ELECTRIFY INDUSTRY

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ESSENTIAL ELECTRIFICATION: PROPOSALS FOR INDUSTRY

CONTENTS

OVERVIEW

Manufacturers want to electrify. The technologies exist. Businesses are ready to invest, but the relative cost of electricity-based energy versus gas (the spark gap) means they do not have an investment case.

A Targeted Electrification Discount now, and a long-term plan to rebalance both policy costs and network charges away from electricity bills, would unlock investment, strengthen supply chains, improve competitiveness and secure Britain's industrial base and future economic resilience.

INDUSTRY WANTS TO ELECTRIFY

Around 80% of manufacturing heat processes are technically capable of electrification if cost and infrastructure barriers are addressed. Within the chemicals sector, 73% of heat demand below 500°C remains unelectrified despite being suitable for electrification.

63% of manufacturers have already taken steps towards electrification, but 87% say they would invest more if the spark gap were reduced. Industrial processes can be 5-500% more efficient with electric heat alternatives, but some manufacturers face cost increases of more than £30 million to switch from gas-fuelled heat to their most viable electric alternative.

WHERE POLICY IS MISSING THE MARK

A pulp and paper electrification project worth approximately £15mn secured £4.5mn of IETF support, for a project increasing energy efficiency by 280%, but still had no business case to proceed due to high electricity operating costs.

In a best-case scenario, the BIC scheme only reduces the spark gap to 3.5:1 – providing minimal confidence for industry to invest in electrification. Using current mechanisms also places the burden of short-term policy subsidies on critical supply chain industries, increasing bills for 119,000 businesses. Medium industrial businesses will face a 115.4% increase in policy and network costs by 2030.

On top of increasing policy costs, network charges are rising. Businesses are expecting an excess 23% increase in transmission network charges by 2027, after a 33% increase from 2024. Overall, a medium industrial site will see a 53% increase in network costs in 2026.

INFRASTRUCTURE BARRIERS

The industrial demand connection queue grew from 41GW to 125GW between November 2024 and June 2025. Grid delays can increase project costs by up to 200%, while research finds 34% of businesses experiencing grid delays to report growth stops entirely. Meanwhile, there is 24.7GW of electricity infrastructure sitting idle in Wales alone. The cost of grid upgrades for some electrification projects, only adds to the stack of costs against the business case manufacturers need for approval.

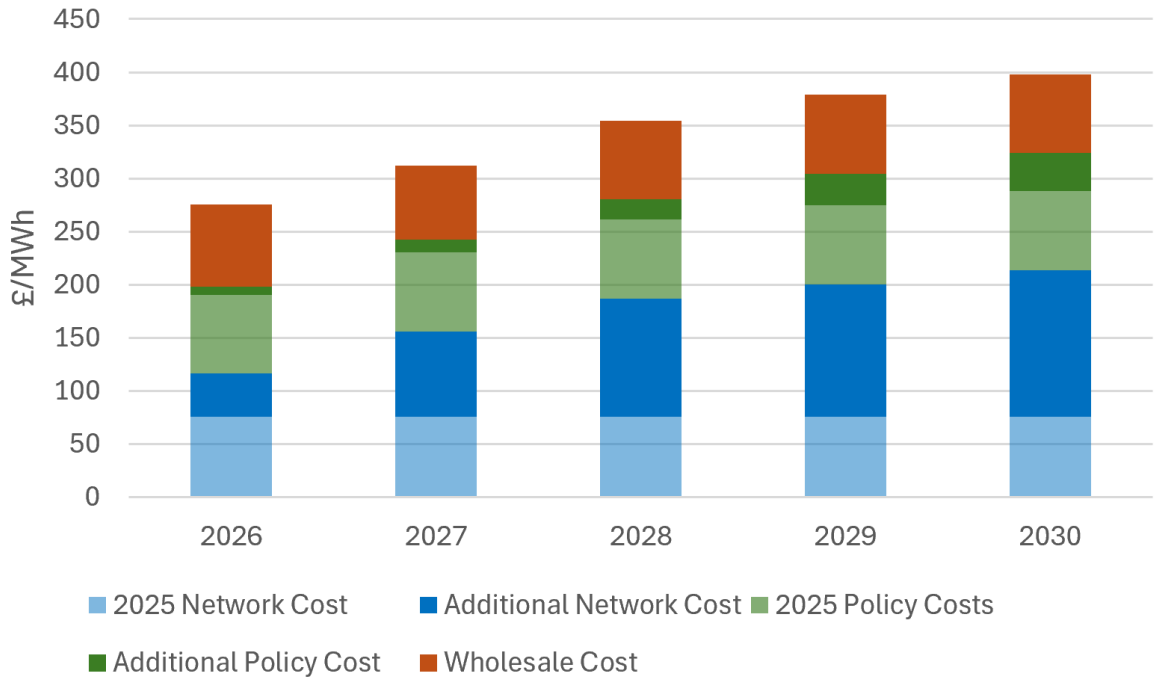
LOSING BRITISH INDUSTRY AND INVESTMENT

Electrify Industry members are reporting new investment for Food and Drink manufacturers (accounting for 24% of UK manufacturing) being offshored because electrified facilities can face a multi-million annual operating cost disadvantage in Britain compared with Europe.

Separately, the number of UK manufacturing businesses has fallen from approximately 138,000 to 130,000 since 2020, with jobs, skills and Britain's security of supply disappearing with them.

One example we have received shows a £1.8mn (pa) difference in operating costs compared to the EU for a British site, which has consequently been forced to offshore.

CHART 1. IMPACT OF INCREASING POLICY AND NETWORK COSTS ON INDUSTRIAL USERS (ILLUSTRATIVE)



Source: Data, courtesy of Shell (2026) for 3,200 MWh/annum, HV Band 4, 3775kVA connection in London.
See Annex A for site size definitions, annual consumption and connection type and further assumption details.

RECOMMENDATIONS

CRITICAL RECOMMENDATIONS

1. **Immediately introduce a Targeted Electrification Discount scheme** – reduce the relative cost of ownership for electricity-based heat technologies for manufacturers fuel-switching from natural gas and oil, for at least 10 years.
2. **Reform the electricity pricing system** – provide long-term confidence for investment and reduce inflation by forming a new approach, which shares all policy costs and network charges across general taxation.
3. **Introduce a clear, long-term Strategy for Industrial Electrification** – whether separate to, or integrated within, the Industrial Decarbonisation Strategy.

COMPLEMENTARY RECOMMENDATIONS

- Accelerate grid infrastructure and connection reform for industrial demand, prioritising and protecting existing manufacturing.
- Keep flexibility incentives separate but aligned to electrification policy, providing guidance on 'the future of a site' for manufacturer's electrifying.
- Develop a coordinated supply chain strategy, enabling growth opportunities and robust logistics.
- Integrate skills policy with industrial electrification objectives and strategy, ensuring a just transition.

INTRODUCTION

Beyond the sky-high price of electricity in Britain, manufacturers face an unfeasible business case for industrial electrification which is stalling modernisation and threatening domestic security of supply. Despite manufacturers wanting to invest, the total cost of ownership for electrified heat technologies compared with natural gas and oil alternatives remains stark – particularly for small and medium businesses.

Britain is increasingly seeing offshoring of key sectors and deindustrialisation, which undermines national resilience. Manufacturers are not able to wait until 2030/31 for the possibility of home-grown energy to start decoupling electricity prices from gas and begin reducing wholesale prices. During this wait, we will see the rapid de-industrialisation of Britain. Policy costs and network charges are set to increase on industry bills over this period, and European competitors are already offering a more stable energy-policy environment to invest in. These consequences are being realised at a point where neither government nor taxpayers can afford to accept such outcomes.

