UK STEEL – SUBMISSION TO THE CONSULTATION ON PROPOSED UPLIFT TO NCC SCHEME FOR EIIS

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To: eii.correspondence@businessandtrade.gov.uk

About UK Steel

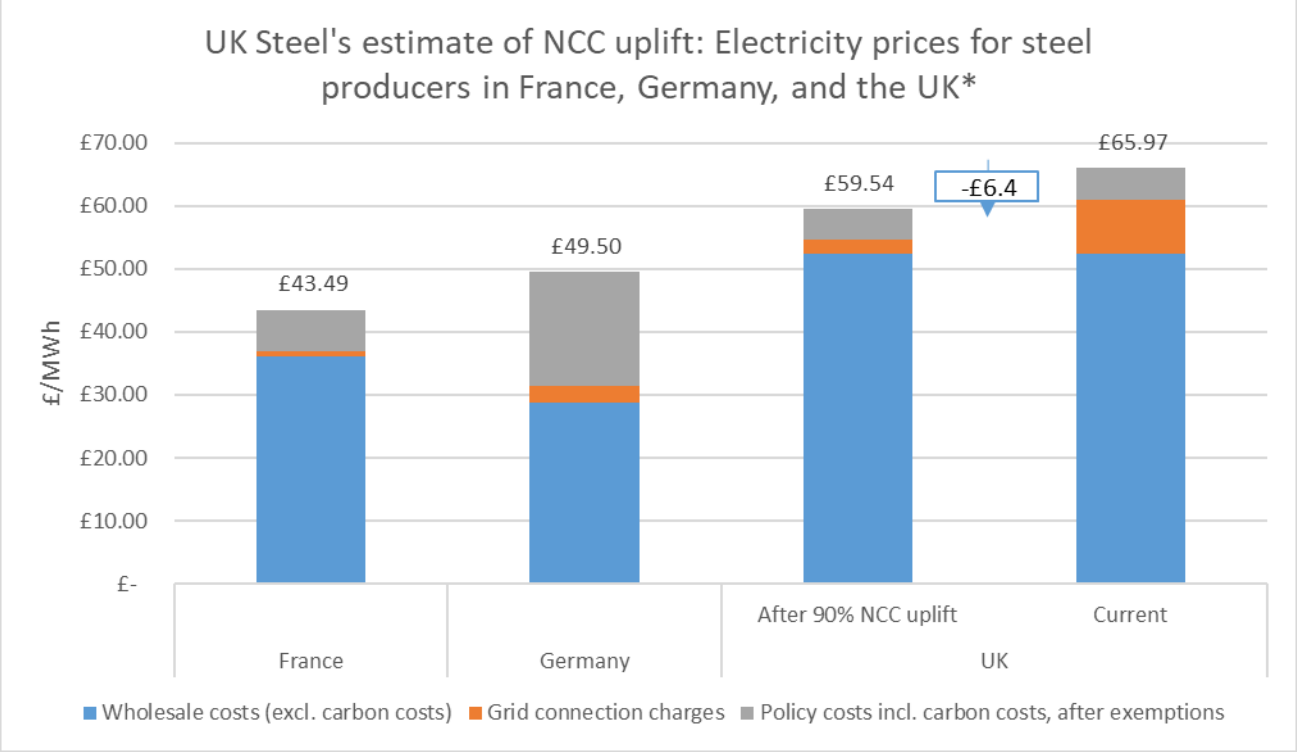
UK Steel, a division of Make UK, is the trade association for the UK steel industry. It represents all the country's steelmakers and a large number of downstream steel processors.

Submission to the consultation on the proposed uplift to the Network Charging Compensation Scheme for energy intensive industries

1. Do you agree with the proposal to raise the level of compensation from 60% to 90%?

We strongly support the proposal to increase the level of compensation from 60% to 90%, in line with the levels provided in Germany and France. UK Steel estimates that the increase in compensation level will reduce industrial electricity prices by £6.43/MWh, based on 2024/25 price data. This would reduce grid charges for steelmakers in the UK to £2.14/MWh, compared to £2.55/MWh for steelmakers in Germany and £0.85/MWh in France.

Figure 1: Industrial electricity prices after NCC uplift for steel producers in France, Germany, and the UK (2024/25 data)[1]



*This is based on 2024/25 industry average prices and will not be representative of individual companies' prices.

