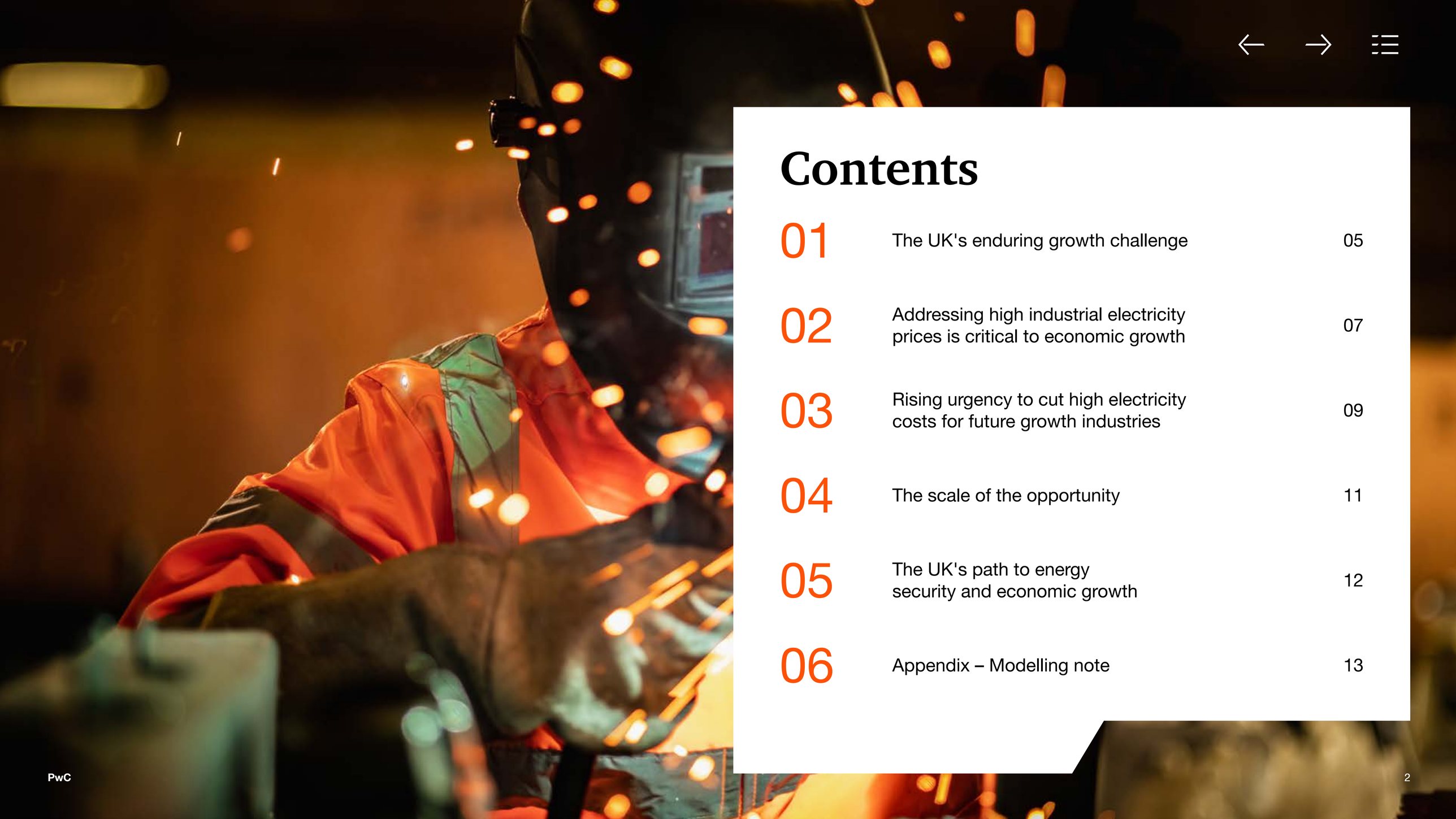
Powered up or priced out? The £250bn case for a national energy plan

2026



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Foreword

The rules of the game have changed.

The effective closure of the Strait of Hormuz, through which around a fifth of the world's oil and liquefied natural gas normally flows, triggered one of the most significant energy market disruptions in modern history – with more likely to follow.