Sectoral voices, including Electrify Industry, Make UK, the Climate Change Committee, Green Alliance, CBI and Energy UK, agree that current government policy is failing to realise the opportunity for industrial electrification and the urgent need address the spark gap now. Enabling widespread industrial electrification in the near-term, would help safeguard the national electricity system, secure domestic provision of critical components, materials, and technologies to rebalance reliance on imports, and strengthen British supply chain capabilities.

The industrial sector is trying to take significant steps towards fuel-switching and modernisation, with sector emissions decreasing by 12% in 2025[1].

Whilst successful electrification projects exist for a handful of larger businesses in Britain, the majority of manufacturing do not face a feasible business case to invest.

Manufacturers in Britain face the largest difference in electricity and gas prices in Europe. Along with capital and infrastructure costs, grid delays, and the absence of a clear industrial electrification strategy, manufacturers are holding back investment in the most readily available, modern and clean heat process energy – electricity.

Businesses who want to electrify are currently experiencing:

- An exorbitant spark gap versus their nearest market competitors.
- Excessive grid infrastructure delays with high costs for connection upgrades, and low transparency.
- Competition for energy transition skills.

[1] Department for Business and Trade, 2025 UK greenhouse gas emissions: provisional figures - statistical release (2025)
[2] Climate Change Committee, Progress in reducing emissions 2026 report to Parliament (2026)
[3] Energy-UK, Energy UK Explains: The 'Spark Gap' (2026)

Consequently, the economy faces:

- Supply chain vulnerabilities as business investment (and decarbonisation) budgets are offshored.
- Endangering industrial upgrade projects and spending.
- Job losses as businesses close or relocate.
- Further skills shortages for the energy transition as Europe invests more heavily in electrification.

For Britain to retain and grow its industrial backbone, at a point of geopolitical turmoil and change, it is crucial that disincentives are immediately removed. This must be approached with both a short-term and long-term view. Immediately introducing a Targeted Electrification Discount scheme would secure British industry now. A long-term pricing system change, requiring excess policy and network charges to be shared across general taxation and not reflexively placed on industrial bills, will increase long-term confidence and help dissuade offshoring. A longstanding, credible electrification strategy should:

- Address the running costs for electricity-based heat technologies, which requires various levels of operational and capital support from business to business[2].
- Have a long-term view to redesign the tax pathway for non-commodity costs, such that industrial bills are not automatically burdened with excess environmental, social and infrastructure costs.
- Approach grid connection reform by prioritising existing industry demand and consider realistic incentives for future electricity flexibility for industry.
- Support British supply chain resilience and job growth.

Make UK has published a report with a clear diagnosis of some key risks and challenges that UK manufacturers are facing due to high electricity prices. Electrify Industry is a sister organisation to Make UK - our mission is to provide specific and detailed feedback to government on what needs to be done to secure and grow the UK industrial base and to stimulate growth via electrification. To that end we endorse elements of the Make UK paper and build on it with our own recommendations.

THE SPARK GAP

The spark gap is the difference in cost between producing heat or energy with electricity, versus natural gas (or oil). The cost of producing energy with any heat technology (e.g. a gas boiler, a heat pump, an oil-fired thermal heater, an electric boiler) is made up of the price of its energy feed and the conversion efficiency (the amount of heat energy produced by the technology per unit of electricity/gas/oil input). Despite electric heat technologies consistently being more efficient than gas technologies, the spark gap is roughly 3.7 to 4.3 times more than gas in Britain but reached 4.7 in spring 2025[3].

THE OPPORTUNITY

ECONOMIC SECURITY AND PRODUCTIVITY

Evidence indicates that the technical potential for electrification across industry is substantial and a wide range of combustion-based industrial processes can be electrified using existing technologies[3]. Manufacturers who are undertaking a shift to electrification for their process power, increase productivity, expand and modernise operations, and support a modern UK economy. If the 80% of manufacturers who could electrify, were enabled to, this investment would open up long-term benefits including lower overall operating costs, improved efficiency, and stronger industrial productivity.

THE ECONOMY

The macro-economic benefits were revealed plainly in April 2026, when there was a downturn in inflation, attributed directly to lower electricity prices[4] and enabled by a strong government policy signal on energy bill reduction. The UK inflation rate fell 2.8% in the year to April, with housing and household services making the largest downward contribution to both monthly and annual inflation figures, driven by the fall in electricity prices[5].

This demonstrates that reducing electricity prices can have measurable macroeconomic benefits which directly influence government borrowing costs. Expanding price reductions across industry could therefore strengthen these effects, improving fiscal headroom by helping to keep inflation, and in turn interest rates on UK borrowing, lower.

INDUSTRIAL EFFICIENCY

Significantly, greater energy and fuel savings can be achieved with digitised industrial electric heat compared to traditional natural gas heat. These characteristics support improved productivity, reduced maintenance requirements, and enhanced resilience to energy price volatility. Improving operational performance, electrified processes are typically more energy-efficient, with electric heat technologies consistently achieving higher efficiencies than gas boilers. Typical examples include electric boilers at 99-100% efficiency, induction heaters at over 90% efficiency, and heat pumps at 200-500% efficiency (depending on the process temperature). Standard gas boilers typically range from 80-90% efficiency, with higher efficiencies less frequently achieved.

Electric heat can also offer greater precision and control and can integrate more easily with digital systems. Electric heat is mechanically more efficient and can be paired with digital software to optimise consumption in ways natural gas systems simply cannot match.

[4] ERM, Future opportunities for electrification to decarbonise UK industry: A report for DESNZ (2023)
[5] BBC News, UK inflation rate falls to lowest in almost three years (2026)
[6] ONS, Consumer price inflation, UK (2026)

In the chemicals sector alone, around 73% of heat demand for processes below approximately 500°C remains unelectrified, despite being suitable for electrification. At the same time, at least 11 industrial processes currently reliant on fossil fuels could be electrified, with seven of these accounting for approximately 11 million tonnes of CO_2 emissions annually[7].

THE GRID

There are also system benefits with demand-side flexibility, at a point where the grid is constrained with excess electricity in some areas, and do not have enough electricity capacity available for new business and development in others.

Constraint costs (payments to electricity suppliers to turn off when there is not enough demand) are set to increase from around £1.3bn to £1.7bn, to between £4bn and £8bn annually by 2030. This means a larger rate of electricity consumption in high generation periods will be needed. Manufacturers are an untapped resource for a growing domestic energy supply industry – increasing industrial demand for electricity in constrained areas is the fastest way to avoid wasted energy generation and lower curtailment costs for all.

Electrified industries could not only take on excess electricity from the grid, but also feed electricity back into the grid from onsite storage and generation when needed, creating load balancing benefits for the national electricity grid, generating wider economic benefits.

Increased electrification of industry also offers unique opportunities for infrastructure planning. If government electrification support were targeted to manufacturers, applications could allow for clearer geographical mapping of large upcoming demand, allowing for more accurate system planning and grid buildout decisions.

BRITISH SUPPLY CHAINS

Electrification presents a clear opportunity to anchor future investment in the UK both in wider manufacturing, and electricity. Britain already has a strong electrification supply chain, manufacturing industrial electric heat technologies domestically[7] and electricity grid equipment[8]. By stimulating sustained demand and improving the economics of electrification, policy can provide the certainty needed for suppliers to invest in people, facilities and innovation, enabling the UK to capture the economic and strategic value of the industrial transition. As the UK electricity system continues to decarbonise and expand, these benefits are expected to compound, strengthening the case for early electrification.