Steel producers operating in the UK will still face higher industrial electricity prices than their competitors after this NCC uplift, but it will no longer be partly due to higher network charges. It is therefore essential that the NCC uplift is backdated to April 2025 to ensure that UK steelmakers will benefit from lower industrial electricity prices this year. Matching the network exemption provided to competitors abroad is vital to improving the competitiveness of the UK steel industry, and we therefore strongly support increasing Network Charging Compensation to 90% for all network charging costs, backdated to April 2025.

[1] UK Steel (2024), Industrial Electricity Prices A Barrier To Growth, Competitiveness, And Profitability, September 2024, https://www.uksteel.org/electricity-prices

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2. Do you have any further evidence from your sector to support raising the level of compensation above 60%?

UK Steel has previously demonstrated that the average electricity price UK steel producers typically face is significantly higher compared to the estimated prices in Germany and France. The price disparity was historically around £20/MWh, meaning that UK steelmakers faced electricity prices 50-80% higher than their continental competitors, but the Russia-driven energy crisis increased this disparity to £30-£90/MWh. After the previous government introduced the British Industry Supercharger, which included the NCC scheme with a 60% compensation rate, the disparity was halved to £16.5-22.5/MWh for 2024/25, broadly in line with the pre-pandemic price disparity, but still leaving a sizeable price difference.

High electricity prices are consistently cited as harmful to the steel industry's ability to decarbonise its production, a major impediment to investment, and detrimental to its immediate market competitiveness. The reasons for this are worth noting:

- Steel production and processing is an energy-intensive process, and the production of millions of tonnes of steel each year consumes vast amounts of energy. For the most electro-intensive producers, electricity represented over 20% of converting globally priced raw materials into finished steel products for consumers, and energy costs are higher than labour costs. Following the rise in energy costs, energy has become the largest expense for some steel producers.
- Steel is a global commodity, intensively traded across borders. In 2023, while 23% of all steel produced is traded internationally, this figure rises to 39% in markets outside of China. Additionally, the UK exported 46% of its steel production in 2023. UK steel import penetration (i.e., the percentage of steel demand supplied by imports) has climbed from around 12% in the 1970s to 65% in 2024. The UK's main competitors are based in the EU, where most imported steel is produced and where most exported steel is going, making price differentials between the UK and EU competitors particularly important.
- The steel sector operates on relatively thin margins. Whilst there are increasingly specialised and high-value steels being produced, market requirements and economies of scale mean that the vast majority of steel made even in developed economies is commoditised and available from a broad range of sources. There is, therefore, intense competition, which keeps steel prices and margins low.
- High electricity prices generally reduce profit margins, leading to less reinvestment. Further, high electricity prices also act as a disincentive to investment from international steel companies, with the UK seen as a less favourable investment location than other countries.
- This electricity price disparity is a major barrier to meeting the Net Zero target since all options for decarbonising steel production, from CCS to hydrogen and electric arc production, lead to significantly increased electricity consumption. Investment goes to the most cost-competitive regions, which will increasingly be those with internationally competitive power prices. In the case of switching to hydrogen-based production, a comparably sized sector would incur over £137m more in costs to run in the UK than in Germany, solely due to electricity prices (at a price disparity of £ 16.5/MWh). Equally, if all UK production were to convert to electric arc furnaces using scrap steel, the sector would face higher electricity costs of £91m (at a price disparity of £16.5/MWh).

<u>Impacts of higher electricity prices</u>

The disparity in electricity prices between the UK and its European competitors has several negative impacts on the sector:

1. Competitiveness: With higher electricity prices and thus higher input costs, the international competitiveness of steel manufacturers is significantly affected. As outlined above, the steel industry is incredibly trade-intensive, and many steel grades are commodity-like products, where competition is fierce and margins low. Raw materials such as scrap, iron ore, and coal are sold in global markets, with trivial differences in the price of iron ore or scrap across the world.

   National and regional variations in costs will lead to competitiveness issues. As UK steel producers compete internationally, they are unable to pass on any additional costs over and above those faced by their competitors. A consistently higher electricity price will, therefore, impact their ability to compete and diminish profitability. The power price disparities identified in this report translate into a total additional cost to UK steel producers of around £37 million for the financial year 2024/25 compared to those in Germany.

   While several factors influence competitiveness and overall profitability, including other raw materials, electricity is a significant input cost. The uncompetitive electricity prices since the early 2010s have contributed to the steady decline in UK steel production. Production has declined for both BF-BOF

and EAF steel production, with the latter being particularly electro-intensive and now producing less than half of what was produced in 2010. Even since the steel crisis in 2016, EAF steelmaking has declined, strongly suggesting that high, uncompetitive power prices have impacted the competitiveness of the UK steel industry.

