in steel scrap, renewable energy, and innovation, which positions it to become a leader in green steelmaking. The UK generates significant amounts of steel scrap, a vital resource for low-carbon production methods, and has an abundance of renewable energy, which combined enhances the potential for green steelmaking.

## **5. What are the UK's strengths and capabilities in these sub sectors?**

Steelmaking does not only underpin growth, economic resilience, and decarbonisation, but in the UK, we are also in a prime position to capitalise on the critical resources necessary to lead the way in green steel production: scrap, renewable energy, and innovation excellence.

The UK is blessed with an abundance of steel scrap, producing around 10-11Mt each year, meaning that scrap-based steelmaking should be an obvious choice for the UK. However, 80% of this steel scrap is currently exported. Indeed, the UK is one of the largest exporters of scrap in the world, only surpassed by the EU and the US. Most of our scrap is destined for Türkiye (nearly 2.5Mt), followed by Pakistan, Egypt, Spain, India, and Bangladesh, all receiving more than half a million tonnes of scrap. Much of the UK's scrap, therefore, ends up being exported to countries with lower environmental, health and safety standards to be sorted and recycled into new steel products that may then be shipped back, adding to the carbon footprint. Not only does the UK have an obligation to deal with its waste responsibly, but furthermore, this represents a clear missed opportunity where we are not making the most of this valuable raw material. Since the UK has access to such a strategic resource, there is an obvious business rationale for growing scrap-based steelmaking in the UK, giving us an advantage in spearheading a low-carbon circular economy. With some strategic planning, domestic scrap retention and quality could be improved, which would catalyse further electrification of steelmaking in the UK, while at the same time also resulting in greater control and resilience of the supply chain.

In addition to the high availability of scrap, the UK is also well-positioned in renewable energy, giving it an even greater advantage for low-emission steelmaking. All routes for decarbonising steel production require greater use of electricity, whether through an electric arc furnace, using hydrogen or carbon capture, utilisation, and storage (CCUS). The UK boasts an electricity mix that is over 40% from renewable sources and is a world leader in offshore and floating wind power. Green electricity can also enable low-emission steelmaking through the use of green hydrogen. The UK has the opportunity to use its position in renewables and combine it with its research and innovation expertise to pioneer new technologies for CCUS and hydrogen, which are still in the early stages of commercial deployment. Already, UK steelmakers support over £214m in active UKRI research programs, tangibly demonstrating their strong and ongoing commitment to R&D. A more ambitious and targeted programme of funding would drive results at the pace that is required and ensure that technologies are commercially available for the Net Zero transition.

## 6. What are the key enablers and barriers to growth in these sub sectors and how could the UK government address them?

There are a number of barriers to the steel industry's growth and prosperity, but an overarching theme is competitiveness, which is hampered by a number of different factors:

- **High Electricity Prices:** The cost of electricity for UK steel producers is significantly higher than for their European competitors. UK Steel's analysis finds that UK steel producers typically face an average electricity price in 2024/25 of £66/MWh compared to the estimated German price of £50/MWh and French price of £43/MWh. This means UK steelmakers pay up to 50% more than their main competitors. Steel production's energy-intensive nature leads to high electricity consumption, and these costs can represent up to an eye-watering 180% of steel producers' Gross Value Added (GVA) in the UK. Steel's global trade and competition dynamics, especially with Europe, further amplify the impact of price differentials. The UK steel sector is dominated by thin profit margins, exacerbated further by uncompetitive electricity prices. Higher electricity prices cut short profitability and undermine the long-term investment prospects for the industry. The price disparity is mainly caused by higher grid connection charges and wholesale costs and negatively impacts the industry's ability to compete, attract investment, and decarbonisation.
- **Global Steel Overcapacity:** Excess global steelmaking capacity, driven by factors such as state subsidies, particularly in China, creates an uneven playing field for UK producers. This overcapacity leads to unfair competition, dumping of cheap steel into the UK market, and injury to domestic producers. Non-market excess steelmaking capacity is a major challenge for the global steel industry, driving down profits and increasing emissions. Measured as the gap between global capacity and crude steel production, global excess capacity in 2023 was estimated at 543Mt, which is over 70 times the size of the UK market. Conditions are rapidly deteriorating as capacity expansions in South East Asia and the Middle East are continuing at an alarming rate – these are largely state-funded, primarily for high-emission blast furnaces and often do not correspond to domestic demand trends. Indeed, steel demand is weakening in key markets, notably China, translating into rising oversupply, which is dampening steel prices and spilling over into other markets. Exports from China this year are expected to reach 100Mt, the highest since 2016, when the last steel crisis saw several steel plant closures and thousands of jobs lost across steelmaking countries, including the UK. This is impacting both the profitability and the carbon footprint of the global steel industry. The average profitability of the steel sector is currently the lowest in a decade, with producers in developed economies losing market share to underpriced imports. This is clearly visible in the UK, where the import share so far in 2024 has jumped to 68% from 60% in 2023 and 55% in 2022. The sharpest import increases have come from non-EU sources, mainly India, Vietnam, China, South Korea, Türkiye, and Algeria. Importantly, these are also countries that have seen significant increases in imports from China or are within China's top 10 exporting destinations.
- **Trade Defence Inadequacies:** The current trade remedies framework, while important, is inadequate in effectively addressing issues like non-market excess capacity. A commonly proposed solution to the excess capacity and trade diversion issues is the greater use of trade defence instruments. It is also thought that the introduction of a Carbon Border Adjustment Mechanism (CBAM) in the UK would act as a quasi-replacement for safeguards. While both policy instruments have a role to play, they are certainly not designed nor able to address the hugely damaging effects of non-market excess capacity: Traditional trade defence mechanisms are designed to address very specific trade distortions of dumping and subsidisation, and, in the case of safeguards, unforeseen surges in imports. However, once UK safeguards expire in 2026, WTO rules prevent their use for the following eight years. The scale of excess capacity is such that targeted trade defence measures are simply insufficient – they are likely to result in a reorientation of trade flows, meaning imports will merely come through different countries or shift down the value chain to downstream products. Anti-dumping and anti-subsidy measures are narrowly defined and can only be applied to specific products and countries – for example, rebar from China, as opposed to all steel products from China. There could be nearly 30 steel product category groupings, so trying to apply and obtain UK trade remedies measures across a multitude of products and countries would be hugely resource-intensive and unrealistic. With low prices in oversupplied markets, exporters can easily undercut the UK market without technically dumping (defined as exporting at prices below what they would sell in their domestic markets). Meanwhile, CBAM is an environmental measure designed to level carbon costs faced by domestic producers and imports. The extent of oversupply is such that there is ample material that will still flow into our market.