[7] Green Alliance, A new formula: cutting the UK chemical industry's climate impact (2023)
[9] Babcock Wanson, Industrial Boilers & Industrial Process Heating Equipment (2026)
[9] BRUSH (2026)
[10] European Commission, Innovation Fund projects - Climate Action - European Commission (2026)

THE BARRIERS

TOTAL COST OF OWNERSHIP

When a manufacturer draws up how much it will cost in total from month-to-month or year-to-year, to switch to electricity-based heat, the picture mostly includes:

- The price of electricity, made up of wholesale price, supplier charges, tax and non-commodity costs (policy, network, and metering charges)
- The capital cost of the asset and the payback period
- Grid and site infrastructure upgrade costs to connect the asset to the network

All costs are then adjusted to account for the efficiency of the technology (e.g. price per MWh + capital expenditure + upgrade expenditure / efficiency = total cost). Despite electric technologies generally being more energy efficient than gas or oil alternatives, the monthly or yearly cost of ownership that these individual costs stack up to create, leave the investment case unfeasible for the vast majority. Despite this, some manufacturers face cost increases of more than £30mn to switch from gas to their most viable electric alternative (see illustrative examples on page 12). The decision not to invest is further encouraged by: a lack of long-term price transparency; minimal policy signals in Britian for market confidence in industrial electrification; delayed grid build-out with a lack of systematic prioritisation for connecting existing industry to the grid. Manufacturers need both sustained electrification support mechanisms, and long-term energy market certainty.

EVIDENCE FROM THE EU INNOVATION HEAT FUND AUCTION

The EU has progressed with a coordinated industrial electrification framework, centred on the Clean Industrial Deal and new state aid mechanisms that enable Member States to directly support electrification investments. This includes targeted funding instruments - such as Innovation Fund auctions for industrial heat and revised state aid rules (CISAF) - which provide capital support, electricity price relief, and investment certainty for energy-intensive industries.

These measures are designed to address the key barriers to electrification, including high upfront costs and energy price volatility, while accelerating fuel-switching and strengthening industrial competitiveness in an increasingly electrified global market.

Within this scheme, medium-temperature heat is described as 100°C – 400°C, with separate funding pots of €150mn (3–5 MW projects) and €350mn (>5 MW projects). High -temperature heat is described as >400°C with the largest funding allocation of €500mn.

In a summary of applications to the auction which have been selected so far[9], five applicants were from high temperature sectors - such as glass and ceramics, or iron and steel - whilst 60 applications were by mid-low temperature industries including pulp and paper, food and beverage, and pharmaceuticals. This ratio of 1:12 highlights the immediate high value-for-money of investment in wider manufacturing electrification.

CHARTS 2-4. ILLUSTRATIVE EXAMPLES: INDUSTRIAL ELECTRIFICATION COSTS WITH NO TARGETED ELECTRIFICATION DISCOUNT APPLIED

PAPER MILLS: MONTHLY COSTS WITH EII SUPERCHARGER, NO TED

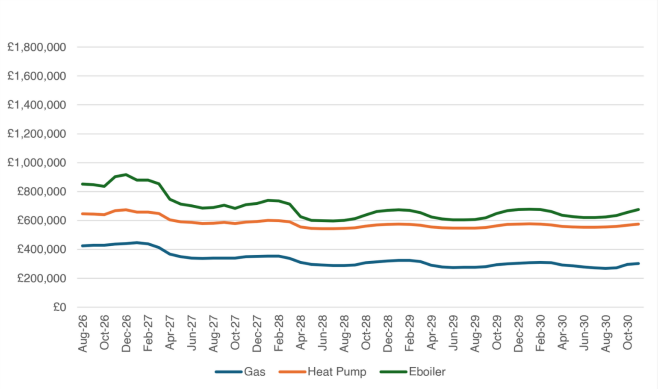


Chart 2: monthly cost of running Gas, Heat Pump and E-boiler on an energy-intensive (EII) industrial site over time, with no TED support applied

PAPER MILL COSTINGS

Policy
Eligible for the Energy-intensive Industry (EII) Supercharger package. Eligible firms are exempt from the following charges: small-scale Feed in Tariff (FIT), Contracts for Difference (CfD), Renewables Obligation (RO) and GB Capacity Market (CM). EII firms can also receive compensation for 90% (up from 60%) of network charges via the British Industry Supercharger 2026.

Gas
Higher at the start, around £400k, easing through 2027–28, then stabilising around £250-300k.

Heat Pump
Significantly above the cost of gas, approximately £650k, falling to ~£550k in 2030.

E-boiler
Costs range from £850k per month, falling dramatically to £650-700k per month but still highest cost, low-emission technology option with no support.

ABOUT THIS ANALYSIS

All values (for Charts 2 and 5) represent estimated monthly energy costs in GBP (£) based on model sites which are eligible for the EII Supercharger Package. Costs are based on paper mill sites running 8,000 operational hours per annum, using 80,000MWh p/a.

For all site scenarios (Charts 2 - 7), a Heat Pump requires over £25mn capital investment, and has a Coefficient of Performance (COP) of 2.45, while an E-boiler requires over £8mn investment and has a COP of 0.99, and a gas boiler has a COP of 0.85.

CHEMICAL PLANT: MONTHLY COSTS WITH BICS, NO TED

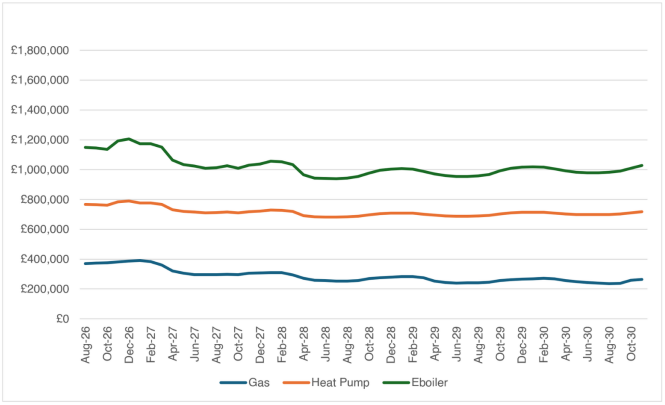


Chart 3: monthly cost of running Gas, Heat Pump and E-boiler on a BICS eligible chemical site over time, with no TED support applied

CHEMICAL PLANT COSTINGS

Policy
British Industrial Compensation Scheme (BICS) exempts eligible businesses (manufacturing frontier industries within the Industrial Strategy's growth sectors) from paying the up to 100% of the cost for the FIT, RO and CM charges.

Gas
Around £400k, easing through 2027–28, then stabilising at around £250-300k. Highest emission option.

Heat Pump
The heat pump option significantly above the cost of running gas, approximately £800k, falling to ~£700k in 2030.

E-boiler
Costs range from ~£1.2mn per month, falling to ~£1mn per month from 2027.

ABOUT THIS ANALYSIS

All values (for Charts 3 and 6) represent estimated monthly energy costs in GBP (£) based on model chemical sites which are not eligible for Supercharger but are eligible for BICS support. Costs based on sites running 7,000 operational hours per annum, using 70,000MWh p/a.

BREWERIES: MONTHLY COSTS WITH NO ENERGY EXEMPTION, NO TED

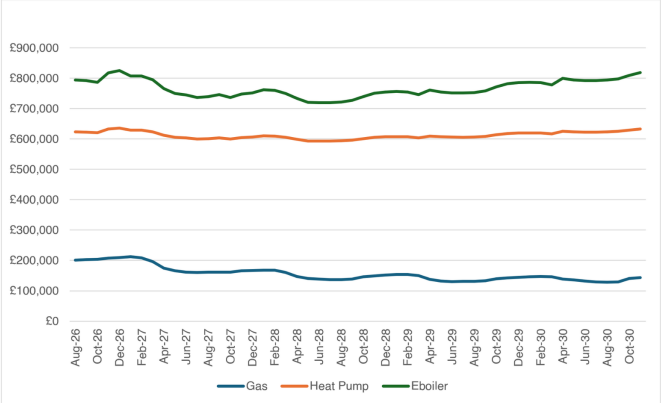


Chart 4: monthly cost of running Gas, Heat Pump and E-boiler on a brewery site over time with no additional support, with no TED support applied

BREWERY COSTINGS

Policy
There is no policy in place to support other manufacturers who fall outside of the Supercharger or BICS exemption schemes.

