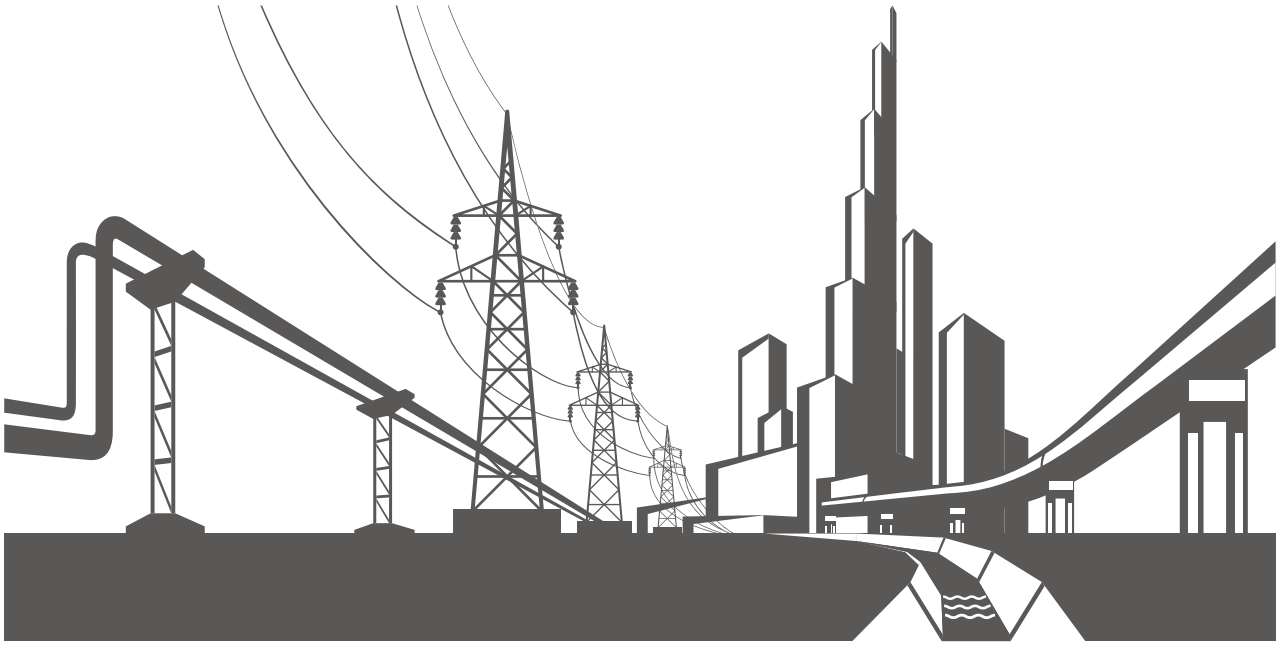
UK Steel

THE ENERGY PRICE SCANDAL

A FAIR POWER DEAL FOR UK STEEL



DECEMBER 2018

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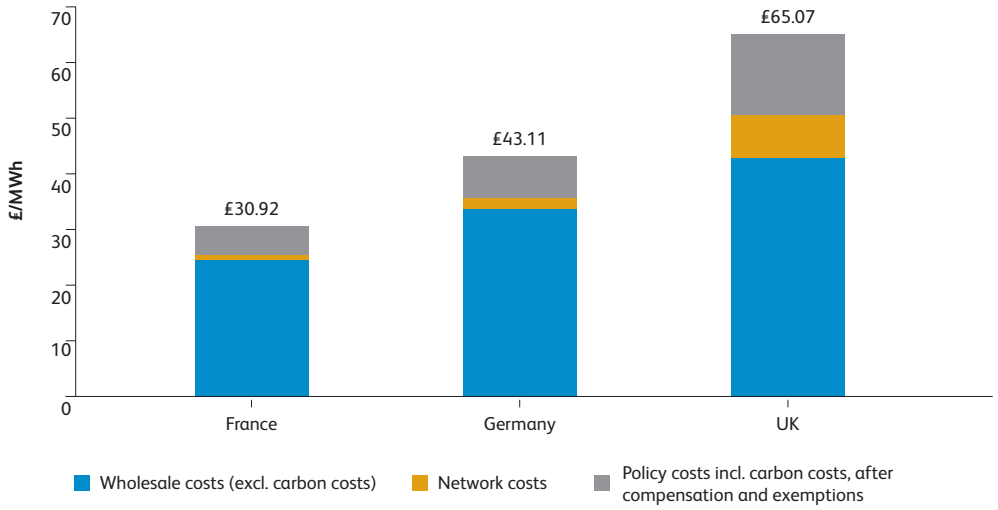
1. EXECUTIVE SUMMARY

The UK consistently has some of the highest industrial electricity prices in Europe. This creates significant problems for steel production, which is both electro-intensive and highly exposed to international competition, meaning it cannot pass on additional costs to customers. With steel producers' direct competitiveness and levels of investment both being affected, electricity prices have become a major ongoing concern for the sector and its long-term sustainability.

In lieu of any recent Government analysis of this issue, UK Steel has conducted its own research examining the prices paid by steel producers based in the UK, Germany and France. This is the third year in which we've conducted similar research, and the third year in which the disparity between UK electricity prices and those in competing countries has increased.

Our results show the average electricity price UK steel producers typically face in 2018/19 has reached £65 per megawatt hour (MWh) compared to the estimated German price of £43/MWh and French price of £31/MWh. UK production sites are therefore paying 51% and 110% more, respectively, than their main competitors.