- **Steel Scrap Competitiveness:** The UK faces challenges in retaining domestically produced steel scrap. The UK produces approximately 10-11Mt of scrap steel each year. 80% of this is mainly exported to developing countries for sorting and recycling back into new steel products that may then be shipped back, with additional carbon footprints to the UK. The primary recipient of UK scrap is Türkiye, followed by Egypt, India, Bangladesh, and Pakistan. Whilst all countries export and import scrap steel, the UK is unusual in using so little of its own material domestically and consequently exporting such large quantities. The UK is the world's second-largest exporter of scrap in absolute terms and the largest exporter of scrap on a per capita basis. The UK risks stripping itself of a vital resource at a time of rising domestic demand with the announced planned investments in new Electric Arc Furnace (EAF) production. While there is a global increase in the demand for scrap steel, countries are taking action to reduce scrap exports. For example, the EU is restricting the export of scrap to non-OECD countries by 2027.
- **Carbon Leakage:** The risk of carbon leakage, where UK steel production declines due to high carbon costs and climate policies and is replaced by imports from countries with less stringent environmental regulations, is a significant concern. This poses a threat to jobs, economic growth, and the UK's decarbonisation goals. The HM Treasury's Net Zero Review<sup>4</sup> analysed the risk of carbon leakage to different industries. It showed that the basic metal sector (dominated by the steel sector) had one of the highest trade openness at 72%, combined with the highest carbon intensity (CO2 tonne/\$m) and the third-highest proportion of CO2 from domestic sources. The report showed that the steel sector's gross output was the most reactive to high carbon pricing among all industries. Similarly, the steel sector was singled out as having a high proportion of demand covered by imports (60%+ import penetration) and a high proportion of production exported (an average of 45% of production is exported). Finally, the UK basic metals sector has significantly lower CO2 intensity embodied in exports than non-OECD countries and somewhat lower than OECD countries. With the introduction of the UK CBAM, the risk of carbon leakage must be reduced.

There are a number of different enablers of growth and actions the Government can take to address the abovementioned barriers:

- **Government-Industry Partnership:** UK Steel has long emphasised the need for close collaboration between the government and the steel industry to foster a supportive business environment and enable the sector's transformation. We are therefore particularly pleased that the new Government is proposing to do just that via its upcoming Steel Strategy.
- **Electricity Price Reduction:** The Government should aim to deliver competitive industrial electricity prices, which requires increasing the Network Charging Compensation scheme to match levels in France and Germany (90%) and considering wholesale price intervention.
- **Robust Trade Defence Measures:** Implementing robust trade defence measures is essential to protecting UK producers from unfair competition and creating a level playing field. This includes making trade remedies more accessible to industry, taking a firmer stance on issues like non-market economies, and forming alliances with like-minded countries to develop effective trade tools.
- **Robust Carbon Leakage Protection:** While the UK CBAM will be implemented in 2027, it is imperative that the Government takes action to reduce the risk of trade diversion as a result of the EU CBAM implementation in 2026. It must also improve the robustness of the UK CBAM, minimise circumvention, and ensure the use of default values does not lead to higher imports of high-emission steel. Additionally, the UK should aim for mutual recognition with the EU CBAM to facilitate frictionless trade by linking its emission trading schemes.
- **Decarbonisation Drive:** The transition to Net Zero steelmaking presents a significant growth opportunity for the UK. The UK has the potential to lead in green steelmaking due to its abundant steel scrap resources, leading position in renewable energy, and access to research and innovation. Achieving Net Zero steel production would not only reduce emissions but also enhance the UK's global competitiveness and secure green jobs.
- **Strategic Public Procurement:** The Government, as a major consumer of steel, has the power to stimulate domestic demand and support the UK steel sector through strategic public procurement. By prioritising the use of UK-made steel in public projects, the government can create a more stable market for producers, encourage investment, and drive the development of robust local supply chains.