Gas costs start at £400k per month
The cheapest option, starting around £200k per month, falling to £150k or less per month. Highest emission option.

Heat Pump
Significantly above gas, approximately £650k, and not reducing in 2030 for a site of this size.

E-boiler is consistently the most expensive option
Costs range from £800-850k per month, falling gently in the late 2020s to £650-700k per month and continuing to rise above £800k up to 2030. Consistently high cost, low-emission technology option with no support.

ABOUT THIS ANALYSIS

All values (for Graph 4 and 7) represent estimated monthly energy costs in GBP (£) based on model brewery sites which are not eligible for Supercharger or BICS. Costs based on 3,800 operational hours per annum, using 38,000MWh p/a.

CHARTS 5-7. ILLUSTRATIVE EXAMPLES: INDUSTRIAL ELECTRIFICATION COSTS WITH TARGETED ELECTRIFICATION DISCOUNT APPLIED

PAPER MILLS: MONTHLY COSTS WITH EII SUPERCHARGER, TED APPLIED

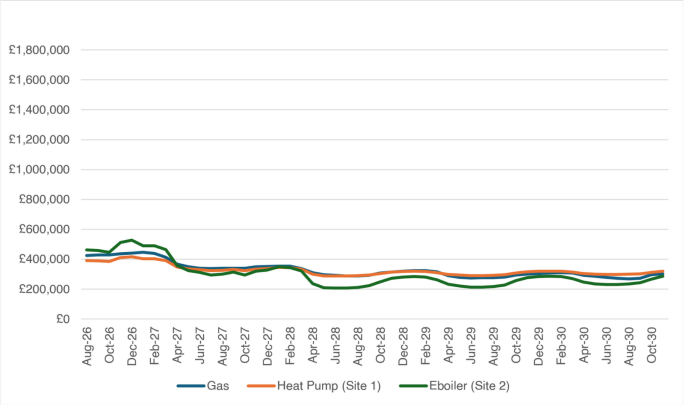


Chart 5: monthly cost of running Gas, Heat Pump and E-boiler on an energy-intensive (EII) industrial site over time, with TED support applied

PAPER MILL COSTINGS WITH TED

Site 1:
For this paper mill, a heat pump is the most viable electric heat technology for the site. With a discount applied, the cost of running a Heat Pump is as affordable as gas, at approximately £380-400k/month, falling to ~£275k/month by 2030.

TED

For site 1, a **£94/MWh discount is applied** to achieve relative parity in cost. This equates to £38 per MWh of heat generated.

Site 2:
For this paper mill, an E-boiler is the most viable electric heat technology for the site. With a discount applied, the cost of running an E-boiler begins in the range of £470-500k per month, falling dramatically to lowest technology cost at £200-300k per month in later years.

TED

For site 2, a **£58/MWh discount is applied** to achieve relative parity in cost. This equates to £54 per MWh of heat generated.

CHEMICAL SITES: MONTHLY COSTS WITH BICS, TED APPLIED

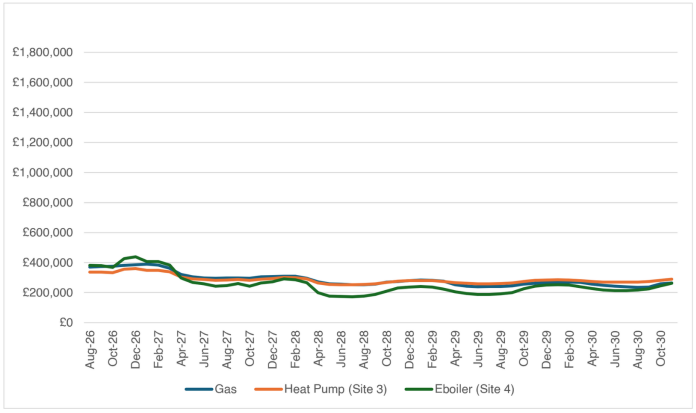


Chart 6: monthly costs of running Gas, Heat Pump and E-boiler on a BICS eligible industrial site over time, with TED support applied

CHEMICAL PLANT COSTINGS WITH TED

Site 3:
For this chemical plant, a heat pump is the most viable electric heat technology for the site. With a bespoke discount applied, the cost of running a heat pump is comparative with gas, staying consitiently in the range of £250-£350k per month through 2026-2030.

TED

For site 3, a **£180/MWh discount is applied** to achieve relative parity in cost. This equates to £73 per MWh of heat generated.

Site 4:
For this chemical plant, an E-boiler is the most viable electric heat technology for the site. With a discount applied, the cost of running an E-boiler initially ranges from £400-450k per month in late 2026, falling below £200k in 2028 and becoming the lowest technology per month.

TED

For site 4, a **£130/MWh discount is applied** to achieve relative parity in cost. This equates to £131 per MWh of low-carbon heat generated.

BREWERIES: MONTHLY COSTS WITH NO ENERGY EXEMPTION, TED APPLIED

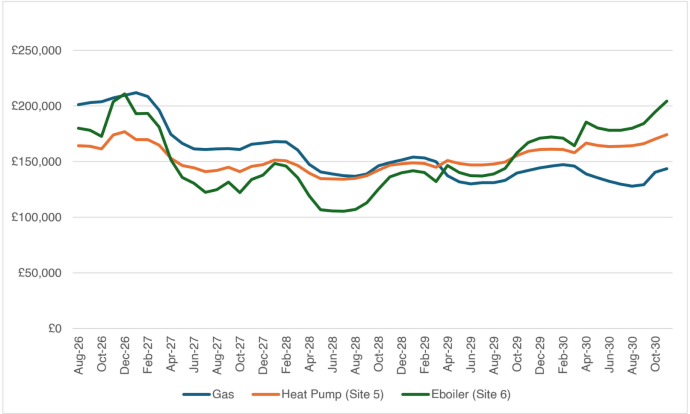


Chart 7: monthly costs of running Gas, Heat Pump and E-boiler on an industrial site with no additional support over time, with TED support applied

BREWERY COSTINGS WITH TED

Site 5:
For this brewery, a heat pump is the most viable electric heat technology for the site. With a bespoke discount applied, the cost of running a heat pump is more comparable to gas. The cost begins lower, before reaching ~£30k more per month than gas in 2030.

TED

For site 5, a **£355MWh discount is applied** to achieve relative parity in cost. This equates to £145 per MWh of heat generated.

Site 6:
For this brewery, an E-boiler is the most viable electric heat technology for the site. With a discount applied, the cost of running an E-boiler initially ranges from £170-210k per month across the period.

TED

For site 6, a **£192/MWh discount is applied** to achieve relative parity in cost. This equates to £202 per MWh of low-carbon heat generated.

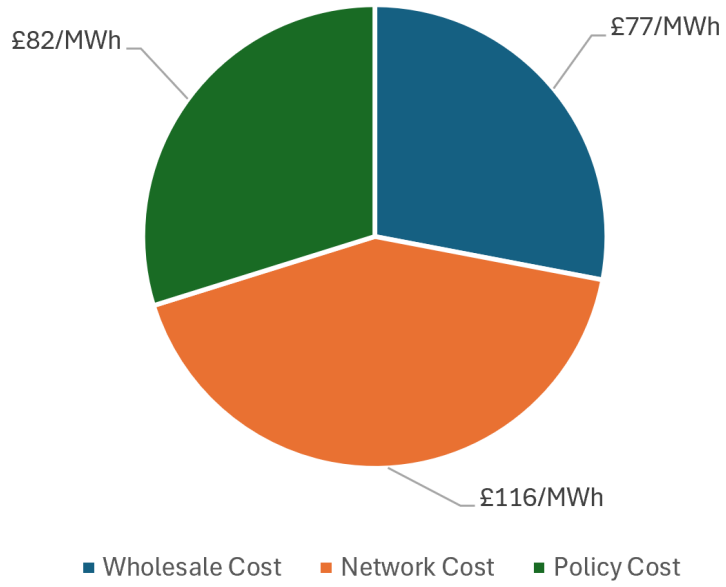
Source: AMP Clean Energy Cost of Ownership Calculator, 2026

THE INFLATED PRICE OF ELECTRICITY

Arguably the most critical component of risk when businesses weigh up the cost of owning electric versus gas heat technologies, is not just the price of electricity, but an outdated pricing structure. Industrial electricity prices in Britain are the highest in Europe - we have reports of manufacturers only able to run at 65-75% capacity for the past year, despite increased demand for their products, as a direct response to high electricity costs. Yet successive governments have followed an ingrained and reflexive process of inflating these bills with environmental, social and infrastructure taxes (non-commodity costs), making the future price outlook unclear and creating investment risk in an electrification business plan. The alternative would be to share these costs across general taxation to improve the business case for electrification and lower the cost of electricity for all users (domestic, commercial and industrial).

