Achieving Wholesale Energy Price Parity for UK Steel

UK Steel and Baringa

February 2025

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Executive Summary

Ensuring a competitive and sustainable future for UK steel through wholesale energy price parity

Situation

The UK steel sector is a cornerstone of the economy and a critical enabler of the country's net-zero ambitions. Transitioning to low-carbon production methods, such as Electric Arc Furnaces (EAFs), could reduce national greenhouse gas emissions by 2% while supporting renewable energy supply chains, including offshore wind turbine production.

Complication

Despite its strategic importance, the UK steel sector is disadvantaged by significantly higher and more volatile wholesale electricity prices compared to European competitors. UK producers face electricity costs up to **50% higher** than those in France and Germany, driven by:

- A heavy reliance on gas-fired power generation.
- Limited interconnection capacity with lower-priced energy markets.
- Lower levels of state support for energy-intensive industries.

This undermines the sector's global competitiveness, increases risk in green investments, and reduces its ability to support the UK's economic and climate objectives.

Resolution

To address this disparity and support the sustainable future of the UK steel sector, **a two-way Contract for Difference (CfD) mechanism should be considered**:

- **Provide price parity with the lowest-cost European competitors** by fixing electricity prices for the steel sector, increasing global competitiveness.
- **Protect against price volatility**, enabling long-term planning and investment in low-carbon technologies such as Electric Arc Furnaces (EAFs).
- **Share risk and reward**, with the sector paying back the Government when prices fall below the agreed strike price.

Next steps

To address this, the UK Government should consider:

- Launching a consultation on the CfD mechanism to gather industry and stakeholder input.
- Setting an initial CfD strike price ahead of a pilot scheme launch in early 2026.
- Exploring complementary measures, such as incentivizing onsite renewables and energy storage, to further reduce costs and emissions.

The proposed CfD is a practical and future-focused solution to support the UK steel sector and drive its green transition. Without decisive action, the UK risks falling behind in the global steel market, with long-term consequences for economic growth and climate goals.

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Decarbonisation in the context of price disparity

The steel sector is committed to decarbonisation, but requires stable and predictable energy costs to transition to greener production methods

The UK steel sector is decarbonising by investing significant amounts in fully transitioning to using **electric arc furnaces (EAFs)**, which is forecast to reduce the *total* UK greenhouse gas emissions by **2%**.

The transition to EAFs support the Clean Power 2030 mission: increasing the commercial attractiveness of the UK steel sector will support the Government's Clean Power 2030 mission by **increasing investments in EAFs** which can be operated flexibly. This, in turn, supports the build out of renewable generation.

Steel's role in the energy transition: steel is a fundamental material used to build **wind turbines**, with LumenEE estimating the need for between 20 million and 25 million tonnes of steel between 2026 and 2050 to supply the UK's offshore wind industry. Having more **competitive, low-carbon steel** will be beneficial for all.

However, wholesale electricity price volatility is hampering the sector: prices have been high and volatile in recent years, with more potential headwinds coming in the form of **REMA**, which creates more **risk when investing in EAFs**. While the shift to EAFs will significantly reduce emissions, they are far more **electro-intensive** than traditional blast furnaces. This heightens the impact of power price disparity and volatility on the international competitiveness of the UK's steel, an industry which is already characterised by thin profit margins. As steel is a globally traded commodity it is not easy for companies to pass on additional cost like this to end customers.

Carbon leakage may occur through a need to import steel from countries with **weaker climate regulations**. While the **UK CBAM** will equalise carbon costs of imported steel from 2027 onwards, it will not equalise other climate action costs such as higher power prices.

Call to action: the UK Government should match other countries in protecting their domestic steel producers from volatile electricity prices to ensure that the UK steel sector becomes an attractive destination for investment.

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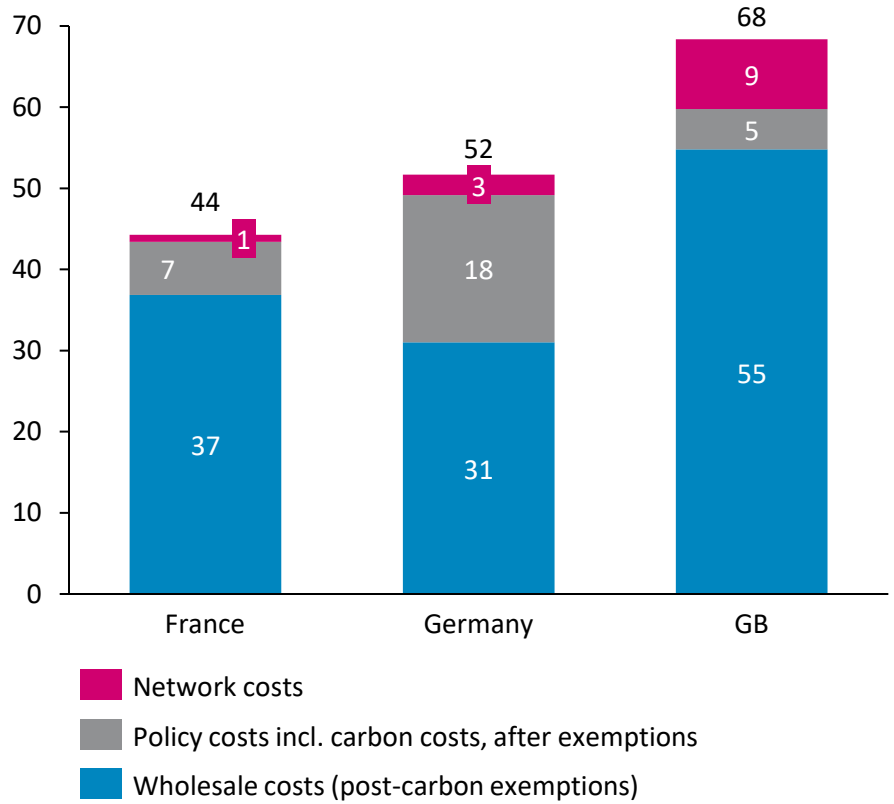
Steel producers in Great Britain face significantly higher electricity costs compared to their European counterparts, with prices 50% higher than those in France

Electricity prices for steel producers in France, Germany, and Great Britain (2025)[1]

£/MWh



- UK steel producers are expected to pay around £68/MWh for electricity, compared to £44/MWh in France and £52/MWh in Germany. This disparity arises from higher wholesale electricity prices in the UK, and lower levels of state support for energy costs.