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<sup>4</sup> HM Treasury (2021), Policy paper, Net Zero Review Final Report, <https://www.gov.uk/government/publications/net-zero-review-final-report>

This involves setting local content targets for publicly funded projects, particularly in critical infrastructure and defence, and boosting domestic demand.

- **Scrap Competitiveness Enhancement:** Measures to retain and improve the quality of domestically produced steel scrap are crucial. This involves upholding environmental standards on exports, creating incentives to retain scrap in the UK, and providing support for improved scrap sorting and recycling within the UK.
- **Investment in Innovation:** Continued investment in research and development is crucial to driving innovation, improving energy efficiency, and developing new technologies for low-emission steelmaking. A dedicated Green Steel Innovation Fund, similar to the Industrial Energy Transformation Fund (IETF), would be beneficial to accelerate innovation and industrial decarbonisation in the sector. This fund should be specifically tailored to the needs of the steel industry, with streamlined application processes, to support research and development in areas like energy efficiency, emissions reduction, and hydrogen deployment.

By addressing these key enablers and barriers, the UK government can play a vital role in ensuring the growth and sustainability of the UK steel sector, contributing to its transformation into a global leader in Net Zero steel production.

## **Business Environment**

### **7. What are the most significant barriers to investment? Do they vary across the growth-driving sectors? What evidence can you share to illustrate this?**

Please see the answer to question 6. Replicated below for completion.

There are a number of barriers to the steel industry's growth and prosperity, but an overarching theme is competitiveness, which is hampered by a number of different factors:

- **High Electricity Prices:** The cost of electricity for UK steel producers is significantly higher than for their European competitors. UK Steel's analysis finds that UK steel producers typically face an average electricity price in 2024/25 of £66/MWh compared to the estimated German price of £50/MWh and French price of £43/MWh. This means UK steelmakers pay up to 50% more than their main competitors. Steel production's energy-intensive nature leads to high electricity consumption, and these costs can represent up to an eye-watering 180% of steel producers' Gross Value Added (GVA) in the UK. Steel's global trade and competition dynamics, especially with Europe, further amplify the impact of price differentials. The UK steel sector is dominated by thin profit margins, exacerbated further by uncompetitive electricity prices. Higher electricity prices cut short profitability and undermine the long-term investment prospects for the industry. The price disparity is mainly caused by higher grid connection charges and wholesale costs and negatively impacts the industry's ability to compete, attract investment, and decarbonisation.
- **Global Steel Overcapacity:** Excess global steelmaking capacity, driven by factors such as state subsidies, particularly in China, creates an uneven playing field for UK producers. This overcapacity leads to unfair competition, dumping of cheap steel into the UK market, and injury to domestic producers. Non-market excess steelmaking capacity is a major challenge for the global steel industry, driving down profits and increasing emissions. Measured as the gap between global capacity and crude steel production, global excess capacity in 2023 was estimated at 543Mt, which is over 70 times the size of the UK market. Conditions are rapidly deteriorating as capacity expansions in South East Asia and the Middle East are continuing at an alarming rate – these are largely state-funded, primarily for high-emission blast furnaces and often do not correspond to domestic demand trends. Indeed, steel demand is weakening in key markets, notably China, translating into rising oversupply, which is dampening steel prices and spilling over into other markets. Exports from China this year are expected to reach 100Mt, the highest since 2016, when the last steel crisis saw several steel plant closures and thousands of jobs lost across steelmaking countries, including the UK. This is impacting both the profitability and the carbon footprint of the global steel industry. The average profitability of the steel sector is currently the lowest in a decade, with producers in developed economies losing market share to underpriced imports. This is clearly visible in the UK, where the import share so far in 2024 has jumped to 68% from 60% in 2023 and 55% in 2022. The sharpest import increases have come from non-EU sources, mainly India, Vietnam, China, South Korea, Türkiye, and Algeria. Importantly, these are also countries that have seen significant increases in imports from China or are within China's top 10 exporting destinations.