Non-commodity costs fall into three categories: policy costs, network charges, and metering costs. Metering costs for installing, operating and maintaining meters and associated market processes, are a relatively low cost for manufacturers. Policy and network charges, however, are placing increasing pressure on long-term electricity investment confidence.

CHART 8. 2026 INDUSTRIAL ELECTRICITY COST BREAKDOWN (ILLUSTRATIVE)



Source: Data courtesy of Shell, 2026 for 3,200 MWh/annum, HV Band 4, 3775kVA connection in London. See Annex A for site size definitions, annual consumption and connection type and further assumption details.

POLICY COSTS

The list of policy costs billed to industry is excessive. It includes the Feed-in Tariff (FiT), Capacity Market (CM) levy, Climate Change Levy (CCL), Contracts for Difference (CfD) levy, and now the Nuclear (RAB) Levy. For the majority of businesses, the cost of a support scheme for 541 electricity intensive businesses, also adds the Energy Intensive Industries Support Levy (ESL) to their bill. Most businesses will also face a charge passed down by generators to subsidise energy network costs in Scotland – the Assistance for Areas of High Electricity Distribution Costs (AAHEDC) levy. New policies are routinely added to industrial bills (the Nuclear RAB levy was implemented in November 2025) and other policies, such as the Climate Change Levy, continue to rise with inflation and act as a disincentive to electrify rather than an incentive to be energy efficient. Even policy costs introduced to gas companies (the Gas Shipper Obligation) make their way onto electricity bills. Whilst these levies often provide social and environmental benefits, the balance has hit industrial electricity users hardest, restricting competitiveness against gas and creating an outcome oppositional to the productivity goals of the incoming Government.

Within the current pricing system, manufacturers are disincentivised to use electricity. If the pool of electricity users in the Britain contracts, the number of users sharing the burden of non-commodity costs also decreases and the per-user share of costs increases. Britain is therefore stuck in a counterproductive and worsening cycle of deterring electrification.

NETWORK CHARGES

Network charges place the largest non-commodity burden on bills. They include the Transmission Network Use of System (TNUoS) charge, the Balancing Service Use of System (BSUoS) charge, the Distribution Use of System (DUoS) charge and the Residual Cashflow Reallocation Cashflow (RCRC) charge. The Department for Energy Security and Net Zero (DESNZ) has indicated that Britain's electricity network will require upgrades of up to £240bn to support the Government's clean power targets in the next 24 years, which will be funded through additional levies on electricity bills. The excess burden for increased national electricity infrastructure build-out disproportionately falls on manufacturers, and after industry took on a 33% increase in transmission network charges from 2024-2025, these costs are forecast to rise by another 23% by April 2027. Industries are also paying increasing constraint costs to help balance the grid and turn off supply when there is no demand to receive it (showing up in increased BSUoS charges), whilst the opportunity for manufacturers to instead take on excess supply and increase production, remain unrealised.

Evidence that manufacturers in Britain want to follow suit with global trends is clear, with 63% of manufacturers having taken steps towards electrification, and 87% are keen to invest more if the spark gap between gas and electricity can be closed. But for many manufacturers, even small increases in unit energy costs can significantly and negatively impact margins.

[12] Energy-UK, Response to DESNZ Gas Shipper Obligation consultation, (2025)
[12] The Telegraph, DESNZ data: Britain will need up to £240bn of net zero upgrades (2026)
[13] NESO, Transmission Network Use of System (TNUoS) Charges (2026)

VOLATILITY

International volatility of fossil fuel feedstocks, evidenced through price hikes from the recent Middle East conflict, already creates deep uncertainty around long-term operating expenditure and payback periods. Therefore, when manufacturers see consistent increases in non-commodity costs, and un-transparent future changes to these, it becomes difficult to justify fuel switching. As a result, businesses are not only delaying or scaling back electrification investments but are cancelling projects altogether, or re-investing in gas, despite wanting to electrify. Manufacturers need long term transparency and lower risk when it comes to the price of electricity, so they can be confident that, if electricity investments become feasible in the short-term, assets will not be redundant in the future, due to government-commissioned price increases.

EXCESS CAPITAL AND INFRASTRUCTURE COSTS

When deciding between replacing legacy fossil fuel heating technologies with a modern solution, our industry feedback showed that businesses are often willing and able to self-finance capital investments where payback periods are within 3-5 years, particularly if other costs are predictable and manageable. However, an industrial electric heat pump can have a pay-back period of 8 years, which businesses have to consider alongside the premium (excess cost) of electricity-based solutions compared with natural gas alternatives.

OTHER MISSED OPPORTUNITIES

EXCESS SKILLS PRESSURE

Electrification is unique for all types of manufacturers, even if the same technologies are being used. The design of high-temperature electric heat solutions requires adaptation to business needs, additional to the unique adaptation and design requirements for site layout, practicalities and production realities. Each installation is unique and will often need re-designing or re-costing if the right design skills have not been integrated at the early stage of a project. Despite the strong electrification supply chain in the Britain, design and project management skills for electrification projects are becoming increasingly difficult to source when competing with Europe, where electrification investment is on the rise.

INSUFFICIENT RESOURCE ALLOCATION

In Wales, National Grid Electricity Distribution (NGED) estimates over 24,700MW of unused, connected demand capacity (available electricity for users) is sitting idle[18]. Despite this abundant availability, electricity accounted for just 16% of total fuel consumption in Wales in 2021 compared with 28% for gas and represented only 20% of fuel use within industry[19]. Inefficient use of the electricity resource we have available means that existing infrastructure is not delivering its full economic value. Electricity capacity sits idle while manufacturing industries continue to rely on fossil fuels. In areas with critical supply chains, such as metals and heavy industry, like Wales, this underutilisation risks both slowing modernisation, and undermining industrial competitiveness and security of supply, particularly where access to affordable, low-carbon power could otherwise support retention and national security.

For example, commercial heat pump capital costs can range from £380/kW - £1360/kW[14], whereas heavy duty industrial gas boilers generally have a range of €230/kW - €290/kW (and average of ~£220)[15]. The cost of installation design and infrastructure needs (process integration) inflate initial capital expenditure also, with most manufacturing sites needing unique design and fitting for their production realities.

Stacked on top of asset capital costs, is a grid and connections system that is going through a generational upgrade. The demand connection queue grew from 41GW in November 2024, to 125GW in June 2025. Grid delays increase project costs for manufacturers by up to 200%, and of companies that experienced grid delays in recent research, 34% said growth had stopped entirely as a result[16]. Manufacturers often have to take on the cost of modernising grid infrastructure on or near their site, if they want to move forward with an electrification project, particularly if the project includes onsite generation.