Contributing Factors to High Prices:

- Wholesale Prices: The GB power market's higher reliance on gas generation has driven higher power prices in recent years due to exposure to high wholesale gas prices. Despite significant growth in renewable generation, gas plant still sets the price most of the time with power prices therefore trending in line with wholesale gas prices. Lower levels of interconnection also reduce inflows of cheaper energy from neighboring markets, pushing prices up.

Policy Costs Exemptions:

- UK energy-intensive industries (EIIs), including steel, benefit from exemptions covering up to 100% of environmental levies (e.g., Renewables Obligation, Feed-in Tariff, and CfD schemes). The sector remains partially exposed to carbon costs in this context.

Higher Network Charges:

- UK steel producers face higher network charges despite the Government's recent announcement of a 60% exemption for system balancing charges (DUoS, TNUoS, and BSUoS) starting in April 2025. Germany provides a 90% exemption for network connection charges, while French EIIs receive around 80% exemption from network charges.

While the new measures can be viewed as a positive step for steel producers, they remain at a significant competitive disadvantage.

[1]Figures are calculated using a combination of live tradeable wholesale prices and data from UK Steel's 2024 paper: INDUSTRIAL ELECTRICITY PRICES: A BARRIER TO GROWTH, COMPETITIVENESS, AND PROFITABILITY

[2]More details on the price delta can be found on page 18 in the appendix and see pages 21 and 22 for a comparison of European state support mechanisms for industrial electricity costs.

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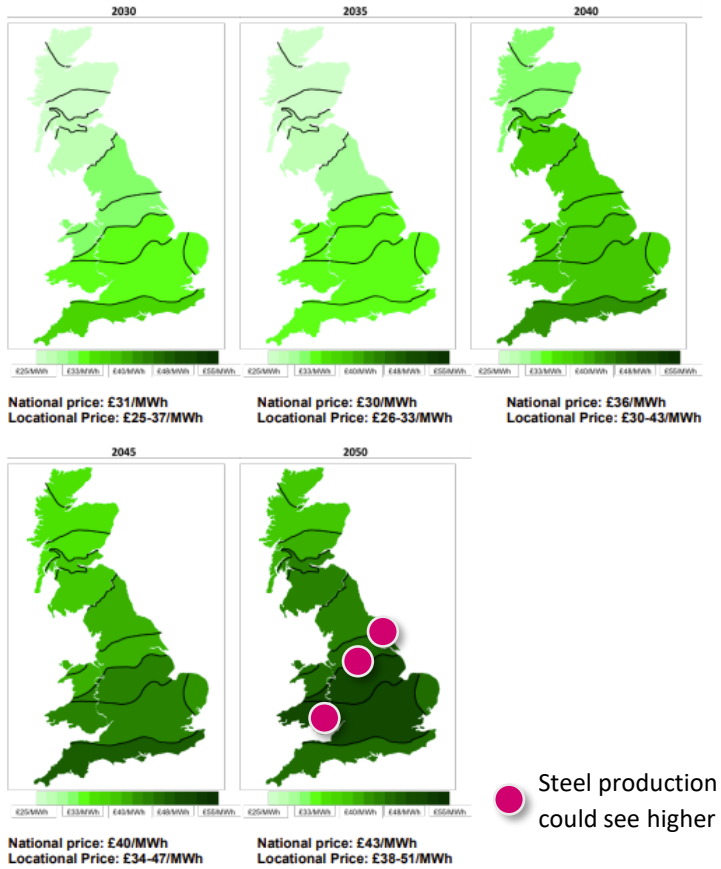
There is also a high degree of uncertainty in future wholesale prices, and the steel industry currently has no protection against possible price spikes

- While GB wholesale prices are projected to fall in the long term as renewable generation scales up in line with global and European trends, significant reductions are only expected from 2030 onwards and wholesale energy prices remain highly uncertain.
- The European steel industry operates in a very trade intensive market with average profit margins typically between 6%-10%. Baringa's modelling projects a potential baseload average price spread between its core future market scenarios of around £20/MWh in 2030 and £30/MWh in 2035 in GB, potentially impacting 2–3% of an electric arc furnace's annual revenue, assuming 500,000 tonnes of annual output and a 2024 steel price of $660/tonne. A negative impact on revenue of 2–3% could lead to unsustainable margins and further loss of market share. This could mean a swing of $12 – $18 per tonne, based on 500 kWh electricity used per tonne.
- Baringa’s Reference Case projects a transition to a net zero power system by 2050 and 2060 for the wider economy. The Net Zero scenario envisions a net zero power system by 2040, driven by rapid wind and solar rollout and electrification, while the Net Zero High scenario assumes higher power prices due to elevated gas, carbon prices, and supply chain challenges.
- Given this uncertainty, government intervention would stabilise investment in the steel industry. UK steel producers also compete globally with manufacturers facing much lower electricity costs (see appendix pages 19-20).