Figure 1: Energy prices for steel producers in France, Germany, and the UK (2018/19)



This price disparity applied to the UK steel sector equates to £55 million per year compared to Germany. With energy being one of the sector's single largest costs, continuing inaction from Government in this area is endangering the steel industry's future and the jobs it provides.

Steel companies have committed to reinvest any savings achieved as a result of Government action on the electricity price disparity back into their UK plants. Achieving parity with Germany would therefore deliver an additional £55m/year of investment in the sector, a 30% increase on current capital investment levels.

The Government must take action now to reduce industrial electricity prices. This should include reassessing a whole range of different elements of the electricity market to find long-term savings. However, in this report we also highlight some immediate steps that could make a difference very quickly:

1. Tracking industrial energy price disparities between countries
2. Increasing the level of renewable levy exemptions
3. Merging renewables levies
4. Reducing the level of Carbon Price Support
5. Exempting electro intensive industries from Capacity Market costs
6. Facilitating Demand Side Response mechanisms for the steel sector
7. Ensuring new network charging rules will not increase costs for steel companies
8. Reviewing post-Brexit carbon pricing and compensation for indirect costs
9. Enabling steel producers to take full advantage of the forthcoming Industrial Energy Transformation Fund

Through these measures, the Government can start to enable the steel sector to compete on a level playing field internationally and protect well paid, highly skilled British jobs.

2. INTRODUCTION

The UK has the highest industrial electricity prices in the EU, according to UK Government statistics[1]. We have topped this league table in all but one six month period since January 2015 and UK prices for extra-large industrial users currently stand 90% above the EU average. This fact is consistently cited by all UK steel producers as harmful to their competitiveness and an impediment to investment. The reasons for this are obvious and straightforward, but are worth noting nonetheless:

- Steel production is an energy intensive process. No matter how efficient a steel plant is, the production of millions of tonnes of steel each year will consume vast amounts of energy, including electricity. In the UK it is estimated that electricity costs represent up to 20% of 'conversion costs' on site – i.e. the costs of converting the basic raw materials into steel.

- Steel is an intensively traded product, with 40% of the 1.6 billion tonnes of steel produced globally each year travelling across national borders. The UK imports some 5 million tonnes of steel each year, around 53% of requirements, and exports 3.5 million tonnes, around 45% of its production.

- The steel sector is one that must operate 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 prices and margins low.

- For the foreseeable future, the UK's principal competitors are based in the EU. Around 4.4 million tonnes, or 66% of total UK imports last year, came from the EU and the UK sent 2.6 million tonnes, 72% of its exports, across the Channel. Price differentials between the UK and EU competitors are therefore particularly important to the health of UK steel producers; electricity costs have become the most persistent and stark of these cost differentials in recent years.

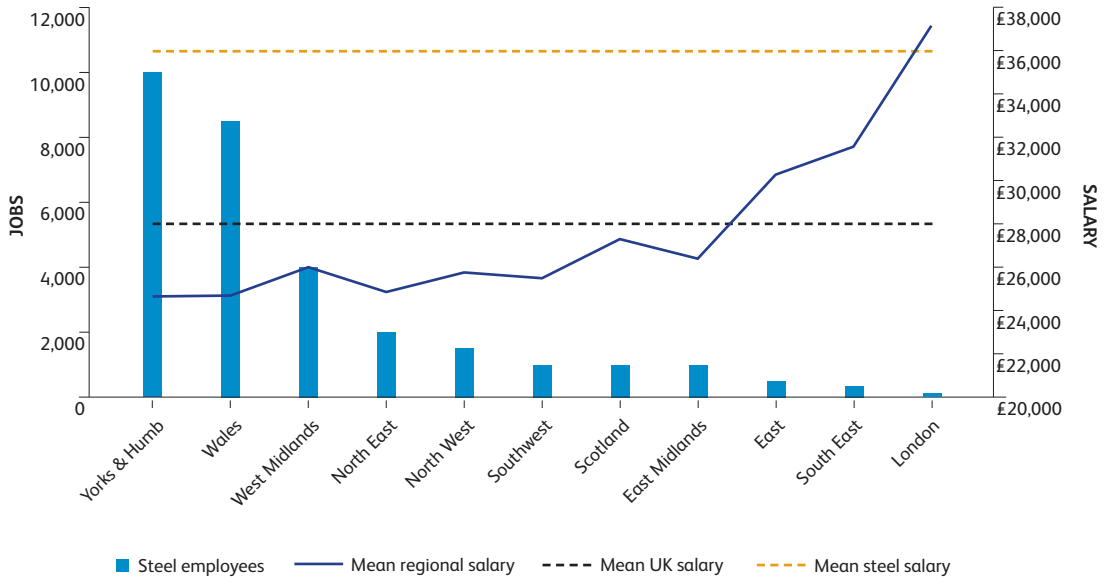
The UK's relative high electricity price has, therefore, become a major ongoing concern for the steel sector and its long-term sustainability. In lieu of any UK Government analysis of the situation in particular sectors and the causes and consequences of this, UK Steel has conducted its own research examining the prices paid by steel producers based in the UK and, where possible, by sister facilities in Germany and France. Where necessary this has been supplemented with data from other international price comparison studies. This report represents our third annual examination of the electricity price disparity between the UK and EU competitors and, as detailed below, the third year in which this disparity has increased.