2. Barrier to decarbonisation of the steel industry: UK Steel has published a roadmap[2] for how the industry could substantially lower emissions by 2035, in line with the Climate Change Committee's recommendations. One of the main challenges identified within the Net Zero report is uncompetitive electricity prices. The Government's Net Zero target will require fundamental changes to steel production in the UK and necessitate substantial investment in new processes and equipment over the next decade. To meet this ambition, the steel companies will need to invest in new production methods, which will increase the sector's electricity consumption. There are broadly three routes to substantially reduce emissions in integrated steelmaking: Carbon Capture and Storage (CCS), Electric Arc Furnaces (EAF), and hydrogen-based steelmaking.

   In previous years, the sector consumed 2.5TWh of grid electricity annually, the equivalent of 800,000 houses. With a sectoral switch to EAFs, consumption would more than double to 5.5 TWh and increase by a factor of five for the affected sites. Hydrogen-based steel production would increase the entire sector's electricity demand to over 8.3TWh (assuming blue hydrogen is produced off-site via natural gas steam reforming), which would more than triple the whole sector's consumption but increase the demand of the affected sites by almost nine times. Finally, CCS experiences significant energy losses when capturing emissions, resulting in substantially higher electricity consumption.

   With the price disparity of £16.5/MWh, it would cost £91m more to operate an electrified steel sector in the UK than in Germany or £137m more to run a hydrogen-based steel sector. To ensure that a decarbonised steel sector would thrive, it needs competitive electricity prices.

3. Attracting investment: While large investments have been announced in conjunction with Government co-financing, it remains a fact that differences in electricity prices will impact the ability to attract long-term investment in R&D, process improvements, and innovation to 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 operate 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.

   Since the financial year 2017/18, the industry has paid £807 million more for electricity than competitors in France and £697 million more than steelmakers in Germany. To put this into context, the average annual capital investment in the UK sector is approximately £200 million.

<u>The cause of the electricity price disparity</u>

Examining the price disparity between UK and French electricity prices reveals that higher network charges account for 34% of the price difference. For the German-UK price disparity, higher network charges caused 37% of the disparity. Overall network systems costs are similar in the UK, France, and Germany at around €33–36/MWh. As outlined in the consultation document, the French and German governments reduced grid connection charges for industry by 80-90%, recognising both the importance of network charges to international competitiveness and the vital role large energy users play in balancing the power networks.

The sky-high network charges were caused by the implementation of two network charging reforms in April 2023: the Targeted Charging Review (TCR) and the Second Balancing Services Charges Task Force (BSUoS Taskforce), significantly increasing network charges for the most electro-intensive manufacturers. Before the reforms, steel producers paid around £10/MWh, but this increased to over £30/MWh for the 2023/24 financial year and £21/MWh for the 2024/25 financial year. Future network charges may increase even further. Transmission costs (TNUoS) are predicted to grow significantly over the coming years. In May 2023, National Grid ESO expected TNUoS charges to be £4.26 million per site for a transmission-connected site in 2028/29, whereas in 2024, National Grid ESO expected the site to face £6.59 million in TNUoS charges. This represents a 55% increase in expected future transmission costs. Without an increase in compensation levels, such

[2] UK Steel (2022), Net Zero Steel: A Vision for the Future of UK Steel Production, https://www.makeuk.org/about/uk-steel/net-zero-steel---a-vision-for-the-future-of-uk-steel-production

volatility would negatively impact steelmakers and their ability to compete and cover the costs needed to decarbonise.

The remaining disparity is caused by higher wholesale prices, primarily due to the different power generation mixes. Natural gas makes up a significantly higher proportion of the electricity generation mix in the UK, whereas nuclear dominates in France, and coal takes up a large share in Germany. As natural gas prices have risen after Russia invaded Ukraine, wholesale prices in the UK are significantly higher than in France and Germany.

While higher wholesale prices are the primary cause of higher industrial electricity prices, the Government would not be able to deliver competitive electricity prices for the steel industry without also addressing network charges. For these reasons, UK Steel ardently supports increasing the NCC to 90%, matching what is provided in other European markets and backdating it to April 2025.

3. Do you agree with the proposal to extend each application window to 2 months?
Yes, we support this proposal, as it provides industrial participants with additional flexibility in supplying data and reduces the need for later corrections, which subsequently provides greater clarity to energy suppliers on future costs.

For further information, contact:
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