One reason a manufacturer may choose to install onsite generation, could be that they cannot source all the electricity needed for an electrification project from the grid, at the price they need it. In this illustrative example, the manufacturer might decide to invest in rooftop solar PV to overcome electrification barriers. The local distribution network operator could then tell the business that the substation (a necessary grid asset) needs to be upgraded if they would like to connect their asset – this action alone costs the manufacturer an additional £50,000[17].

POLICY PROGRESS AND SHORTFALLS

Successive governments have introduced several policy mechanisms which have gone some way to reducing the price of electricity for a small portion of manufacturers. However, interventions have not been sufficiently designed to stimulate electrification across Britain. A lack of clear policy strategy for industrial electrification, and a delayed industrial decarbonisation plan, also creates an uncertain environment for investment.

EII SUPERCHARGER AND BICS

The Energy Intensive Industries (EII) Supercharger support scheme, for example, removes policy costs like Renewables Obligation and Capacity Market, as well as reducing network charges by 90% eligible businesses. However, this scheme places the burden on non-eligible businesses, who take on the redistributed costs via higher levies. Although Government has indicated it will offset costs for BIC scheme via adjustments to the RO and withdrawal of the Carbon Price Support (CPS), it is currently unclear whether struggling businesses will also pay the burden for eligible manufacturers to receive the relief.

With 586 businesses eligible for the improved EII Supercharger as of June 2026, and a further 10,000 being offered BICS support from April 2027, there are still just under 119,500 businesses taking on even higher costs as a result, receiving no relief, and under increased risk of closure or relocation abroad.

[14] Commercial Solar Grants, Commercial heat pump cost UK (2026)
[15] Technology Collaboration Programme Project 58, Technology Overview (2026)
[16] Roadnight Taylor, The grid reality gap threatening industrial growth (2026)
[17] Decerna, Grid-connections (2023)
[18] National Grid, Network Opportunity & Development Map (2026)
[19] Regen for Welsh Government, Energy Use in Wales - Third Edition (2024)

If we consider ever-increasing policy and network costs, then the relief of BICS for an eligible business is greatly reduced. By April 2027, excess transmission network charges and policy cost increases will mean that, for an average business with high electricity intensity who is eligible for BICs support, the scheme only offers up to 13.4% decrease in cost of electricity by April 2027.

If the spark gap surges again to 4.7:1, as it did in early 2026, this still leaves a 4:1 ratio. At best, the spark gap for these users would be 3.5:1 by 2027, which is not sufficient to drive large-scale electrification.

BUSINESS RATES

Manufacturers also have a considerable appetite to move forward with installation of clean technology, including on-site renewables and storage, but are restricted by available finance and incentive to support. 32% of manufacturers want to have greater access to finance to invest into infrastructure but investment is impeded by business rates[20].

Hundreds of sites are expected to pay even higher rates once planned business rates reforms come into force, that will impose a higher multiplier on properties valued over £500,000 – installing clean tech and grid balancing storage and generation, risks raising the value of property in this way.

There is often a lack of confidence in new technologies and their pay-off - our members report that technology uptake has been successfully encouraged in the past by funded technology demonstration events.

GRID GOVERNANCE

Businesses are further deterred from electrifying due to nation-wide connection roadblocks, with some businesses being offered 10 year waits to connect to the grid. Though Government have taken steps to reduce speculative applications in the demand queue, definitions of 'strategic demand projects' in the Department for Energy Security and Net Zero connections accelerator service[21] give no advantage to electrifying manufacturers, while the application process is unclear and inaccessible to many SMEs.

The recent Government trial of discounted electricity for consumers in areas with high wind generation (e.g. Scotland, East of England), to reward electricity consumers near renewable generation for using electricity during high generation, is a valuable first step in reducing curbing the cost of wasting (constraining) this excess energy. However, constraint costs are set to increase from around £1.3bn to £1.7bn, to between £4bn and £8bn annually by 2030. This means a larger rate of electricity consumption in high generation periods will be needed.

Manufacturers are an untapped resource for a growing domestic energy supply industry – increasing industrial demand for electricity in constrained areas is the fastest way to avoid wasted energy generation and lower curtailment costs for all. Whilst pathways to encourage industry to take on excess electricity in times of high production are being developed[22], mechanisms like Demand for Constraints are not accessible to a wide enough scope of industry.

[20] Make UK, From Crisis to Stability: A future energy system for Manufacturers (2026)
[21] Department for Energy Security and Net Zero, Annex B, Accelerating electricity network connections for strategic demand (2026)
[22] NESO, Constraints Collaboration Project (2025)

THE CONSEQUENCE

DEINDUSTRIALISATION

With the loss of manufacturing industries across Britain, we risk the potential deskilling of towns and cities – 2.6mn jobs which represent a value of £107bn to towns and cities, plus the basic £20bn value to HM Treasury from existing industrial employment.

The decision by manufacturers to replace end-of-life equipment with the same legacy natural gas or oil technologies, is increasingly being made from survival-necessity, and against global market indicators that suggest electrification is the best long-term business decision.

LACK OF DEMOCRATIC CHOICE

These forced choices strip businesses of democratic choice: manufacturers are limited in their choice of energy use, their options for digitisation, and the location of their supply chains as suppliers and buyers offshore production to nations where efficient, modern energy use is affordable and feasible.

Meanwhile, policy signals in Europe are increasingly indicating that the operational costs of electrified sites will be actively reduced and stabilised for manufacturers. At the EU level, measures under the Clean Industrial Deal and Affordable Energy Action Plan explicitly target lower electricity prices through reduced taxes, levies and network charges, to provide cost certainty and reduce exposure to market volatility.

EU policy is reinforced by national interventions, with countries such as Germany already implementing electricity price relief through reduced grid fees and energy taxes, contributing to measurable reductions in industrial energy costs. Taken together, these policies signal a clear direction of travel: across Europe, electrification is being underpinned by sustained efforts to improve operating cost competitiveness, creating a more stable and investable environment for manufacturers.

OFFSHORING

The cost of electrification in Great Britain comparative to other nations, is a serious threat to domestic supply chains. Last year, a large UK-based food manufacturing business committed to opening a decarbonised facility in Poland, because it would reduce operational costs by over £1mn per year, where the same investment in Britain would have increased costs by £800,000 per year. This makes the cost differential of relocating a new industrial site £1.8mn, negative to Britain.

Food and beverage manufacturers make up almost a quarter (24%) of our manufacturing base and are key buyers for our packaging and chemicals industries. A single food manufacturing business moving abroad directly affects five other sectors (agriculture, food & drink; manufacturing, wholesale, retail, food service/hospitality) and indirectly affects over 10. Businesses are not only seeking to reduce carbon, but also increase efficiency and productivity, opportunities to do so in Great Britain are minimal.

If we lose a significant portion of the food and beverage sector, undue stress will be placed on our domestic packaging, chemicals, and hospitality industries, who are also suffering the same cost barriers to electrifying and remaining in the UK.

ELECTRIFICATION SUPPLY CHAIN INVESTMENT

Britain has a strong industrial electrification supply chain, with some firms drawing on decades - and in some cases centuries - of engineering expertise. However, Electrify Industry engagement suggests that European markets are currently providing significantly stronger demand signals than the UK. For example, one manufacturer reports around €165mn of electric boiler sales across Europe in 2025 compared with only around €1mn in the UK, reflecting clearer policy support and more consistent deployment activity in the EU.

This dynamic is reflected in the experience of UK-based suppliers such as BRUSH Group and Babcock Wanson, which have the capability and business desire to deliver electrification solutions at scale in the UK but face an uncertain domestic market. Without stronger long-term deployment signals and visible commitment to industrial electrification in the UK, suppliers may find it increasingly difficult to justify investment in domestic facilities, skills and supply chains, placing UK manufacturers at an increasing disadvantage relative to overseas competitors operating in larger and more supportive home markets.