1. BEIS, Industrial electricity prices in the EU, QEP 5.4.4, 2018

3. OVERVIEW OF STEEL SECTOR

- Steel is a vital foundation sector establishing a base for a huge number of high-value industries such as automotive, construction, energy, aerospace and yellow goods.
- The UK steel industry directly employs 32,000 people and additionally supports an estimated 50,000 jobs in its supply chains and local communities.
- The average steel salary is 28% higher than the national average and 46% higher than the averages in Wales and the Yorkshire & Humberside region where most of the industry is based[2].
- The manufacture of steel products contributed £1.6 billion directly to the UK economy in 2017, with an additional £3.9 billion created in supply chains and local communities[3].
- The annual UK Steel demand is 9.4Mt compared to a production of 7.6Mt. 3.5Mt of our production is exported, and we import 5.0Mt to meet requirements. In 2030, UK steel demand is forecast to be 11Mt, which represents a £3.8bn per annum future opportunity in revenue terms[4].
- The industry makes a positive contribution to the UK's trade deficit, exporting around £3.2 billion of products in 2017[5].

Figure 2: Steel employees across UK regions and sector salary



2. ONS (2016) Annual Survey of Hours and Earnings. Figures round to nearest thousand. £36,000 represents the mean annual earnings of all employees in the basic metals sector SIC 24 of which & steel comprises some 52% of the workforce. The average UK salary stood at £28,000.
3. PWC (2014) Understanding the Economic Contribution of the Foundation Industries provides multipliers of 1.64 additional jobs supported by each steel sector job and £2.42 of additional GVA for each £1 of direct steel sector GVA.
4. Future Capacities and Capabilities of the UK Steel Industry, BEIS Research Paper Number 26, 15 December 2017
5. International Steel Statistics Bureau – 3.5 million tonnes exported in 2017 at average value of £903/tonne

3.1. Steel production and energy costs

Steel production is an extremely energy intensive process. There are two principle methods of producing steel: by recycling scrap steel in an electric arc furnace (EAF - Cardiff and Sheffield), which requires extremely large amounts of electricity and more modest amounts of natural gas, or from iron ore using blast and basic oxygen furnaces at an integrated site (Port Talbot and Scunthorpe), which consume large amounts of coal, electricity and some natural gas. Beyond the steel production itself, significant volumes of energy are used in downstream processes such as rolling.

The proportion of the total costs of steel production that are attributable to energy vary significantly, from site to site and from country to country. The World Steel Association has recently estimated that energy on average constitutes around 20% [6] of the cost of steel production with the split of energy consumption at an integrated site being 50% coal, 35% electricity, 5% natural gas and 5% other gases[7]. For an EAF, the figures are approximately 75% electricity and 25% gas[8].

It is important to note that when the UK steel sector talks of uncompetitive energy prices it is generally talking about electricity prices. Coal prices are set on a world market and, excluding state subsidised supplies of coal that some steel companies may be provided with, are broadly the same everywhere. Natural gas prices do vary significantly from region to region, with very low prices in the US compared to very high ones in Japan. But with gas making up a smaller proportion of energy input of steel production, and limited trade between the UK and these regions, gas price differentials cannot be said to be playing a significant role in the cost competitiveness of UK producers.

It is also worth noting that despite the commonly accepted view that the UK experiences a price advantage with the EU in relation to gas and that this helps to alleviate any cost disadvantage with regards to electricity, the data does not bear this out. Once all government interventions, such as transmission cost reductions, are taken into account, gas prices in Germany, France, Belgium and the Netherlands for large industrial consumers were all lower than in the UK for the last three years[9].

An alternative demonstration of energy intensity is used by the UK Government when judging eligibility for various reductions in policy costs, such as renewables levies, added to bills. This requires companies to show that their electricity costs represent at least 20% of their Gross Value Added (GVA - i.e. total economic impact in terms of profit and jobs[10]). With steel companies in the UK demonstrating electro-intensities of up to 120% [11] on this scale, it is clear the detrimental impact high electricity prices are having on profits, investment and long-term sustainability within the steel sector.

6. World Steel Association (2015) Energy use in the steel industry
7. World Steel Association (2015) Energy use in the steel industry
8. UK Steel Climate Change Agreement data
9. CREG/PWC (2018) A European comparison of electricity and gas prices for large industrial electricity consumers
10. GVA classified as Earnings (Before Interest, Taxation, Depreciation and Amortisation) plus all employee costs
11. As demonstrated through applications to UK's "Compensation for the indirect costs of the Renewables Obligation and Feed-in-Tariffs" scheme.