- **Trade Defence Inadequacies:** The current trade remedies framework, while important, is inadequate in effectively addressing issues like non-market excess capacity. A commonly proposed solution to the excess capacity and trade diversion issues is the greater use of trade defence instruments. It is also thought that the introduction of a Carbon Border Adjustment Mechanism (CBAM) in the UK would act as a quasi-replacement for safeguards. While both policy instruments have a role to play, they are certainly not designed nor able to address the hugely damaging effects of non-market excess capacity: Traditional trade defence mechanisms are designed to address very specific trade distortions of dumping and subsidisation, and, in the case of safeguards, unforeseen surges in imports. However, once UK safeguards expire in 2026, WTO rules prevent their use for the following eight years. The scale of excess capacity is such that targeted trade defence measures are simply insufficient – they are likely to result in a reorientation of trade flows, meaning imports will merely come through different countries or shift down the value chain to downstream products. Anti-dumping and anti-subsidy measures are narrowly defined and can only be applied to specific products and countries – for example, rebar from China, as opposed to all steel products from China. There could be nearly 30 steel product category groupings, so trying to apply and obtain UK trade remedies measures across a multitude of products and countries would be hugely resource-intensive and unrealistic. With low prices in oversupplied markets, exporters can easily undercut the UK market without technically dumping (defined as exporting at prices below what they would sell in their domestic markets). Meanwhile, CBAM is an environmental measure designed to level carbon costs faced by domestic producers and imports. The extent of oversupply is such that there is ample material that will still flow into our market.
- **Steel Scrap Competitiveness:** The UK faces challenges in retaining domestically produced steel scrap. The UK produces approximately 10-11Mt of scrap steel each year. 80% of this is mainly exported to developing countries for sorting and recycling back into new steel products that may then be shipped back, with additional carbon footprints to the UK. The primary recipient of UK scrap is Türkiye, followed by Egypt, India, Bangladesh, and Pakistan. Whilst all countries export and import scrap steel, the UK is unusual in using so little of its own material domestically and consequently exporting such large quantities. The UK is the world's second-largest exporter of scrap in absolute terms and the largest exporter of scrap on a per capita basis. The UK risks stripping itself of a vital resource at a time of rising domestic demand with the announced planned investments in new Electric Arc Furnace (EAF) production. While there is a global increase in the demand for scrap steel, countries are taking action to reduce scrap exports. For example, the EU is restricting the export of scrap to non-OECD countries by 2027.
- **Carbon Leakage:** The risk of carbon leakage, where UK steel production declines due to high carbon costs and climate policies and is replaced by imports from countries with less stringent environmental regulations, is a significant concern. This poses a threat to jobs, economic growth, and the UK's decarbonisation goals. The HM Treasury's Net Zero Review<sup>5</sup> analysed the risk of carbon leakage to different industries. It showed that the basic metal sector (dominated by the steel sector) had one of the highest trade openness at 72%, combined with the highest carbon intensity (CO<sub>2</sub> tonne/\$m) and the third-highest proportion of CO<sub>2</sub> from domestic sources. The report showed that the steel sector's gross output was the most reactive to high carbon pricing among all industries. Similarly, the steel sector was singled out as having a high proportion of demand covered by imports (60%+ import penetration) and a high proportion of production exported (an average of 45% of production is exported). Finally, the UK basic metals sector has significantly lower CO<sub>2</sub> intensity embodied in exports than non-OECD countries and somewhat lower than OECD countries. With the introduction of the UK CBAM, the risk of carbon leakage must be reduced.

There are a number of different enablers of growth and actions the Government can take to address the abovementioned barriers:

- **Government-Industry Partnership:** UK Steel has long emphasised the need for close collaboration between the government and the steel industry to foster a supportive business environment and enable the sector's transformation. We are therefore particularly pleased that the new Government is proposing to do just that via its upcoming Steel Strategy.

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<sup>5</sup> HM Treasury (2021), Policy paper, Net Zero Review Final Report, <https://www.gov.uk/government/publications/net-zero-review-final-report>

- **Electricity Price Reduction:** The Government should aim to deliver competitive industrial electricity prices, which requires increasing the Network Charging Compensation scheme to match levels in France and Germany (90%) and considering wholesale price intervention.
- **Robust Trade Defence Measures:** Implementing robust trade defence measures is essential to protecting UK producers from unfair competition and creating a level playing field. This includes making trade remedies more accessible to industry, taking a firmer stance on issues like non-market economies, and forming alliances with like-minded countries to develop effective trade tools.
- **Robust Carbon Leakage Protection:** While the UK CBAM will be implemented in 2027, it is imperative that the Government takes action to reduce the risk of trade diversion as a result of the EU CBAM implementation in 2026. It must also improve the robustness of the UK CBAM, minimise circumvention, and ensure the use of default values does not lead to higher imports of high-emission steel. Additionally, the UK should aim for mutual recognition with the EU CBAM to facilitate frictionless trade by linking its emission trading schemes.
- **Decarbonisation Drive:** The transition to Net Zero steelmaking presents a significant growth opportunity for the UK. The UK has the potential to lead in green steelmaking due to its abundant steel scrap resources, leading position in renewable energy, and access to research and innovation. Achieving Net Zero steel production would not only reduce emissions but also enhance the UK's global competitiveness and secure green jobs.
- **Strategic Public Procurement:** The Government, as a major consumer of steel, has the power to stimulate domestic demand and support the UK steel sector through strategic public procurement. By prioritising the use of UK-made steel in public projects, the government can create a more stable market for producers, encourage investment, and drive the development of robust local supply chains. This involves setting local content targets for publicly funded projects, particularly in critical infrastructure and defence, and boosting domestic demand.
- **Scrap Competitiveness Enhancement:** Measures to retain and improve the quality of domestically produced steel scrap are crucial. This involves upholding environmental standards on exports, creating incentives to retain scrap in the UK, and providing support for improved scrap sorting and recycling within the UK.
- **Investment in Innovation:** Continued investment in research and development is crucial to driving innovation, improving energy efficiency, and developing new technologies for low-emission steelmaking. A dedicated Green Steel Innovation Fund, similar to the Industrial Energy Transformation Fund (IETF), would be beneficial to accelerate innovation and industrial decarbonisation in the sector. This fund should be specifically tailored to the needs of the steel industry, with streamlined application processes, to support research and development in areas like energy efficiency, emissions reduction, and hydrogen deployment.