Industry also notes that parts of the UK's critical supply chains have already contracted, resulting in the loss of jobs and capabilities which are difficult and costly to rebuild. A stronger domestic electrification market would help retain and expand these capabilities, supporting skilled employment, encouraging long-term investment and strengthening the resilience of strategically important manufacturing supply chains.

QUIET DEATH OF CRITICAL INDUSTRIES

Some businesses are typically overlooked in piecemeal policy mechanisms but play integral roles in critical growth sectors with mature supply chains spanning Europe. For instance, heat treatment processes (SIC 2561) are not optional “nice to have” services, but fundamental enabling processes for aerospace, defence, and automotive manufacturing and crucial to delivering the Modern Industrial Strategy, along with the aims of the Strategic Defence Review. Yet because the industry falls under trade codes that are ‘value-adding’ as opposed to ‘product producing’, sectors like these which are moderately-to-highly energy-intensive fall short of qualifying for current support mechanisms.

Such sectors are often inhabited by privately owned, family SMEs, that due to policy costs on energy are finding it ever more difficult to keep pace with the price of these product services globally and have faced multiple closures and administrative take-overs in recent years as a result.

These businesses are in a transitional phase, using both electricity (most often for precision work) and gas (most often for longer, high-intensity heat processes). If electrification in Europe, underpinned by policies to enable, continues to outpace Great Britain, then critical, value-adding industries like these examples could be outcompeted due to UK government policy by those who can fully electrify and buyers will invest in European produced alternatives. With the loss of these industries, Britain also loses jobs and the critical manufacturing skills it is already in shortage of.

THE SOLUTIONS

IMMEDIATE INVESTMENT AND LONG-TERM MARKET CONFIDENCE

The size of the prize is clear, yet the policy approach has, to date, been patchwork and the disincentives to electrify are rapidly expanding. Manufacturers urgently require a reduction in the cost of ownership for electricity-based heat, and a long-term vision for reduction of punitive policy and grid costs. This way, industry will be incentivised to electrify and modernise.

SOLUTION ONE: TARGETED ELECTRIFICATION DISCOUNT SCHEME

An industrial electrification strategy must begin with a near-term solution to accelerate electrification and secure supply-chains in Britain. For manufacturers to trust that a decision to electrify will be financially viable in Britain, investment certainty is crucial. In current, global market dynamics, a targeted policy will be too weak as an investment signal for the majority of businesses, if its duration is only 3-5 short years. Confidence to upgrade industrial heat technology to electricity-based alternatives, requires a business-specific reduction, with at least a 10-year government commitment to this solution, in the form of a Targeted Electrification Discount (TED) scheme.

A TED scheme is a financial support mechanism which would make the cost of investing in electric heat technologies, more comparable to running gas and oil alternatives. The subsidy needed would vary from business to business, depending on which electric heat technology is viable for their site, and what their site profile is.

Evidence from industry engagement shows that ongoing the difference in running costs between gas and electricity technologies remain the primary barrier to industrial electrification. For example, because of the current UK electricity-to-gas price ratio (spark gap), a food manufacturer in the UK is planning to install a low-cost gas-fired boiler. If operational costs were feasible, the site could instead decarbonise by combining heat pumps with Mechanical Vapour Recompression (MVR), using waste heat from a new refrigeration system to meet steam demand at an effective efficiency of 300%+. Additionally, industry reports that a pulp and paper electrification project worth approximately £15mn secured £4.5mnof IETF support, for a project increasing energy efficiency by 280%, yet still did not have a viable business case to proceed due to electricity operating costs.

Alongside the high operational costs of electricity, high capital expenditure remains an important barrier for particular manufacturers. Other businesses use leasing models and typically avoid large upfront investments, instead relying on predictable, periodic payments. Either way, for businesses to electrify in the short term, costs remain too high for price reductions like the BIC scheme, to make any significant impact on a business case for electrification (see illustrative examples above).

OTHER CONSIDERATIONS FOR A TED SCHEME

Flexibility incentives - Measures for flexibility should be encouraged separately to an electrification scheme, to avoid over-complication for applicants and issues with roll-out. Government should however, consider writing guidance on what developing an electrified site might look like, and future flexibility benefits, with information on 'what else to consider' when applying to participate in the TED scheme.

Industry guidance is needed, with the production of a single, coordinated access point providing clear information on electrification pathways and demystifying the process of securing grid connections and planning for future flexibility.

Supply chain strategy - A TED scheme for industry should be designed as part of a broader, clearly articulated strategy for UK supply chains, rather than as a standalone incentive. In practice, this means the scheme should be informed by robust supply chain mapping to identify domestic strengths, gaps, and dependencies, and should explicitly define what qualifies as "local" or UK-based content to avoid ambiguity.

While the scheme could incentivise local procurement to support skills development and resilience, its design must carefully balance these benefits against the risk of increasing costs or administrative complexity for firms. A scheme also needs to reflect international competitive pressures - particularly from EU support frameworks - and recognise that multinationals and SMEs respond differently to incentives.

Small and medium business constraints - Many SME's don't have energy managers or excess resource to manage complex application processes. Simplicity and accessibility will be critical to ensuring a scheme like TED is effective for SMEs, which often lack dedicated resource to navigate complex application processes or compliance requirements.

Evidence from the Industrial Energy Transformation Fund (IETF) highlights this risk: the 2026 process evaluation found that applicants faced significant time and resource burdens, with the overall complexity of the application process acting as a barrier to participation. A streamlined application, clear eligibility criteria, and standardised support offers would therefore reduce administrative burden and increase participation. Providing upfront guidance, simple cost–benefit framing, and predictable timelines will help smaller manufacturers assess opportunities quickly and integrate electrification into business planning, improving overall scheme accessibility and uptake. Creating specific government guidance for transitioning an industrial site will also keep future flexibility-participation options open to smaller manufacturers.

SOLUTION TWO: REBALANCING NON-COMMODITY COSTS

Moving non-commodity costs (policy and network levies) onto general taxation provides an economically coherent and sustainable funding model for the long-term that also provides investment certainty.

OPPORTUNITY

Many of the costs currently recovered through electricity bills - including support for renewables and network build-out - deliver benefits across the whole economy. Funding them through general taxation and allowing these costs to be shared more broadly, reducing business case blockages to investment, when security of supply and productivity is at the fore for Britain. This approach avoids placing undue pressure on lower-income households, as well as liberating businesses to have confidence to invest.

Crucially, rebalancing non-commodity costs would help unlock the lowest-cost pathway to modernisation. Electrification is widely recognised as the most efficient route for reducing industrial emissions and increasing efficiency, but its deployment is constrained by artificially high electricity prices. By shifting these costs, government can enable faster uptake of mature, deployable technologies, lower the overall cost of the transition, and maximise the return on investment in clean power generation and grid infrastructure. In this context, rebalancing is not simply a price intervention - it is a strategic enabler of cost-effective modernisation and decarbonisation.

INTERNATIONAL PRECEDENT

There is some international precedent for approaches like this amongst several European economies, who have already shifted policy costs away from electricity bills and into centralised funding mechanisms, like federal budgets or general taxation. Examples include Germany and Denmark, who have both taken steps to reduce electricity taxes to the EU minimum to accelerate industrial electrification. The European Commission also released 'recommendations on tax incentives to accelerate the Clean Industrial Transition' in June 2025, suggesting options like accelerated depreciation and targeted tax credits[23].

The UK Government has begun to take some similar actions, though not to the same or necessary extent. Such reforms are therefore feasible and deliverable but are not being implemented with the same haste in Britain as elsewhere in Europe. Building on this progress to implement a comprehensive route to rebalancing, would provide industry with the clarity and confidence needed to invest at scale.

Shifting these punitive costs from industrial bills removes a key barrier to electrification, improves fairness in cost recovery, and strengthens the competitiveness of British manufacturing. Without such reform, there is a clear risk that investment, production, and the associated economic benefits of the clean transition will continue to be diverted elsewhere.