Another risk to the steel sector is the potential move to zonal pricing in the wholesale market, which could see prices increase in areas where steel production is located

Zonal price maps in the locational pricing factual for DESNZ Net Zero Higher scenario in £(2022)/MWh[2]



Steel production hubs are located in areas which could see higher prices in a zonal market.

- The current Review of Electricity Market Arrangements (REMA) could shift towards more location-based wholesale pricing. The steel industry is concerned about potential price increases in high-demand, low-generation zones, where many of their operations are permanently located. This shift aims to reduce system balancing costs and encourage regional supply-demand balancing.
- Balancing costs have surged recently, with charges increasing from around £3/MWh to £15/MWh due to constraint costs from paying Scottish wind generators to curtail output during low demand or transmission limitations. While the specifics of zonal pricing—such as the number and granularity of zones—remain undecided, Baringa's analysis suggests potential annual price differences of +/- £10/MWh.[1]
- Other analyses, including a report for the Department for Energy Security and Net Zero, indicate locational pricing could lead to higher average costs for consumers compared to national pricing.[2]
- Another concern for the steel industry is that zonal pricing would shift balancing costs away from BSUoS to wholesale prices and generators. This would indirectly raise wholesale prices, disadvantaging energy-intensive industries (EIIs), which are currently exempt from 60% of BSUoS costs.
- There is considerable uncertainty around the impact of zonal pricing on EIIs, and the UK Government is yet to publish an impact assessment of how steel producers would be impacted.

[1]Proprietary Baringa analysis.
[2]Department for Energy Security and Net Zero (2023) *System benefits from efficient locational signals*. Research Paper No. 2023/057.

Unlike the UK, many steel-producing countries have mechanisms to protect energy-intensive industries (EIIs) from wholesale price volatility[1]

	France		Italy		Spain	UAE
Wholesale price support mechanism	ARENH	ARENH replacement	Virtual Interconnectors	Energy Release 2.0	Electro-intensive Statute	National Strategy for Industry and Advanced Technology
Description	Up to the end of 2025, EIIs can buy a share of nuclear production at 42 €/MWh (EDF must sell c.100 TWh per year at this price).	From 2026, a new mechanism will be introduced, which taxes EDF's profits from power generation above a certain level, with the taxes passed back to consumers via a rebate. This is effectively a windfall tax which protects consumers against wholesale price spikes.	Italian energy companies can receive power outside Italy and match the volume in Italy without physically moving it (i.e. without the need for an interconnector), giving EIIs access to lower prices of neighboring markets.	Italian Government to underwrite a Contract for Difference (CfD) for companies with at least 1GWh annual demand at a fixed price of EUR 65/MWh (roughly 50% of current wholesale prices) for 36 months. Companies must commit to investing in new renewable energy plants.	Facilitates and incentivises purchase of renewable power via long-term PPAs, which can reduce costs. PPA procurement is further supported by FERGEI - a scheme through which the Spanish Government covers credit risk associated with the PPAs.	Strategy includes energy tariff reduction for EIIs. Lower tariffs (with discounts of 10-26%, according to the Head of the Major Industrial Initiative Committee) are offered to industrial companies with a monthly consumption that exceeds 10 GWh.
Applicability to the GB energy market	There is no state-owned power generation in the UK, so the Government cannot mandate generators to sell a proportion of their power at a discount.	Again, this is easier in France because EDF is state-owned. In the UK this would amount to a permanent windfall tax on private companies.	Transitional scheme while new physical interconnection capacity is being built.	This is highly applicable to the UK market and is similar to our recommendation for a UK Government-backed CfD.	Potentially applicable in the GB market, although longer time to market and lower price flexibility make corporate PPAs unattractive for the steel sector.	This is a top-line price subsidy as opposed to specifically tackling wholesale prices.

[1]While UK industrial power prices are often compared to Germany and Sweden, these have not been included in this table. As Germany uses coal extensively for power generation and Sweden enjoys an abundance of hydropower, both which are not available to the UK, their wholesale prices are lower and mechanisms have not been necessary to lower wholesale prices for EIIs

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Our proposed solution and next steps

A two-way Contract for Difference with the UK Government could be an effective solution from those assessed below to protect the steel sector from price volatility

	Two-way Contract for Difference (CfD) with the Government	Private sector Corporate PPA	Onsite or private-wire renewables and storage	EII-specific DSR scheme
Description	Insulates the sector from wholesale price volatility via a financial contract with the Government for a fixed price of wholesale electricity – the price is set to achieve wholesale price parity with the lowest cost European steel competitor.	A contract for fixed price wholesale power between an EII body and private wholesale power generators. The fixed price would limit wholesale price volatility but would be set by the market.	Capital investment in onsite renewable and/or storage assets at steel production plant. Self-generation would reduce exposure to wholesale prices.[3]	A flexibility market which would see the EII sector remunerated for not consuming electricity during high demand or high price periods. This would provide an additional revenue
Would it achieve the objective of ensuring wholesale price parity with European steel producers?	**Yes** – the price could be set at regular intervals by a government body to achieve this objective.	**No** – the price would be set by private companies, without the flexibility for price adjustments. The credit positions of steel producers has also put upwards pressure on CPPA price offers.[1]	**No** – could reduce wholesale price exposure and potentially lead to savings, the economics of these projects are weaker given the lower retail electricity price faced by EIIs versus other sectors.	**No** – the value of this revenue stream is unlikely to be at the level required to offset higher GB wholesale prices. It is also unlikely to benefit the whole sector.
Capital requirement	**None** – financial contract for fixed power price	**None** – financial contract for fixed power price	**Yes** – significant amounts of capital required for infrastructure investment	**Maybe** – some additional controls may be required to enable flexibility
Time to implement	**Short** – could be implemented within existing CfD regulatory framework	**Long** – extensive and expensive procurement process required	**Long** – time required to develop and construct physical assets	**Mid** – a few years for existing EAF, fully applicable once new EAF are operational
Technical and operational feasibility	**Highly feasible** – no technical requirements	**Highly feasible** – no technical requirements	**Highly constrained** – coupling renewables with EAFs is challenging	**More investigation required** – to assess feasibility at what price point
Cost to consumers	**c.£0.17/MWh p.a.** – example based on French price parity analysis (p.14)	**None** – private sector contract	**None** – private sector contract	**More investigation required** – to assess feasibility at what price point
Overall assessment	**We believe this is the optimal solution because it can be implemented quickly within the current LCCC framework and would be highly flexible.**	**We do not believe corporate PPAs are a good option for the steel industry, primarily due to lower flexibility, time to market, and credit requirements.[2]**	**Business case is unlikely to be attractive, would require a significant capital investment and would have a longer time to market.**	**Would only be feasible at certain sites and would not meet the requirement to protect the whole sector (should be considered in addition to CfD).**