By addressing these key enablers and barriers, the UK government can play a vital role in ensuring the growth and sustainability of the UK steel sector, contributing to its transformation into a global leader in Net Zero steel production.

## **Business Environment – People and Skills**

8. **Where you identified barriers in response to Question 7 which relate to people and skills (including issues such as delivery of employment support, careers, and skills provision), what UK government policy solutions could best address these?**
9. **What more could be done to achieve a step change in employer investment in training in the growth-driving sectors?**

We support MakeUK's comments on the barriers to skills and people.

## **Business Environment - Innovation**

10. **Where you identified barriers in response to Question 7 which relate to RDI and technology adoption and diffusion, what policy solutions could best address these?**

The UK has world-leading materials science departments at Cambridge, Imperial, and Oxford Universities, which collaborate with other industry-facing Universities at Birmingham, Sheffield, Swansea, and Warwick and with innovation centres such as HVM, MPI, SaMI, and Henry Royce. Birmingham, Swansea, Sheffield, and Warwick have significant activity in steel process and product development. Sheffield, Swansea, and Warwick host centres connected with UK producers.

Centres of excellence exist around the UK, such as those at Cardiff (Combustion and Energy systems), Cambridge (Sustainability), Huddersfield (Rail research centre), Imperial (high-temperature materials),

Sheffield (Carbon capture and utilisation) and Swansea (Hydrogen technologies). Swansea continues to pioneer a materials-focused Engineering Doctorate scheme, training over 40 steel industry researchers annually from a total of around 100 PhDs nationally.

The UK also hosts many innovation Centres and Institutes, such as:

- The Materials Processing Institute is the UK's largest steel innovation centre, with 70 years of experience serving the steel industry globally. It holds commercial relations with all of the UK players, including the supply chain and many international steel companies, having globally significant capabilities in steel processing and product development, particularly in low carbon and circular economy technologies, advanced steel processing and industry 4.0.
- Steel and Metals Institute (SaMI), Swansea University is an open-access Innovation centre and the forerunner to a new National Innovation Centre. SaMI is connected to the new state-of-the-art, low TRL facilities located at the new Bay campus in Swansea. Industry researchers are co-located with university staff to identify solutions to Industry challenges rapidly. SaMI has capability in high-temperature materials processing, a pilot plant for alloy development and thermo-mechanical processing, mechanical testing facilities, and materials characterisation.
- SPECIFIC, Swansea, is an innovation and knowledge centre led by Swansea University through a partnership with BASF, NSG Pilkington and Tata Steel with funding from EPSRC and InnovateUK. The centre focuses on coatings development, primarily for the construction of energy-positive buildings, and is key to the Transforming Construction challenge.

The major players in the industry also have industrial facilities for higher TRL activity. RD26 of Forgemasters has distinctive capability in large casting design and both British Steel and Liberty Speciality Steels have industrial research departments focussed on developing new steel products. Finally, Tata Steel's environmental technology department is an internationally recognised centre of expertise on sustainability and research into environmental technologies. These UK centres are experienced in working together collaboratively across the innovation and manufacturing supply chains, with both national and international partners.

Provision of government funding enables Universities and Research Institutes to recruit staff and will encourage and be matched by industry through the recruitment and collocation of Industry researchers. The combined strengths of these centres of excellence and the broader University ecosystem, through collaborative working, will enable the UK to become a world leader in addressing the challenge allowing UK companies to increase market share at home and overseas.

While the UK hosts these excellent RDI centres, it is not matched by dedicated support for clean steel innovation funding. Instead, UK steel companies have lost access to funding, such as to the EU Research Fund for Coal and Steel, where the last UK Government decided that it would not fund those organisations choosing to participate in projects as 'third country' organisations<sup>6</sup>. According to the terms of the EU Withdrawal Agreement (Article 145) the approximately £180 million UK share of this fund will be returned in five annual instalments from June 2021. This money was provided by a levy on UK steel and coal companies over the course of our membership of the European Coal and Steel Community, and the creation of the Clean Steel Innovation Fund provides the opportunity to put that money to the best possible use, modernising and decarbonising the steel sector.

The task of decarbonising the steel sector by 2050 presents not just a major commercial challenge but a technological one as well. The technological challenge must be viewed as an opportunity. A Net Zero UK steel sector will become a world-leading one, using best-in-class technologies and requiring British steel plants to be amongst the most efficient in the world. To aid this transition and to develop many of the technological solutions here in the UK, it is proposed that industry and Government come together to form a *Clean Steel Innovation Fund*.

Finally, the Government cannot rely on world-leading RDI centres and potential funding for innovation. It must ensure a vibrant, thriving domestic steel industry which can adapt and deploy the RDI findings and utilise these for commercial gain. Innovation cannot stand alone but must be coupled with deployment in a strong UK steel

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<sup>6</sup> <https://www.gov.uk/government/publications/research-fund-for-coal-and-steel-uk-funding-for-2020-call-for-proposals/research-fund-for-coal-and-steel-uk-funding-for-2020-call-for-proposals>

industry. The latter can only be delivered by addressing the barriers outlined in the answers to questions 6 and 7.

**11. What are the barriers to R&D commercialisation that the UK government should be considering?**

See the answer to question 10.