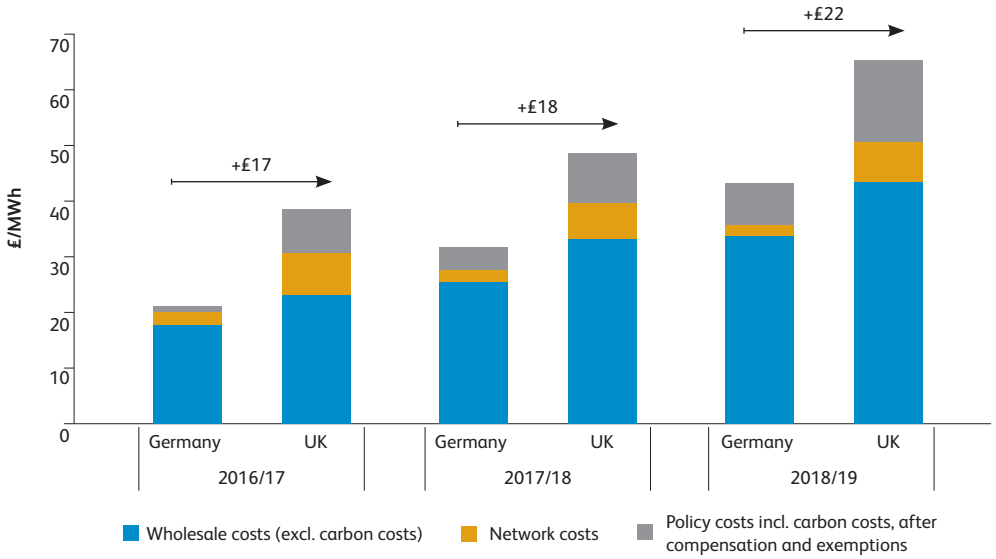
4. PRICE DISPARITY

4.1. Results

Although other countries conduct detailed analysis of energy price disparities on a regular basis, the UK has not done so since 2012. Instead it relies on highly aggregated data collated at EU level that UK steelmakers feel poorly reflects their own experiences. This is the third year UK Steel has published an analysis of the electricity price disparity based on an estimated range of prices steelmakers face. The trend is clearly worsening.

The average price faced by UK steelmakers for 2018/19 is £65/MWh compared to the estimated German price of £43/MWh. This indicates a price disparity of 51 % – or a UK surcharge of £22/MWh – as seen in Figure 3.

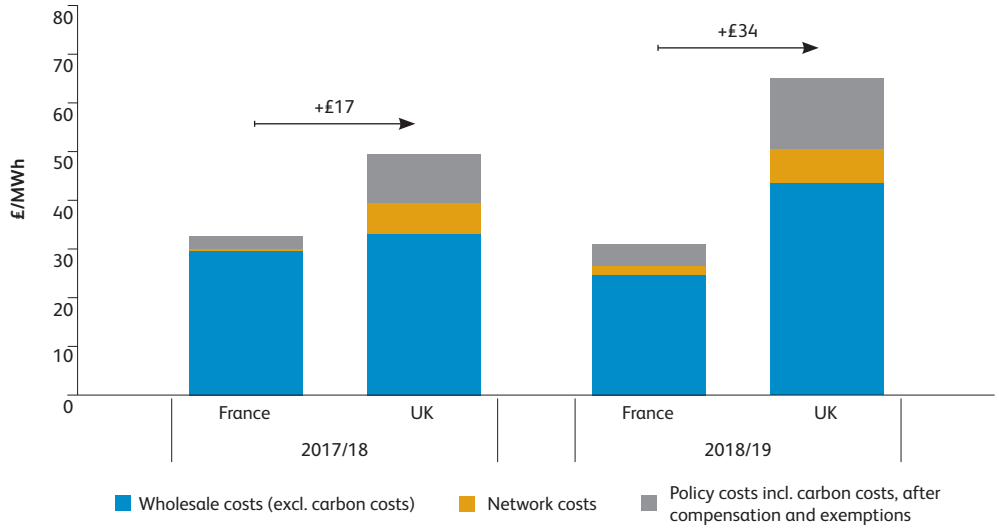
Figure 3: Electricity prices for UK and German Steel producers



The disparity with French prices for 2018/19 is even higher at £34/MWh, or 110 %, as shown in Figure 4.

It should be noted that in both cases the carbon costs from the EU Emissions Trading System (ETS) and Carbon Price Support (CPS) have been deducted from the wholesale costs and added to the policy costs (including appropriate compensations) to better reflect the true nature of the policy costs.

Figure 4: Electricity prices for the UK and French Steel producers

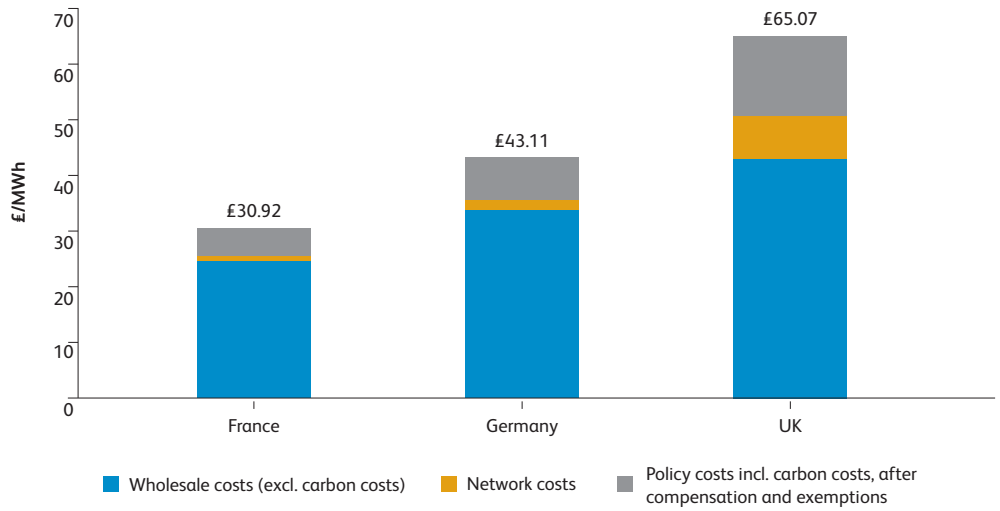


The chief reason for the major increase in the UK/France disparity over the last year is the interplay between French market wholesale prices and the regulated ARENH Tariffs (see box opposite). Typically, qualifying French industry will have access to the lower of the two prices. Last year this was the market wholesale price, but with significant increases in wholesale prices, French industry is now assumed to be relying on the cheaper ARENH tariff.