This is the latest and most severe in a series of shocks, from conflict to supply chain disruption, that highlight how quickly economic security can be undermined when essential supplies depend on a small number of routes, producers or sources of energy.

In this more volatile and contested landscape, energy security is now a defining factor at the heart of competitiveness and economic growth.

In response, countries are making fundamentally different choices on how they balance cost, security and investment in their energy systems. For the UK, these shocks underscore how essential energy security is, not only for the resilience of our critical infrastructure and services, but to provide the foundation for future growth in industries that are heavily dependent on electrification.

Cost is also a critical factor, yet UK industrial electricity prices have remained stubbornly above those of other G7 economies since 2020 – peaking at 63% more in 2024, with UK monthly wholesale electricity prices running over 30% above the EU median in May 2026.

The Government's Industrial Strategy has rightly identified the critical need to tackle these costs to support growth. And progress has been made in transforming the power system, particularly through decarbonisation and improvements in energy efficiency. Recent policy signals are also encouraging, with greater emphasis on energy security and new commitments to infrastructure investment.

However, the persistent price gap is weighing on competitiveness, influencing investment decisions and exposing a real vulnerability in the UK's growth model. This impact extends far beyond energy-intensive industries. When energy costs rise, they ripple across entire value chains, making this a whole-economy challenge, not a sectoral one.

The stakes for getting this right are high. Our analysis in this report shows that closing the UK's gap with G7 electricity prices could unlock up to £250bn in additional economic output over the next decade. At around 8% of today's GDP, that represents a step-change in the UK's growth and productivity.

Fundamentally, the challenging macroeconomic environment also demands that businesses rethink how they operate and compete. UK companies currently facing structurally higher energy costs must work harder than international peers to succeed.

This report focuses on closing the UK's electricity price gap with G7 peers. But recent events have exposed a wider vulnerability. UK competitiveness and business resilience also depend on the availability and cost of products derived directly from hydrocarbons, such as petrochemical feedstocks, plastics, fertilisers and industrial gases, which underpin supply chains across the economy.

The scale of this exposure demands a response that goes beyond managing energy costs alone. UK businesses must pursue broader reinvention: taking control of the full cost base, accelerating technology adoption, building true resilience and ensuring supply chains can absorb and adapt to shocks and disruption.

Ambition across this agenda must now translate into action, but no one party can do this alone. It will need government, business and investors to work together at the pace and scale required.

An important part of the UK meeting these challenges and seizing the opportunity, is creating a practical and deliverable national energy plan that provides a whole system view across supply, demand, infrastructure and delivery. A clear and comprehensive framework for strategy and coordination between the private and public sector, which gives the investment community clarity and confidence to commit capital at the scale needed to deliver this transformation.

Developed by PwC UK, with support from the CBI and Energy UK, this report sets out the scale of the UK's energy challenge and the prize for getting it right, focusing on delivery and competitiveness rather than specific questions such as the energy mix.

With the right choices, the UK can strengthen its competitiveness, accelerate electrification and position itself as a leading destination for investment in an increasingly contested global landscape.

Vicky Parker

Energy, Utilities and Resources Industry Leader, PwC UK

Simon Oates

Strategy& Economics Leader, PwC UK

The 5 key imperatives to unlock the UK's energy and growth opportunity

01

Reallocate policy costs to support price competitiveness

Energy costs are now a central driver of competitiveness. The UK must address the structural gap in electricity prices relative to its international peers if it is to attract and retain investment at scale.

The Government should:

- Make transparent the associated policy costs, already and planned, to be included in energy prices.
- Undertake an economic impact assessment of policy costs to the economy and growth.
- Rethink how to create a fairer reallocation which balances long term energy security objectives with the need for price competitiveness in the short term.

02

Embrace innovation and technology to manage demand

As the energy system becomes more complex and also critical, the focus must shift from simply expanding supply to improving how businesses and consumers operate within it.

Businesses should:

- Embed innovation to reduce energy wastage and rethink operational efficiencies through technology and AI.
- Take ownership of their energy management to the fullest extent, maximising the channels, technology and innovation available so they have more choice and control over when and how energy is used throughout their entire value chain.