[1]While other sectors can pay more for low-carbon PPAs, the steel industry requires cheaper options. Combining renewable and steel production load profiles incurs a premium, as steel companies need extra power when renewables aren't generating.

[2]See appendix page 25 for more details.

[3]See appendix page 23 for more details.

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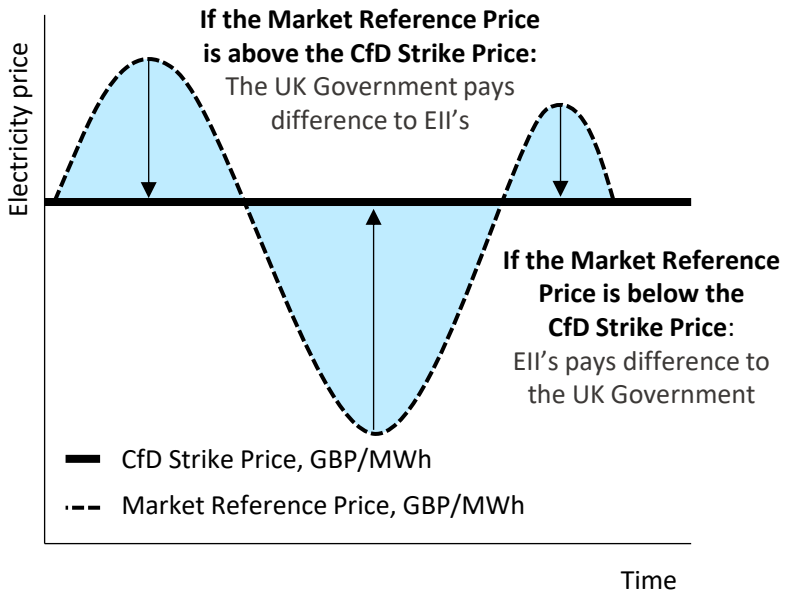
The CfD contract will protect against wholesale price volatility and increase the competitiveness of the UK steel sector in a global market

The Contract for Difference Mechanism



CfD Strike Price = fixed strike price for wholesale electricity paid by EIIs

Market Reference Price = traded day-ahead wholesale market electricity price, used as a reference for any top up value to the generator

- The objective of this CfD is to reduce steel industry exposure to wholesale electricity prices by providing it with a fixed price for wholesale electricity and to achieve wholesale electricity price parity with its lowest price European competitor.
- It will work such that when the wholesale market price is above the strike price, the steel industry shall receive a payment from the UK Government, possibly via the existing Low Carbon Contracts Company, for the delta between that price and the agreed strike price, ensuring the steel sector pays the fixed price and is protected from price volatility. Vice-versa, when the market price is below the strike price, the steel sector shall pay back the delta.
- The strike price could be set at regular intervals to reflect changes in wholesale electricity prices and provide the steel sector with much-needed protection from price volatility.
- The calculation could be an ex-post reconciliation, calculated at the end of each regulatory period.
- Benefit of this mechanism:
  - Ensures price competitiveness for UK steel producers.
  - Stable and predictable, enabling long-term planning and investment in green technologies.
  - Shared risk and reward.
  - Aligns with climate and government growth goals.
  - Can be designed to include price signals to incentivise peak load shifting.
- Implementation considerations:
  - Determining the Strike Price
  - Review periods and break clauses
  - Regulatory framework

As an example, indexing the Strike Price to achieve price parity with French wholesale prices could cost the consumer £0.17/MWh per annum between 2026 – 2030