The ARENH tariff

The ARENH (Accès régulé à l'énergie nucléaire historique) tariff is based on the right that entitles industry to purchase electricity from nuclear generator EDF at a regulated price, in volumes determined by the French energy regulator, CRE . This rate is set in advance. French steel producers may in reality be on a long-term tariff, usually with EDF, for their energy supply instead, rather than relying on the wholesale market or ARENH.

Figure 5: Energy prices for steel producers in France, Germany, and the UK (2018/19)



4.2. Causes of disparity

There are several underlying factors which contributes to the price disparities with France and Germany that are worth highlighting.

4.2.1. Wholesale costs

The UK wholesale price is generally higher than that in Germany and France. This is partly due to the fact that the UK has a low level of interconnection compared to its European neighbours[12], constraining our ability to import low-cost electricity. The UK's 4GW of interconnectors is equivalent to 4.5% of domestic generation capacity[13], compared to 10% for France and Germany. Although several new interconnectors are currently being built and in the planning stage, the Government could look at opportunities to facilitate increased cross-border electricity contracting to minimise the wholesale cost difference.

The different fuel mixes in France and Germany also play a role. France has a higher proportion of nuclear power (helping underpin the ARENH rate discussed above) than the UK and Germany is more reliant on coal and lignite than the gas-dependent UK. Once carbon costs are removed, German wholesale prices are in the region of £34/MWh compared to £43/MWh for the UK.

The UK's higher reliance on gas is driven in part by Carbon Price Support, which forces the use of the more expensive fuel gas over coal. The UK Government has also been excluding some of the cheapest renewable energy technologies, such as onshore wind and solar, from its most recent auctions for Contracts for Difference (CfDs), reducing the ability of new renewables installations to bring down wholesale costs.

Finally, the UK electricity market has few contracts with duration beyond a couple of years ahead, which increases exposure to volatile energy prices. In Germany and France, some of the power generators contract considerably further ahead with their consumers. Unlike the UK approach of promoting competition between industries, a large French industrial group (Exeltium) has negotiated a shared 24-year power contract with EDF, reducing prices substantially.

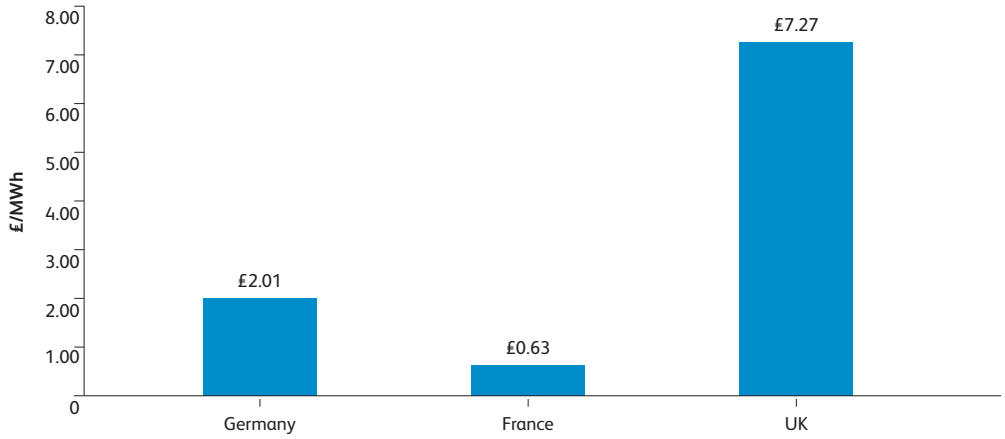
Italy has also innovated in this area, offering large industrial consumers the chance to buy electricity at lower prices via a virtual cross-border trade if they invest in new interconnection capacity.

4.2.2. Network costs

Total network costs are similar in the UK, France, and Germany at around €33–36/MWh. However, costs are allocated more evenly across all consumers in the UK, including industrial consumers, whereas France and Germany reduce tariffs for industry, providing up to a 90% discounts for certain industrial users[14]. French steel sites studied have transportation prices at less than £1/MWh compared to £7/MWh in the UK. German sites are paying an average of £2/MWh.

12. Grubb, M., & Drummond, P. (2018). UK Industrial Electricity Prices: Competitiveness in a low carbon world. UCL Institute of Sustainable Resources, https://www.ucl.ac.uk/bartlett/sustainable/sites/bartlett/files/uk_industrial_electricity_prices_-_competitiveness_in_a_low_carbon_world.pdf
13. Ibid. In 2016, the UK had over 60GW of 'firm' generating capacity.
14. Ibid.

Figure 6: Network costs



4.2.3. Policy Costs

Policy costs, including levies to pay for renewables schemes like the CfD, the costs of the Capacity Market and carbon costs, also contribute to the disparity in electricity price. Gross UK policy prices are £55/MWh, reduced by exemptions and compensations to £14/MWh. This is significantly higher than the £7/MWh paid in Germany and £6/MWh in France.