Research by PwC and the World Economic Forum estimates better efficiency and flexible energy use could reduce the UK's nearly £60bn annual commercial and industrial energy spend by around 30%.

03

Recalibrate and simplify regulation to prioritise economic growth

The UK's regulatory and planning framework will be critical to enabling investment, accelerating delivery and improving competitiveness.

The Government should:

- Streamline the rulebook, remove duplication and complexity and focus regulation on driving growth.
- Secure clearer planning, simpler regulation and coordination across regulators to improve investor confidence and speed up delivery.

PwC estimates better coordination across the regulatory environment could unlock approximately £9bn over the next decade.[1]

04

Reshape supply chain and workforce to create delivery resilience

Delivering a transformed energy system depends on the availability of materials, supply chain capacity and skilled labour.

Businesses should:

- Reconsider their minimum viable company operating model and how that affects resilience and consumption to remain competitive.
- Secure availability of materials, and supply chain capacity and skills to support the scale and pace of investment needed, in the right areas, at the right time.
- Compete internationally for both skills and supply chain.
- Translate supply chain objectives into a deliverable strategy that gives investors and wider stakeholders confidence.

05

Unlock long-term investment to address the need to smooth intergenerational cost

The energy system requires unprecedented levels of investment across infrastructure, technology and system capability.

Investors should:

- Utilise the UK’s pioneering role in financial services to develop innovative financial and insurance products that address the financing challenge the energy system requires.
- Set out what kind of risk and reward environment is necessary to provide the clarity that will bring forward capital of the right type and quantum to deliver on the UK's economic growth objectives; energy is a critical pillar for future economic growth.
- Engage with government on what is needed to create an investment environment that is at least as attractive as alternative destinations for footloose international capital and domestic patient capital.

[1] See modelling note for details on calculation

01 The UK's enduring growth challenge

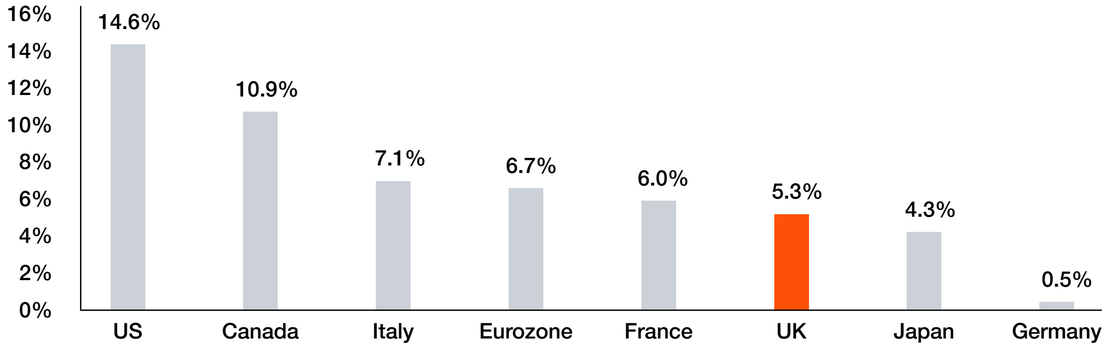
Periods of below trend investment and modest productivity growth have reduced the UK economy's capacity to absorb shocks and return rapidly to its prior trajectory. As a result, disruption tends to have more persistent effects on UK output than in many other advanced economies.

This dynamic has been evident following recent shocks. The UK's recovery has, at times, been slower than that of other G7 economies, and returning to pre-crises growth paths has proved difficult.

Looking ahead, GDP forecasts in the IMF's World Economic Outlook show that because of weaker than expected growth in 2025 and ongoing geopolitical pressures, UK growth prospects have been cut more than for other major economies.[2]