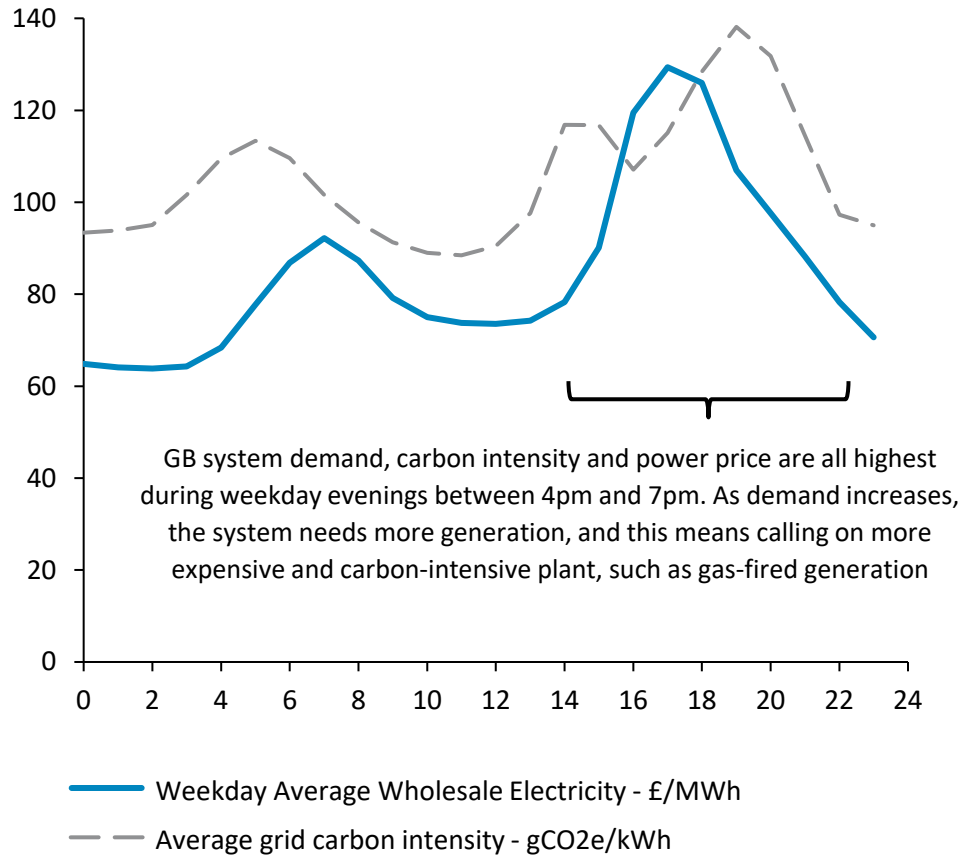
- This approach would index the UK wholesale electricity price to the lowest-cost European competitor, ensuring a level playing field for the UK steel sector. For illustration, the strike price is set to achieve parity with France, which is projected to have the lowest prices among assessed competitors. Actual strike prices should reflect broader market dynamics to ensure global competitiveness.
- Between 2026 and 2031, GB wholesale prices are projected to be 4.7 £/MWh higher than France, but they are projected to fall below both France and Germany thereafter. Under a two-way CfD, the Government would compensate the energy-intensive industries (EIIs) for the price difference when GB prices are higher and recover the difference when GB prices are lower, creating price parity.
- Using projected EII demand[1], the net cost to consumers is estimated at £51m annually between 2026–2030 (equivalent to 0.17 £/MWh on bills) and an average net benefit of £13m to the consumer annually between 2031–2035.

	2026 – 2030	2031 – 2035
Average annual cost to consumer – £m	51.3	-12.9
Average consumer bill impact – £/MWh	0.17	-0.04

[1]EII demand assumption is assumed as 9.7 TWh in 2025, increasing to 12.2 TWh by 2035, with this increase being due to the steel sector increasing its electricity demand from c.2.5 TWh to 5 TWh due to converting to Electric Arc Furnaces.

£20m to £30m per annum in consumer wholesale price savings could be generated by incentivising steel producers to operate EAFs flexibly and avoid peak demand periods

Hourly Average Wholesale Price and Grid Carbon Intensity in 2025[1]



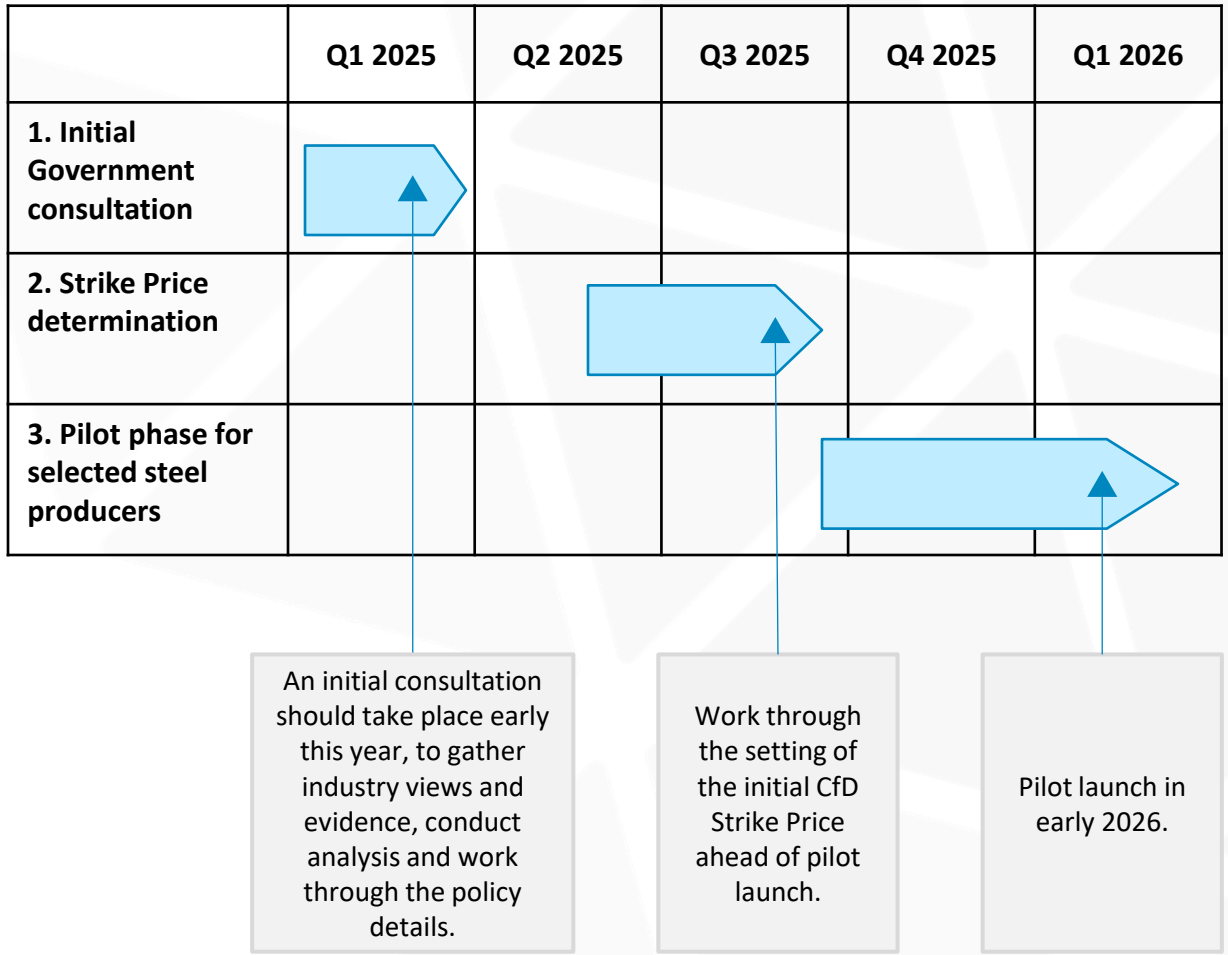
- As mentioned, the transition to EAFs will reduce overall annual UK emissions by around 2% but will increase wholesale prices for consumers due to increasing electrical load. Baringa analysis estimates this could increase wholesale power costs to consumers by around £200m per year by 2030 (based on spot year analysis). This is based on aggregated EAF load from all major steel producers in the UK, operating on an average baseload demand profile.[2]
- By designing the CfD so that it gives the steel sector some exposure to price or carbon signals, we can ensure that it provides the appropriate incentives for low-carbon steel producers to operate EAFs flexibly to minimise wholesale electricity costs and carbon emissions and ensure alignment with the UK's climate targets.
- To illustrate the maximum potential wholesale market savings from flexible operation of EAFs, a scenario was modelled which saw EAFs fully avoid peak periods, while keeping total annual load constant. This resulted in wholesale energy cost savings to consumers of between £20m and £30m in 2030. It also resulted in carbon savings of around 40 KtCO2e.
- Beyond these savings, the flexible EAF operation can help balance the grid, support the integration of renewable energy by reducing reliance on fossil-fuel-based peaking plants, and contribute to lowering the overall carbon intensity of electricity supply.
- There could also be significant savings for the consumer in funding the cost of the Capacity Market if the 2-way CfD didn't apply during peak hours, incentivising reduced production when carbon levels and prices were at their highest.