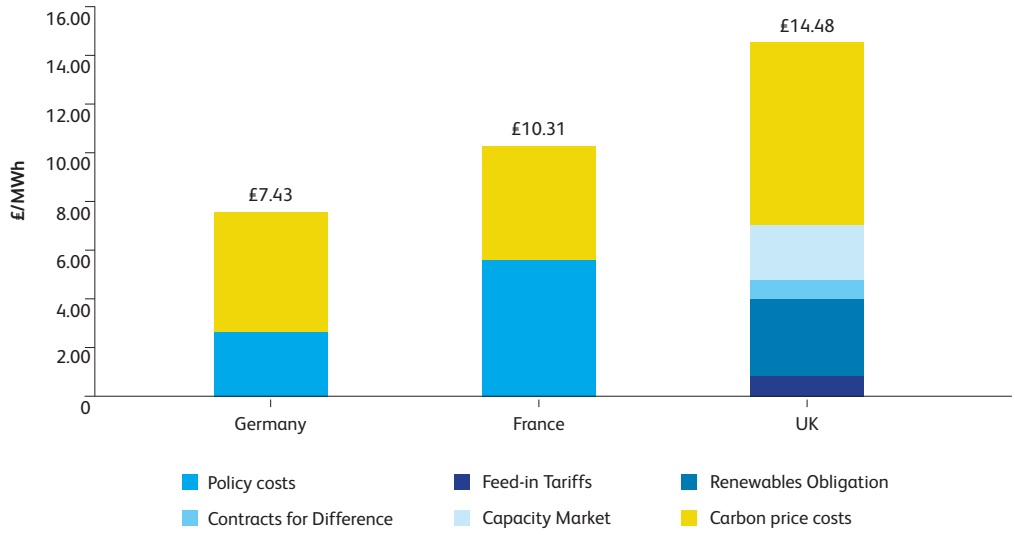
Most German consumers pay more to support the decarbonisation costs of their electricity sector than their UK counterparts. However, the German Government has decided to keep energy costs competitive for energy intensive industries, recognising the other benefits they provide to the economy. Renewables levies are therefore capped at the equivalent of 0.5 % of GVA so those companies with a low GVA in recent years are accessing more than 95 % exemption from renewable energy costs. UK steel companies meanwhile get a maximum exemption of 85 %. Renewables costs (after exemption) for steel companies examined in Germany are around £3/MWh compared to £5/MWh in the UK. The Government consulted in autumn 2018 on further exempting energy intensive industries from renewables levies but only considered expanding the exemptions to a wider pool of companies not increasing the degree of exemption available.

One of the other key differences between the UK and France/Germany is Carbon Price Support (CPS) which contributes £3/MWh to the disparity, even after the carbon price compensation for which some energy intensive industries are eligible. The CPS is a UK-only top up to the EU ETS carbon price and is currently stuck at £18/tonne of CO_2, failing to reflect a sharp rise in recent ETS prices. This means residual carbon costs after compensation is paid in France and in Germany are currently around £5/MWh compared to £8/MWh in the UK.

On top of this are UK-only Capacity Market charges of around £2/MWh for which there is no exemption or compensation available[15].

15. The capacity market is currently suspended at the time of publication, but a resolution is expected and charges may continue in the meantime.

Figure 7: Policy Costs



4.3. Future concerns

There are two future issues that may further exacerbate the electricity price gap between the UK and France/Germany: the Targeted Charging Review (TCR) and Brexit.

4.3.1. Targeted Charging Review

This is one of two reviews being carried out at the moment by Ofgem that could affect future distribution of network costs. The Targeted Charging Review (TCR), the more advanced of the two, is looking at how the costs of the existing electricity network are shared between consumers. Significant increases are possible for manufacturers. Ofgem's initial, indicative figures released in August showed an alarming rise of £9/MWh for some industrial consumers under one charging model. Price rises of this scale would add significantly to the existing disparity created by network charging exemptions in France and Germany. The review is still in progress and Ofgem does appear to be listening to industry concerns. However, we would still seek as a minimum a guarantee that steel sector charges will not be increased.

4.3.2. Brexit

The UK's exit from the EU could impact the efficiency of cross-border electricity trading. A hard Brexit could also leave the UK with the fall back carbon tax set out by Treasury in its 2018 Autumn Budget. There is a risk the rate of this will deviate from the EU ETS over time, imposing additional costs on UK generators that will be passed on to consumers.

5. EFFECT OF PRICE DISPARITY ON UK SECTOR

5.1. International competitiveness

The main and foremost concern is the impact on steel manufacturers' international competitiveness. As outlined above, electricity costs can represent up to 120% of UK steel producers' GVA and 20% of their controllable costs. As they are competing internationally, they are unable to pass on any additional costs over and above those faced by their competitors. A consistently higher electricity price therefore impacts their ability to compete and diminishes their profitability. The disparities identified here translate into a total additional cost to UK steel producers of £55 million/year compared to Germany and £85 million/year compared to France[16].

5.2. Investment

Besides the impact on direct competition is the more insidious impact on investment. Four out of the five major steel producers in the UK are part of multi-national companies headquartered outside the UK, all have facilities elsewhere in the EU and three additionally operate outside the EU. In this context, the cost competitiveness of each particular market is crucial to attracting investment. Persistent cost disadvantages lead to underinvestment which in turn leads to further erosion of competiveness. This is compounded by the lack of action from the UK Government to address the disparity, making substantial investments here even less attractive.