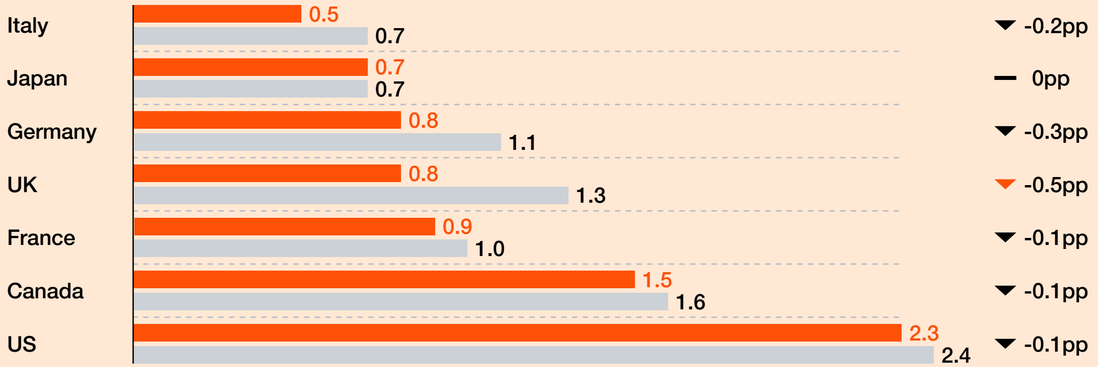
This reinforces the importance of addressing the underlying factors that shape resilience, competitiveness and long-term performance.

Figure 1: G7 real GDP % change compared to pre-pandemic level (Q4 2025 compared with Q4 2019)



Source: PwC analysis; House of Commons, GDP international comparisons

Figure 2: Comparison of IMF economic growth forecasts for 2026, made in January 2026 and April 2026 (%)



Source: PwC analysis; IMF World Economic Outlook - Reference scenario[3]

[2] IMF, Global Economy in the Shadow of War

[3] In May 2026, the IMF upgraded the GDP growth forecast from 0.8% to 1% for 2026, following UK economy growth in Q1 2026. Even with the upgrade, the UK growth forecast downgrade remains one of the highest among advanced economies.

Significant underinvestment has hindered the UK's ability to adapt and grow

Investment presents a similar picture. The UK has been successful in attracting foreign direct investment (FDI), but overall investment across the economy has remained lower than peers relative to GDP since the 1990s. PwC analysis indicates that the UK has lagged the G7 median by around 4–5% of GDP per annum, equivalent to approximately £150bn per year. Had the UK's investment share been consistent with the G7 median since 1997[4], total investment could have been around £2.3tn higher (as explored by PwC UK in its 2024 Framework for Growth report).

The UK also faces an increasing challenge in relying on FDI alone to close this gap, given the current geopolitical outlook and the significant investment priorities facing other developed economies. This reinforces the need to improve the domestic conditions for investment and crowd in capital across the economy.

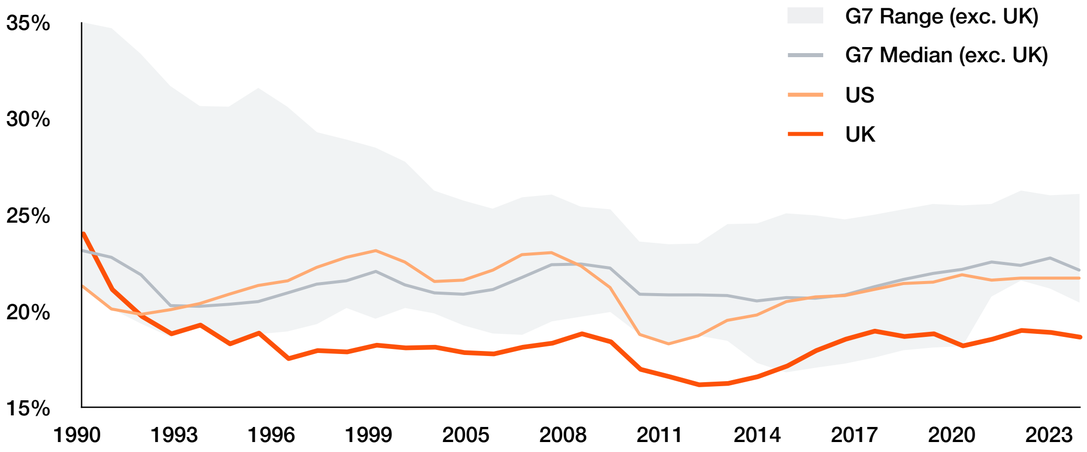
Energy is a critical driver of growth in a more unpredictable world

The global economic environment is becoming more uncertain and strategically contested. In response, countries are increasingly focused on strengthening resilience, and securing access to critical inputs, alongside supporting long-term growth. This includes investment in domestic capabilities, strategic sectors and more robust supply chains.