[1]Baringa proprietary analysis.

[2]Aggregated annual load is assumed to be 5 TWh per annum (based on UK Steel analysis estimating the total electricity demand from EAFs to produce current steel output).

To address this issue, the Government should begin a consultation on a CfD to support investment in the UK steel sector, targeting a pilot launch early next year

- The UK steel industry faces high electricity costs, which negatively impacts the sector's ability to contribute to high-value global supply chains. A two-way Contracts for Difference (CFD) mechanism is a practical and equitable solution approach to support the sector while aligning with the UK's climate and economic objectives.
- Consideration of this policy by the Government, in collaboration with industry stakeholders, would influence the sector's future trajectory. Timely communication of upcoming schemes may also assist businesses in planning and making informed investment decisions.

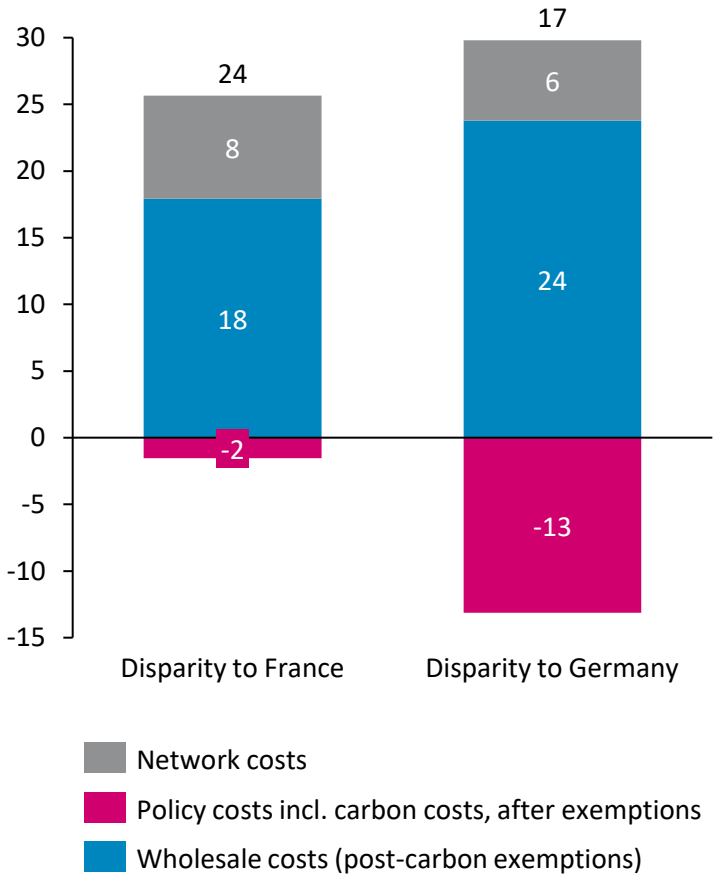


Appendices

Most of the current price disparity is due to wholesale electricity prices, which outweighs the lower policy costs