The issue of underinvestment resulting from the UK's high electricity prices has become increasingly apparent over the course of the last two years, during which the UK's six steel producers have come together to develop a Sector Deal proposal to feed into the Government's Industrial Strategy. Delivering the proposals as a whole would see much-needed capital investment in the sector increase by 50% per year, industry R&D investment increase by a potential 75% and steelmaking capacity increase by 30%. However, the CEOs of all the steelmakers have made it clear that this investment and expansion is reliant, in the first instance, on a Government commitment to deliver competitive electricity prices in the near and long-term.

Considering electricity prices in isolation, the UK's five largest steel producers made a firm and direct commitment to Government earlier this year that all savings on electricity costs resulting from Government action would be reinvested in the UK. Based on the analysis of this report, delivering cost parity with Germany would deliver a £55 million a year investment over and above business as usual: this represents a 30% increase. With this clear-cut commitment from the sector, it is more obvious than ever before the investment the steel industry is missing out on as a result of UK Government inaction on electricity prices.

16. Electricity Consumption figure updated from ISSB. 2017 steel sector consumption of imported electricity was 2.5TWh.

6. OPTIONS FOR LOWERING THE PRICE DISPARITY

The current Government committed in its 2017 Manifesto to try and deliver the lowest energy costs in Europe for both domestic and industrial consumers. A few months later, the Industrial Strategy promised to make the UK the best place to start and grow a business. However, the only substantial action since then has been on energy efficiency. Although welcome, support for energy efficiency does nothing to alter the kind of market fundamentals considered by multinational investors. No amount of energy efficiency improvement will counteract having to pay 50-100% more for your electricity than your competitors.

UK Steel urges the Government to commit to action to eliminate the electricity price disparity, thereby helping ensure the future viability of the sector and securing the jobs of thousands of employees. This should include reviewing which technologies are able to bid in forthcoming CfD auctions in order to support more cost-effective renewable energy technologies, exempting industry from any further renewable or low-carbon energy levies, facilitating cross-border contracting, and increasing the level of UK interconnection. It is particularly dispiriting to see the results of the Government's own Cost of Energy Review largely ignored for a year and then apparently dismissed.[17]

Whilst it is critical that the Government quickly comes forward with a long term plan to deliver cost competitive electricity, is is also essential that it implements the measures listed below to reduce prices for industry in the here and now.

Some of these would redistribute costs to other energy consumers. We share Government's concerns about the fuel poor but we would also note that the impact of further exemptions would be minimal. Eliminating the electricity price disparity for the steel industry would only add 51p per year to the average household bill[18]. The Government needs to look beyond black and white arguments around the cost to other consumers of taking action and consider the wider economic case for supporting the steel sector in this manner. As stated above, action on electricity will demonstrably lead to a significant increase in investment, capacity and jobs within the steel sector, delivering benefits to the wider manufacturing sector and the UK economy. As such we firmly believe there is a strong and logical argument for taking action.

Our specific proposals include:

Track industrial energy price disparities between countries: The Government should track the disparity in industrial energy prices between the UK and other key competitors and reasons for this to enable more informed policymaking. We believe an update on this should be published every year alongside an Annual Energy Policy Statement giving a unified view for investors from Government and the regulator on the future of energy policy. The Belgian Government currently publishes an annual review of the impact of energy costs for energy-intensive, trade-exposed industries, headed up by the Commission for Electricity and Gas Regulation (CREG) and PwC.

17. Greg Clark, November 2018, Speech on The End of the Energy Trilemma

18. The average disparity between the UK and Germany is £22/MWh, or £55m per year, assuming a total electricity use of 2.5TWh. If the £55m were to be spread across the remaining consumers, it would lead to a costs of £0.00016 per kWh (£55m / (total UK power consumption (336TWh – 2.5TWh)). An average household consumes 3100kWh according to Ofgem's Typical Domestic Consumption Values, which would equate to £0.51.

Increase the level of renewable levy exemptions: The costs of supporting renewable energy generation are expected to increase in the coming years, from £10.2bn in 2018/19 to £13.1bn in 2023/24[19]. EU state aid guidelines on relief to industry from the costs of renewables allow for exemption up to the level of 0.5 % of a company's GVA. The UK, for reasons of administrative simplicity, chose instead to only provide relief at 85 % aid intensity. However elsewhere, such as Germany, companies achieving the necessary electro-intensity thresholds are able to access the higher level of relief – paying a maximum of 0.5 % of their GVA (average over three years). We estimate that introducing similar measures in the UK could reduce electricity costs for the steel sector by an average of £2/MWh or £5 million in total.

Merge renewables levies: The Cost of Energy Review suggested combining all renewables levies into a single 'legacy bank' and exempting business from these costs. Even if that isn't done, there could be advantages to bundling the three separate levies (for CfDs, the Renewables Obligation and Feed-In Tariffs) if taken in conjunction with the step above. Having three separate levies means companies would need to pay an amount equivalent to 0.5 % of GVA on each or 1.5 % across all levies. Combining all three into one would reduce this by up to two thirds.

Reduce the level of Carbon Price Support: The Government must take urgent action to bring the Total Carbon Price (EU ETS plus CPS) back to the £25/tonne of carbon dioxide level it said it would aim for in its 2017 Autumn Budget. Since then EU ETS prices have risen significantly, pushing the Total Carbon Price up above £35/tCO_2 at times. This is damaging in itself, but even more so considering industrial consumers in the rest of the EU are not paying the CPS or any equivalent.