[23] European Commission, Taxation and Customs Union, European Commission makes recommendations on tax incentives to accelerate the Clean Industrial Transition (2025)

FUNDING NETWORK CHARGES

A long-term vision for shifting all non-commodity costs from electricity bills, may need staged intervention. For example, the scope with which the Government can realistically intervene in network charges specifically, will depend on what successive government policies are in regard to ownership models of infrastructure assets. If a debt instrument is to be created for national infrastructure, then government could borrow against it.

Alternatively, if action for increased state intervention in network infrastructure were to be taken, then costs might fall under general government borrowing rules, allowing for a fixed long-term levy on all taxpayers, over a set period. This option would alleviate British businesses of the ‘cost per kwh’ pathway currently being used which directly punishes industry for increased clean energy use.

RECOMMENDATIONS IN DETAIL

1. Introduce an electrification accelerator, the Targeted Electrification Discount Scheme (TED), to immediately secure British industrial resilience

- To realise a long-term plan to reform industrial energy costs and national security of supply, we need to immediately secure the UK industrial base. Government should implement a long-term (≥10 years) targeted electrification discount to reduce the cost of ownership of electricity-based heat technologies for manufacturers, compared to natural gas and oil alternatives.
- A one-size-fits-all approach should be avoided, with tailored support reflecting industrial diversity.
- Address the cost of ownership for electricity-based heat technologies:
    - An ongoing electrification subsidy to ensure competitive operating costs.
    - Excess capital support mechanisms and access to finance for SMEs should also be explored to compliment the scheme.
- Eligibility should prioritise businesses able to electrify in the near to medium term, to maximise early impact on productivity.
- Ensure accessibility and simplicity for businesses, making the scheme:
    - Simple to understand and access, especially for SMEs.
    - Designed to reflect sectoral and operational differences.
    - Free from unnecessary administrative complexity.
- Provide long-term policy certainty to unlock investment:
    - All electrification support should be delivered through stable, multi-year policy frameworks rather than short-term funding cycles.
    - Set out a credible, long-term industrial electrification strategy.
    - Provide clear eligibility criteria and funding timelines.

2. Redistribute non-commodity costs, onto general taxation, for long-term confidence

- For the long term, reform the electricity pricing structure to allow current and future costs for non-commodity items to be shared across general taxation, via the progressive and modern tax system in Britain. This would allow the cost to be shared by all those who benefit from the public services the levies provide and secure the longevity of Britain's manufacturing base for a growth economy and national security.
- Take an approach to non-commodity costs which allows long-term investment certainty and statement of such an approach would increase confidence and uptake of any solutions introduced in the meantime, if bridging policy is needed to secure industry in the short-medium term.
- If network charges are to be addressed separately, then the historic mechanism of placing policy charges on industrial bills must still be restructured at a minimum - as Make UK recommended this year[24].

3. Introduce a clear, long-term strategy for industrial electrification, setting out the roadmap for electricity price reform

- Introduce an industrial electrification strategy, whether this is via the anticipated Industrial Decarbonisation Strategy, or through a renewed direction of work.
- Include a long-term vision for electricity price reform for industrial users and provide a clear action plan for working towards this reform.
- Publish a timetable with key milestones for an industrial electrification scheme, and rebalancing non-commodity costs.
- Benchmark policy against emerging European industrial electrification frameworks, including the EU Clean Industrial Deal, to ensure British manufacturers remain internationally competitive.
- Align the strategy with the Government's wider Industrial Strategy, supply chain resilience objectives, and skills planning, ensuring electrification is treated as a growth and competitiveness agenda rather than solely a decarbonisation programme.

[24] Make UK, From Crisis to Stability: A Future Energy System for Manufacturers (2026)

COMPLEMENTARY RECOMMENDATIONS

4. Accelerate grid infrastructure and connection reform for industrial demand

- Government, NESO and Ofgem should prioritise industrial electrification in grid connection reforms, ensuring that existing manufacturing demand is not crowded out.
- Key actions:
    - Expand the definition of ‘strategic demand projects’ in the connections accelerator to ensure industries switching from fossil fuels to electricity take precedent.
    - Offer direct process support to SMEs without energy managers, for new and upgraded connection applications, with standardised processes and cost visibility.
    - Enable alternative connection options (e.g. non-firm connections, self-build) to allow for scheme uptake.
    - Strategic industrial projects should receive priority access in the connections queue and be mapped via scheme applications.

5. Keep flexibility incentives separate but aligned to electrification policy

- Industrial flexibility should be enabled through incentives, not mandates within industrial electrification policy.
- Introduce tax relief incentives for clean, flexible technology investments, particularly where technologies help balance the grid – we suggest a targeted business rates exemption for investment in green plant equipment and machinery, including onsite generation and storage projects.
- Consider funding technology demonstrations.
- Develop industrial electrification guidance with a framework leading manufacturers through the process of site electrification, future flexibility possibilities, sequencing of how to get started and who to talk to.
- Encourage optional participation, avoiding overly complex scheme requirements.
- Focus on outcome-based metrics (e.g. ability of industry to respond to price signals, and related incentive needs).

6. Develop a coordinated supply chain strategy

- Government should support the growth of domestic electrification supply chains, including equipment manufacturing and installation capability.
- This should include:
    - Targeted support for UK-based technology providers, in line with recent Cabinet Office procurement directives.
    - Measures to reduce import dependency and supply chain risk.
    - Alignment with the broader industrial electrification strategy and the industrial decarbonisation strategy.

7. Integrate skills policy with industrial electrification objectives and strategy

- Skills policy should be designed alongside electrification policy, not treated separately.
- Government should:
    - Develop flexible, modular training pathways aligned with electrification technologies in manufacturing.
    - Coordinate skills provision with infrastructure roll-out.

Annex A

Shell data archetype site size definitions based on annual consumption and connection type:

- Large User (3,2000 MWh)
  - 3,200 MWh/annum, HV Band 4, 3775kVA Connection in London
  - Equivalent to small-medium scale industrial site (per DESNZ definition below), equivalent to production such as metals fabrication, plastic moulding, food processing.
- Wholesale prices (2026–2030) based on Wood Mackenzie (GB Long Term Power Market Outlook, H2 2025). Non-commodity forecasts based on NESO, LCCC, DBT, DESNZ, HMRC, auction outcomes and Shell estimates. Includes transmission and distribution losses.

DESNZ industrial site size definitions:

- Medium Industrial Sites: Consume between 2,000 to 19,999 MWh (2,000,000 to nearly 20,000,000 KwH) annually.
- Large Industrial Sites: Consume between 20,000 to 69,999 MWh (20,000,000 to nearly 70,000,000 kWh) annually.
- Very Large Industrial Sites: Consume between 70,000 to 150,000 MWh (70,000,000 to 150,000,000 kWh) annually.

ELECTRIFY INDUSTRY

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Electrify Industry is the industrial electrification sector's representative body representing industrial, manufacturing stakeholders concerned with, within the supply chain of and those in favour of industrial electrification.

Make UK, The Manufacturers' Organisation, is the representative voice of UK manufacturing, with offices in London, every English region and Wales. Collectively we represent over 20,000 companies of all sizes, from start-ups to multi-nationals, across engineering, manufacturing, technology and the wider industrial sector. Everything we do – from providing essential business support and training to championing manufacturing industry in the UK and internationally – is designed to help British manufacturers compete, innovate and grow. From HR and employment law, health and safety to environmental and productivity improvement, our advice, expertise and influence enables businesses to remain safe, compliant and future-focused.

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LinkedIn: www.linkedin.com/company/electrify-industry

For further information

Daniel Paterson

Director, Policy & Government Affairs

dpaterson@makeuk.org

Louise Young

Head of External Affairs

lyoung@makeuk.org

Lucy Adams

Policy Advisor

ladams@makeuk.org