In this evolving context, access to secure affordable and reliable energy is becoming a defining factor of economic performance. Competitive energy is therefore not only about supporting growth, but about underpinning resilience, security and a country's capacity to adapt and compete in an increasingly volatile global environment.

[4] Using yearly ONS chained volume measures GDP data from 1997-2024

Figure 3: Gross fixed capital formation (GFCF) as % of GDP, 1990-2024, G7



Source: PwC analysis, World Bank data

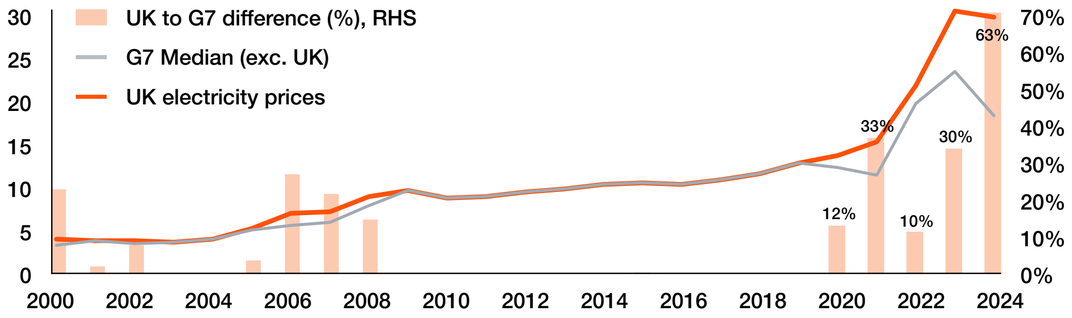
02 Addressing high industrial electricity prices is critical to economic growth

UK electricity prices are higher than its G7 peers

+63%

UK industrial electricity prices tracked G7 medians between 2009-2019 but have increased markedly from late 2020 onwards as global shocks put pressure on gas prices – peaking in 2024.

Figure 4: UK industrial electricity prices versus G7 peers, p/kWh, including taxes and levies[5]



Source: DESNZ, Energy Prices International Comparisons, Table 5.3.1

Increasing international gas prices in the wake of the Ukraine conflict are widely cited as a key factor behind the divergence of UK electricity prices from G7 prices from 2020 onwards. This is because gas sets UK electricity prices more frequently than other European countries such as Germany or France. The UK has reduced its dependency on gas through the expansion of low carbon energy, but it still has major impact on electricity prices in the UK, setting the electricity price 60% of the time today (down from 97% in 2021).[6,7] Electricity prices are increasingly volatile, driven by gas price volatility, making it more difficult for businesses and households to understand how their bills will evolve and bringing uncertainty.

Tackling the UK's exposure to gas market volatility

Recognising the challenge of high and volatile energy prices, the Government has announced plans to decouple electricity costs from gas markets with the aim of lowering bills and strengthening energy security. The strategy introduces voluntary fixed-price contracts to protect legacy low-carbon generation from wholesale gas spikes, backed by an increased Electricity Generator Levy to disincentivise companies from staying on gas-linked market pricing.

[5] US industrial price data for 2024 were not available at the time of preparing this report. To calculate the G7 median, it is assumed the US will have the lowest or second lowest prices in the G7, following past trends