**Business Environment - Data**

**12. How can the UK government best use data to support the delivery of the Industrial Strategy?**

**13. What challenges or barriers to sharing or accessing data could the UK government remove to help improve business operations and decision making?**

-

**Business Environment - Infrastructure**

**14. Where you identified barriers in response to Question 7 which relate to planning, infrastructure and transport, what UK government policy solutions could best address these in addition to existing reforms? How can this best support regional growth?**

**15. How can investment into infrastructure support the Industrial Strategy? What can the UK government do to better support this and facilitate co-investment? How does this differ across infrastructure classes?**

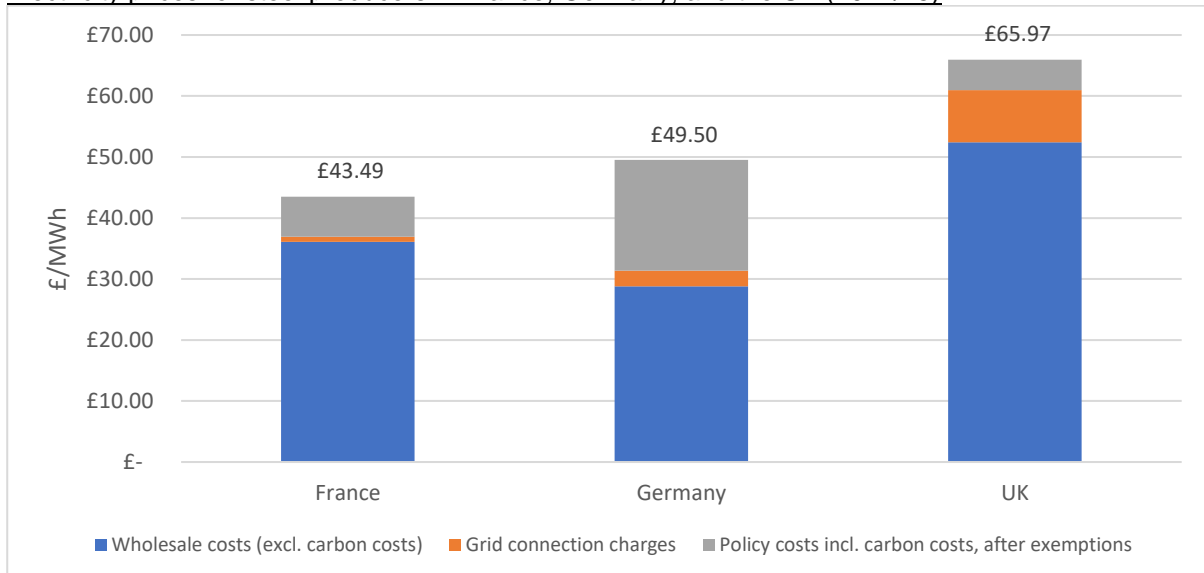
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**Business Environment - Energy**

**16. What are the barriers to competitive industrial activity and increased electrification, beyond those set out in response to the UK government’s recent Call for Evidence on industrial electrification?**

One of the key barriers to competitiveness and profitability for the UK steel industry and its electrification process is the high and uncompetitive industrial electricity prices. UK Steel analysis of industrial electricity prices finds that UK steel producers typically face an average electricity price in 2024/25 of £66/MWh compared to the estimated German price of £50/MWh and French price of £43/MWh. This means UK steelmakers pay up to 50% more than their main competitors.

Electricity prices for steel producers in France, Germany, and the UK (2024/25)



Source: UK Steel

Steel production’s energy-intensive nature leads to high electricity consumption, and these costs can represent up to an eye-watering 180% of steel producers’ Gross Value Added (GVA) in the UK. Steel’s global trade and competition dynamics, especially with Europe, further amplify the impact of price differentials. The UK steel sector is dominated by thin profit margins, exacerbated further by uncompetitive electricity prices. Higher electricity prices cut short profitability and undermine the long-term investment prospects for the industry. The price disparity is mainly caused by higher grid connection charges and wholesale costs and negatively impacts the industry’s ability to compete, attract investment, and decarbonisation. The higher electricity prices translate into a total additional cost to UK steel producers compared to those in Germany of around £37 million per year.

Since 2016/17, this disparity has resulted in the UK steel industry incurring additional costs of £807 million compared to French producers and £697 million compared to German producers.