Exempt electro intensive industries from Capacity Market costs: The Capacity Market is another policy cost arising from decarbonisation. As such, the Government should exempt electro-intensive consumers from covering its costs. This would lower the average electricity price for steel producers by £2/MWh, but would only increase the annual energy bill for a typical household by a maximum of 23p[20]. The re-distributive impacts could be limited significantly by limiting access to the scheme to the most electro-intensive industries, for example the steel related portion of that 23p/household is just 5p.

Facilitate Demand Side Response (DSR) mechanisms for the steel sector: The Government should facilitate development of a new DSR product for EAFs in particular and work with the steel sector to develop mechanisms that can capture more of the inherent flexibility steel production sites can offer. EAFs alone in the UK could offer 250MW of flexibility and there is further capability in integrated steelworks and downstream processing sites. Unlocking this potential delivers on the Government's aims of a smarter, more resilient grid, whilst providing a valuable revenue stream for steel producers. The case for something along these lines may become even stronger if the TCR removes some of the current incentive to manage demand around peak periods. Similar schemes have been developed in France.

19. Figures from Office for Budget Responsibility

20. Assuming the electricity intensive industry uses roughly 20TWh, which is equivalent to 6 % of the UK total electricity use; the capacity market costs £400m in 2017/18, which would make the costs to EIIs roughly £24m. This would likely be much less as the EIIs change their consumption behaviour to minimise capacity market charges. If the £24m were to be spread across the remaining consumers, it would lead to a costs of £0.000075 per kWh (£24m / (total UK power consumption (£336TWh – 20TWh)). An average household consumes 3100kWh according to Ofgem's Typical Domestic Consumption Values, which

Ensure new network charging rules will not increase costs for steel companies: In the context of Ofgem's TCR, solutions must be found that, at the very least, do not further increase network costs for steel companies. However, we would urge Government and Ofgem to go further and move to a model similar to Germany and France in which all three elements of network charging (transmission, distribution and balancing) are bundled together and various discounts/exemptions provided. Linking such exemptions to delivering DSR activities could also be considered.

Review post-Brexit carbon pricing and compensation for indirect costs: In the case of a 'No Deal' Brexit, Government has outlined plans to introduce a carbon tax of £16/tCO_2 from March 2019. There is a concern that the EU ETS price could drop below this if UK players exit the market, leaving UK electricity suppliers and their customers paying much higher prices than their EU counterparts. The Government should commit to ensuring that steel producers as a minimum do not face higher direct or indirect carbon costs as a result of leaving the European Union without an agreement. In the case of a relatively hard Brexit, there could also be an opportunity to review the degree of compensation UK firms receive from carbon costs and range of sectors eligible. EU state aid constraints currently limit the level of compensation that can be provided to the effect that steel companies in receipt of relief are still exposed to some 35% of total carbon costs and this will increase to 40% next year. Moreover, it should be remembered that not all steel processes, or steel suppliers, are currently in receipt of compensation due to EU state aid methodology, and further changes could be considered here.

Enable steel producers to take full advantage of the forthcoming Industrial Energy Transformation Fund: In the 2018 Autumn Budget, the Government announced the Industrial Energy Transformation Fund to support industrial energy efficiency and decarbonisation projects. We look forward to working with the Government on this and hope both it and the Industrial Heat Recovery Scheme will benefit steel producers. The steel industry has identified a host of energy efficiency projects, which could collectively save 356GWh of energy and 125,183t CO_2e per year.

7. METHODOLOGY

This research by EEF and UK Steel is based primarily on the electricity prices faced by typical UK steel producers based in the UK and their sister facilities in Germany and France. Where necessary, this has been supplemented by data from international price comparison studies such as the PwC/CREG report referred to above. The intention is to provide a much-needed sector specific view with input from steel companies actually operating in those countries examined. Importantly, this analysis also takes into account all exemptions and compensations that are available to those companies and therefore provides the most accurate and up-to-date picture possible.

UK wholesale prices have been constructed by using the five monthly average spot prices (from April to August) and average forecasted price for the following seven months, based on published reference data. German wholesale prices are based on similar methodology and French prices on ARENH rates. The policy prices for the Renewables Obligation, Feed-in Tariffs, and Contracts for Difference are based on average reported prices from UK steelmakers and exemptions and compensations have been applied. The Capacity Market prices are also based on the average prices per MWh for steel producers over the past year. UK network prices are similarly based on the average prices steel producers face, including distribution, connection, and transmission costs (assuming consumption during one Triad at 70% capacity). The French and German policy and network prices are based on the average prices reported by steel producers. This includes the CPSE, Contribution tarifaire d'acheminement (CTA), CHP, StromNEV, Offshore, EEG-Umlage, Stromsteuer, and Konzessionsabgabe / Concession Fee. The exchange rate used is €1:£0.896 based on the exchange rate of the end of August 2018. The EU ETS prices are based on the average price for April to August 2018 and the forecasted price for the following seven months. Compensation has been applied to this and, in the UK's case, the CPS. In all countries, we assume compensation provides 63% relief; based on the assumption of plants being at 80% of the electricity consumption efficiency benchmark and compensation provided at 80% aid intensity in Q2-4 2018 and 75% in Q1 2019.

Any demand side response income or revenue from embedded benefits has been excluded from this analysis in all countries.

UK Steel

UK Steel is the trade association for the UK steel sector. As the voice of the steel industry, we interface with government and parliament – in both London and Brussels – to influence policy so that it underpins, rather than undermines, the long-term success of our sector.

Membership of UK Steel is open to all UK-based companies and organisations involved in the production of steel and downstream processes.

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