Breakdown of 2025 price disparity

£/MWh



- Steel producers face an electricity price disparity of £24/MWh compared to France, and £17/MWh compared to Germany.
- This is mostly due to higher wholesale electricity prices, which are £18/MWh higher than in France and £24/MWh higher than in Germany (after carbon tax exemptions have been applied).
- France's ARENH policy currently allows its steel industry to purchase electricity at a fixed price of 42 EUR/MWh (c.36 £/MWh), although this policy is ending and being replaced by a different scheme in 2026.
- Before carbon exemptions are applied, GB wholesale electricity prices are going to be around £6 higher than in Germany and around £23/MWh higher than in France, due to the GB system being more dependent on gas generation and therefore still impacted by higher wholesale gas prices.
- Grid charges are also higher for UK steel producers, due to receiving lower exemptions versus France and Germany. To reach parity of prices, the UK Government should increase its compensation of network charges to 90%, matching what is provided in France and Germany.
- Given the GB energy system's persisting high dependency on gas generation and therefore exposure to wholesale gas prices versus its European competitors, it is imperative that the UK steel industry is offered a cost parity mechanism to offer some wholesale price protection.

While GB wholesale prices are expected to fall, Great Britain is projected to have higher prices than both France and Germany until the 2030s[1]

- UK steel producers have been at a competitive disadvantage versus their European competitors as GB wholesale prices have been higher. This is due to structural features of the GB energy system which have pushed prices higher than in continental Europe; namely, that the UK has a higher dependence on gas-fired power generation than France and Germany and has lower levels of interconnection.

- Baringa's analysis projects that GB wholesale power prices will remain higher than in France and Germany for the remainder of the decade.[2]

- While GB prices are projected to fall in the near-term, as wholesale gas prices continue to recover from crisis levels caused by Russia's invasion of Ukraine in 2022, prices are projected to peak again around 2030 due to an increase in system tightness due to thermal plant closures. Prices should then fall again due to increasing renewable generation coming online, which could result in GB having lower prices than France and Germany from the early 2030s.

[1]Projections use forward prices taken on 19th December 2024 and Baringa's Reference Case price projection from 2026/27. Prices are on a baseload basis and pre carbon price exemptions.
[2]French wholesale prices are dampened in 2025 due to lower interconnection capacity and lower energy demand. Reduced interconnector capacity means than France cannot export as much power at low prices, meaning that this lower-priced power remains in France and depresses average prices; however, this is expected to be a temporary effect.

UK steel producers also face significantly higher wholesale power prices than their global competitors, with prices more than double those in the US

- Steel is a competitive global market. While many markets have mechanisms in place to protect against wholesale power price volatility, many markets benefit from structurally lower wholesale prices.

- Some regions benefit from structurally lower power prices, like the US, due to abundant domestic natural gas and growing renewable energy. India also enjoys low prices from cheap domestic coal, dominating its energy mix.

- In contrast, Japan faces high power costs due to its reliance on imported energy, primarily LNG, indexed to oil prices but gradually shifting to gas pricing. From 2028, Japan's power prices will rise with the introduction of carbon pricing, including a fossil fuel levy and an emissions auction system by 2033. Renewables growth is expected to stabilize prices by 2035.

Major European governments have policies in place to protect energy intensive industries from high electricity costs, which also cover wholesale power costs (1/2)

Components					
Wholesale cost	None	France's **ARENH** scheme allows independent suppliers to purchase up to 100 TWh per annum EDF's nuclear production at a regulated price of 42 EUR/MWh, allowing EIIs access to significantly lower prices	None[1]	Government-incentivised renewable power procurement through long-term PPAs, with credit risk covered by the Government (**FERGEI**)	CfDs available to EIIs with price to be set at EUR 65/MWh, roughly 50% of current IT wholesale price (on condition that double the volume is returned through newly built renewables capacity) **Virtual interconnectors** – energy companies can purchase power in markets that are not connected to Italy, meaning EIIs can access lower wholesale prices of neighbouring markets[3]
Carbon cost	Partial relief (up to 60% of indirect carbon emissions costs)	Indirect emission costs compensation for EIIs of sector at risk of carbon leakage)[2]	Rebate from indirect CO2 emission costs for energy intensive industries	Indirect emission costs compensation of up to 75%	Rebate from indirect CO2 emission costs for energy intensive industries

[1]As Germany uses coal extensively for power generation, its wholesale prices are lower than the UK and mechanisms have not been necessary to lower wholesale prices for EIIs.
[2]In order to qualify for compensation, companies will have to either (i) implement certain measures identified in their 'energy management system' i.e. the companies' plan setting energy efficiency objectives and a strategy to achieve them) or (ii) cover at least 30% of their electricity consumption with renewable sources (through on-site renewable energy generation facilities, power purchase agreements or guarantees of origin).
[3] Suppliers purchase power in markets that are not connected to Italy, and then sell generation to the equivalent domestic capacity to EIIs at the same price in exchange for a payment from the Italian TSO, funded by end-users.

Major European governments have policies in place to protect energy intensive industries from high electricity costs, which also cover wholesale power costs (2/2)

Components					
Network cost	Partial relief through British Industry Supercharger (60% exemption)	EIIs currently benefit from discounts on recurring network charges based on their demand profile (81% for a baseload demand profile)[1]	Partial relief of up to 90% (can vary significantly subject to individual conditions and formal approval)	None	EIIs pay between 35% of A_{SOS} system costs and 1.5% of the GVA of the company (gradually phasing out, ending 2028)[4]
Environmental Taxes and levies	100% exemption for the indirect costs of renewable energy policies (the Contracts for Difference, Renewables Obligation and Small-Scale Feed In Tariffs) and 100% exemption for the capacity market costs	Significant rebates on TICFE possible based on level of electro–intensity	**Offshore network levy:** consumption of an industrial offtaker above 1 GWh may be reduced to 25% of standard levy if criteria are met[2] **CHP levy:** potential rebates through the same mechanism as the offshore levy **Electricity tax:** industrial offtaker may have the right to a reduced or completely removed electricity tax[3]	75-85% **electricity consumption levy** reduction depending on risk exposure (minimum levy of 0.5 EUR/MWh)	None
Other	None	ARENH replacement – EDF will be able to sell all nuclear volumes on the wholesale market, with a taxation on any "excess profit" (50% if market prices above 70-78 €/MWh, increasing to 90% if prices go above 110 €/MWh) to be redistributed to end consumers	None	None	None