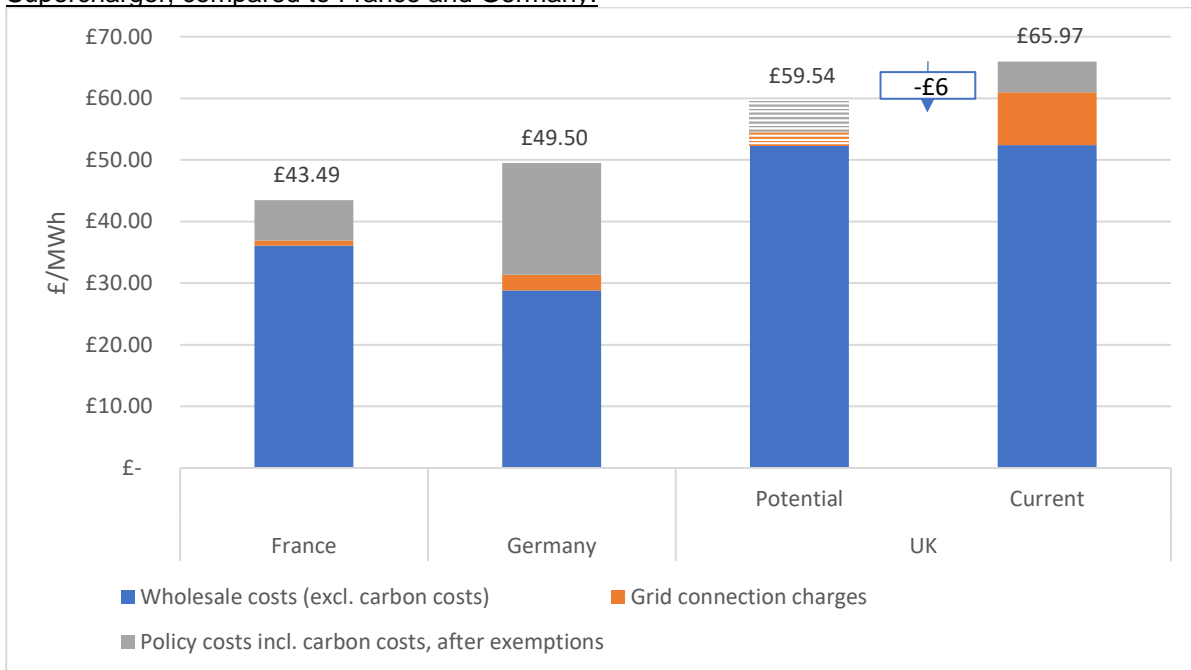
It is worth emphasising that the UK government has established schemes to exempt steel producers from policy levies and introduced schemes to compensate them for the indirect cost of the UK ETS and CPS and network charges. However, whereas France and Germany exempt their steel industry from 90% of network charges, the UK only provides compensation at a level of 60%, leading to electricity network charges being 10 times higher in the UK than in France. To be completely clear, the price data referred to in the Industrial Strategy (p.37) is not reflective of the commercial reality of the steel industry, nor is it correct to state that EILs face lower electricity prices. This is only true if compared to companies not eligible for the aforementioned exemption and compensation schemes.

**17. What examples of international best practice to support businesses on energy, for example Purchase Power Agreements, would you recommend to increase investment and growth?**

While significant investments have been announced in combination with Government co-financing, it is still a fact that differences in electricity prices will impact the ability to attract long-term investment in R&D, process improvement, and innovation into the UK. Most of the major steel producers in the UK are part of multi-national companies with facilities in the EU and four also operating outside the EU. From this perspective, the cost competitiveness of each particular market is crucial to attracting investment. Persistent cost disadvantages in the UK lead to underinvestment, which in turn leads to further erosion of competitiveness.

When the Government consulted on the Network Charges Compensation, it initially considered a 90% compensation level, which would be in line with what is provided in France and Germany. As illustrated below, matching German and French network exemptions would reduce electricity prices by a further £6.43/MWh, reducing the price disparity between the UK and France to £16/MWh and £10/MWh compared to Germany.

Potential electricity prices for UK steel producers after the implementation of the British Industrial Supercharger, compared to France and Germany.



Source: UK Steel

The best international practices for EILs are the examples outlined above, where the French and German Governments have introduced schemes to provide their EILs with competitive industrial electricity prices. It is therefore recommended that the UK matches what is provided in France and Germany for EILs on network exemptions.

After uplifting the network compensation, the remaining price difference of £10-16/MWh is caused by variations in wholesale prices, driven by distinct electricity generation mixes. To bring UK industrial electricity prices in line with those of Germany and France, further steps are necessary. In the longer term, this would involve increasing renewable and nuclear power generation to minimise dependence on natural gas. But waiting several years for natural gas to cease being the dominant price-setting fuel would leave the steel industry exposed and negatively impact its competitiveness. Instead, the Government must take direct actions to lower industrial electricity prices for the steel industry.

Finally, on power purchase agreements (PPAs), While some steelmakers have taken up PPAs in the past, it is not a common arrangement for the sector for a number of reasons:

- **Hedging:** Agreeing to a long-term PPA of, for example, 15 years does carry additional risks, as the market price could drop below the agreed price, threatening the ability to compete. Companies will often try to price as close to the market price as possible on energy and raw materials to remain competitive.
- **PPAs are inherently riskier for EILs:** For non-energy-intensive companies, agreeing a PPA carries less risk, as any difference between market price and PPA will have a minuscule impact on the overall company, as energy costs generally make up a small percentage of costs. For Energy-Intensive companies, such a difference will have a much more significant impact, as energy costs are a larger proportion of their overall costs. For example, if the electricity market price dropped below the agreed power price within a PPA, it would not make a substantial difference for a supermarket, as energy costs only make up 2-3% of their overall costs. However, the same scenario would have a significant impact on a steelmaker, whose energy costs are up to 20% of converting the basic raw materials into steel.
- **Uncompetitive PPAs:** Due to the intense competition and global oversupply within the steel sector, it is naturally riskier, which subsequently increases the cost of finance for energy developers. As such, the PPAs will be more complex and come at a higher price, making them less attractive.

While PPAs have their place, potentially as part of the commercial hedging strategy of steel companies, they are not a silver bullet to systemically and persistently high electricity prices.

## **Business Environment - Competition**

- 18. Where you identified barriers in response to Question 7 which relate to competition, what evidence can you share to illustrate their impact and what solutions could best address them?**
- 19. How can regulatory and competition institutions best drive market dynamism to boost economic activity and growth?**

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## **Business Environment - Regulation**

- 20. Do you have suggestions on where regulation can be reformed or introduced to encourage growth and innovation, including addressing any barriers you identified in Question 7?**

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## **Business Environment – Crowding in Investment**

- 21. What are the main factors that influence businesses' investment decisions? Do these differ for the growth-driving sectors and based on the nature of the investment (e.g. buildings, machinery & equipment, vehicles, software, RDI, workforce skills) and types of firms (large, small, domestic, international, across different regions)?**

Differences in business environments will impact the ability to attract long-term investment in R&D, process improvement, and innovation into the UK. Most of the major steel producers in the UK are part of multi-national companies with facilities in the EU and four also operating outside the EU. From this perspective, the cost competitiveness of each particular market is crucial to attracting investment. Persistent cost disadvantages in the UK lead to underinvestment, which in turn leads to further erosion of competitiveness. Please see the barriers and recommendations outlined in the answer to question 6.

## **Business Environment – Mobilising Capital**

- 22. What are the main barriers faced by companies who are seeking finance to scale up in the UK or by investors who are seeking to deploy capital, and do those barriers vary for the growth-driving sectors? How can addressing these barriers enable more global players in the UK?**
- 23. The UK government currently seeks to support growth through a range of financial instruments including grants, loans, guarantees and equity. Are there additional instruments of which you have experience in other jurisdictions, which could encourage strategic investment?**

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## **Business Environment – Trade and International Partnerships**

### **24. How can international partnerships (government-to-government or government-to-business) support the Industrial Strategy?**

Global steel overcapacity driven by non-market forces is one of the most significant trade challenges for the steel industry. Subsidies and below-market lending have resulted in rapid growth in steelmaking capacity in China, Southeast Asia, and the Middle East, unmatched by growth in domestic demand. This creates huge amounts of surplus material relying on export markets. Meanwhile, the increasing prevalence of tariff and trade remedies measures globally means that there are more and more closed-off markets to steel, creating trade diversion. This is resulting in a flood of international imports undercutting markets including the UK, suppressing steel prices and profitability, and undermining the viability of the steel industry. There is also an increasing trend of circumvention of trade measures.

This is a global challenge and international collaborations with other governments would help to tackle this issue more effectively. Information sharing on distortions and trade measure circumvention, as well as more granular trade flow monitoring, could help countries identify and tackle these issues. An international arrangement amongst like-minded nations that penalises countries that are sources of excess capacity would be highly beneficial in rebalancing the competitive landscape and enabling the UK steel industry to thrive.

### **25. Which international markets do you see as the greatest opportunity for the growth-driving sectors and how does it differ by sector?**

The EU and the US have been by far the most important export markets for the UK. However, the second Trump presidency could see the tariff-free quota arrangements agreed with the US removed and 25% Section 232 tariffs return. This will significantly impact UK steel exports. Furthermore, as a result of global overcapacity, oversupply, and weak demand globally, most export markets are saturated. Higher energy costs and carbon costs in the UK also mean that UK materials would struggle to compete in many export markets, particularly for commodity goods. More specialised steel, such as stainless steel and steels that go into aerospace and defence, are more likely to have greater export opportunities.

## **Place**

### **26. Do you agree with this characterisation of clusters? Are there any additional characteristics of dimensions of cluster definition and strength we should consider, such as the difference between services clusters and manufacturing clusters?**

### **27. What public and private sector interventions are needed to make strategic industrial sites ‘investment-ready’? How should we determine which sites across the UK are most critical for unlocking this investment?**

### **28. How should the Industrial Strategy accelerate growth in city regions and clusters of growth sectors across the UK through Local Growth Plans and other policy mechanisms?**

### **29. How should the Industrial Strategy align with devolved government economic strategies and support the sectoral strengths of Scotland, Wales, and Northern Ireland?**

## **Partnerships and Institutions**

### **30. How can the Industrial Strategy Council best support the UK government to deliver and monitor the Industrial Strategy?**

The Industrial Strategy must be aligned with other Government policies, and, in particular, the Steel Strategy, which DBT is currently developing. The two strategies must work in unison, ensuring that the Industrial Strategy supports the Steel Strategy and vice versa.

### **31. How should the Industrial Strategy Council interact with key non-government institutions and organisations?**

### **32. How can we improve the interface between the Industrial Strategy Council and government, business, local leaders and trade unions?**

## **Theory of Change**

### **33. How could the analytical framework (e.g. identifying intermediate outcomes) for the Industrial Strategy be strengthened?**

### **34. What are the key risks and assumptions we should embed in the logical model underpinning the Theory of Change?**

### **35. How would you monitor and evaluate the Industrial Strategy, including metrics?**

**Additional Information**

**36. Is there any additional information you would like to provide?**

**For further information, contact:**

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