[1]Assuming max level of rebate (baseload profile: > 7000h full load equivalent hours) See appendix for more information.
[2] Requirements include being part of an industry listed in appendix of the EnFG, sourcing 30% of consumption from unsubsidized renewable energy assets, making investments in decarbonisation of the production acc. to sec. 30 nr. 3c EnFG.
[3] Acc. to sec. 9b StromStG, if it is part of specified manufacturing areas or chemical processes.
[4] Companies in sectors deemed to be at high risk of relocation have access to this level of reduction until 2027, when they will pay between 55% of system charges and 2.5% of GVA. In 2028, they will pay 80% of system charges, and 3.5% of GVA.

The CfD scheme could include incentives to develop onsite renewables and storage, which is being introduced in Italy

- Installing onsite renewables and storage at steel plants could have multiple benefits for both steel producers and wider society:
  - **Cost reduction and management:** it could reduce energy bills for steel producers by reducing overall electricity consumption, as well as reducing overall GB wholesale prices by reducing peak demand from steel production. It would also protect against wholesale price volatility, potentially removing the need for a Government price parity mechanism in the long-term. However, we note the current retail price exemptions available to EIIs would reduce the economics of these projects versus other industrial sites.
  - **Carbon reduction and sustainability:** reduce UK carbon emissions by reducing demand for grid-imported power, further aligning with net zero targets.
  - **Enhanced grid stability and energy security:** onsite energy storage allows for better load balancing and can provide power smoothing for high-energy processes in steel production.
  - **Long-term commercial viability:** steel production sites could participate in demand response programs, earning additional revenue by supplying energy back to the grid during peak times.
- However, there are many challenges to steel producers installing onsite renewable generation which has prevented this in the past. Technical feasibility, spatial requirements, and matching renewable generation output with steel production profiles have all been barriers. Availability of capital for investment in non-business as usual activity would also need to be increased.
- Italy is introducing a requirement on EII's to build renewable energy in return for a receiving a Government-backed discounted wholesale price. Where the business case works for all, this could be a potential option to explore.

The proposed Green Power Pool, rejected in REMA Consultation 2, could have provided at-risk consumers (such as EIIs) access to lower electricity prices

The concept of a Green Power Pool (GPP) in the UK was first put forward by Michael Grubb & Paul Drummond in 2018, and subsequently considered in the first two REMA consultations. The proposal was to create an optional pool of renewable electricity to sit alongside the wholesale market, leaving the wholesale market itself relatively unchanged.

Doing so would allow at-risk consumers (such as EIIs) to access the pool of renewables directly through fixed long-term contracts: generators sign government-backed contracts to sell a proportion of their output at marginal cost, and large consumers then contract with the pool operator to buy a volume at the weighted average price of available generation. This would reduce pressure on the Government to provide a market-wide cost-parity mechanism as wholesale electricity prices would no longer be driven by fossil fuel-based generation for this group of consumers.

The second REMA consultation ultimately rejected the GPP proposal for the following reasons:

- It failed to meet deliverability and investor confidence criteria
- Concerns that the GPP would not provide additional benefits to consumers as who are ‘already targeted through existing schemes’
- Concerns that benefits would accrue to intermediaries due to the potential for trading between the 2 markets

Instead of opting for the GPP, the Government has proposed maintaining the current renewables CfD support mechanism as the driver for passing the benefits of renewable investment on to consumers, suggesting that by the time a change on the scale of the GPP is in place, the pace of renewables roll-out will limit any potential benefits compared to the current arrangements.

In the meantime, the second REMA consultation proposes that large consumers purchase renewable power through CPPAs, which we do not believe to be a suitable alternative for the steel industry.

Although REMA has rejected the proposal, it could be reconsidered in the future as an alternative mechanism.

We do not believe private corporate PPAs are a good option for the steel industry, primarily due to lower flexibility, time to market, and credit requirements

- Corporate PPAs can have advantages to corporates in general who are seeking to procure wholesale electricity backed by renewable certificates at a long-term fixed price. These contracts are typically between a private generation asset and a corporate offtaker, for the sale of wholesale electricity. Contract structures can be flexible, with the key negotiated terms being the fixed price of electricity, the tenor, and whether the product is financial or based on physical delivery of power. Generators typically enter into these agreements for tenors of greater than five years, to ensure bankability of the contract.
- We believe these contracts are less attractive for the UK steel industry for the following reasons:
  - **Lower flexibility:** private generators are unlikely to want to adjust the fixed price at regular intervals, so fundamentally this would not support the objective of the mechanism, which is to achieve electricity price parity with European steel producers.
  - **Longer time to market:** arranging multiple private generator PPAs with UK steel or wider EII's would take multiple years, when the steel sector needs a mechanism introduced as quickly as possible. UK Government intervention may be required to incentivise or even mandate private generators to engage in any tender process, which itself would be competing with other private sector tenders as well as the Government's own Contract for Difference allocation rounds.
  - **Credit requirements:** weaker credit ratings of steel producers would likely mean higher prices offered by private generators, which goes against the objective of the mechanism. The UK Government could underwrite the credit risk, something currently being considered in Spain, but again, this would be lengthy process to design.