[6] HMG, Decisive action to break influence of gas on electricity prices

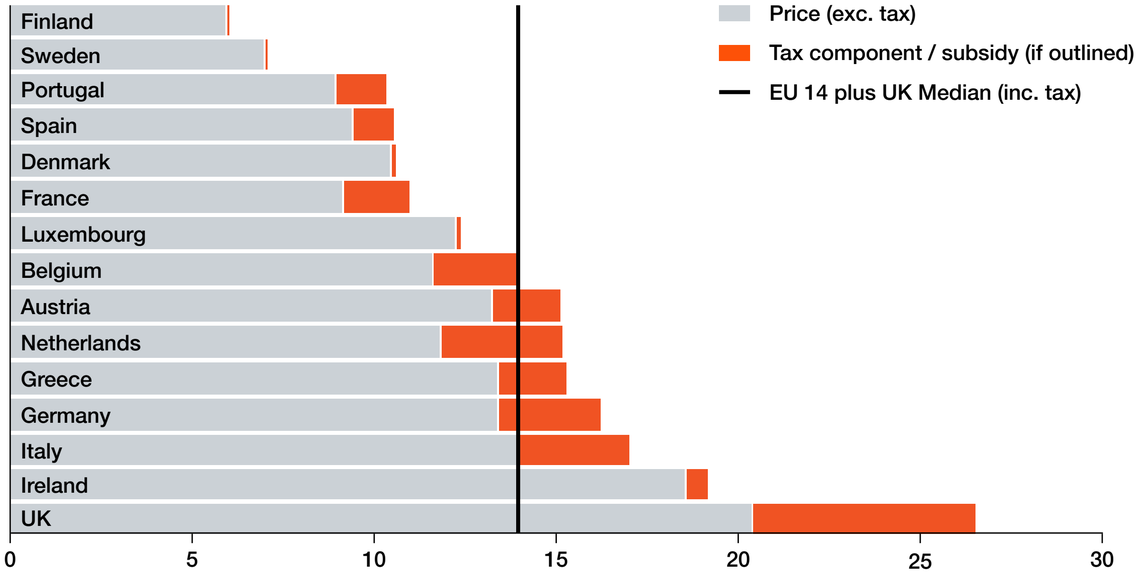
[7] Behnam Zakeri, Iain Staffell, Paul E. Dodds, Michael Grubb, Paul Ekins, Jaakko Jääskeläinen, Samuel Cross, Kristo Helin, Giorgio Castagneto Gissey, The role of natural gas in setting electricity prices in Europe, Energy Reports, Volume 10, 2023

Policy costs are increasing electricity bills to a greater extent than our European peers

A larger share of network, policy and tax costs are added to UK electricity bills than in many peer countries. While other countries also have these costs, some do not levy them onto energy bills and cover them through general taxation. These costs are funding investments to help build the future energy system and towards electrification.

UK electricity costs reflect both how the system is funded and how costs are distributed. A larger share of policy cost is placed on electricity bills than in many European peer countries. Even excluding these, wholesale and network costs in the UK remain relatively high compared to the EU14.

Figure 5: Average non-domestic electricity prices in the EU14 plus UK for medium consumers, (Jan-Jun 2025, p/kWh)[8]



Source: DESNZ, Energy Prices International Comparisons, Table 5.4.1

[8] Tax component includes policy costs

[9] ONS, The impact of higher energy costs on UK businesses: 2021 to 2024

The high cost of UK electricity is affecting growth and shaping investment decisions

High electricity costs are weighing on UK competitiveness and industrial performance. Energy-intensive industries have been particularly affected. Real output in these sectors fell by 33.6% between 2021 and 2024. Less energy-intensive manufacturing saw a 6.2% decline over the same period.[9]

PwC's CEO Survey finds the UK remains an attractive country to invest in because of the stability and strong institutions the UK offers.[10] However, the UK Government, investors and businesses increasingly highlight that the cost of energy is shaping their investment decisions.

The UK Government's Industrial Strategy identifies **tackling high electricity costs** as a priority action to increase investment into the UK.[11]

The 2026 Make UK/PwC UK survey reveals that **72% of manufacturing firms** find energy costs to be a barrier to increasing investment.[12]

PwC UK ran a survey of investors in March 2026, and results show **c50% of investors** highlight the **cost of electricity**, timely grid connections and infrastructure planning as key areas for improvement in the UK.[13]

[10] PwC, 29th CEO Survey

[11] UK Government, The UK's Modern Industrial Strategy

[12] Make UK, PwC UK, Executive Survey 2025, A Strategy for Growth – Risk and Opportunities

[13] See modelling note for details on PwC's survey

03 Rising urgency to cut high electricity costs for future growth industries

Over time, economic growth has relied less on electricity as the economy shifted to services, but that is set to change.

PwC's Value in Motion analysis shows that the global economy is being reconfigured, with value shifting into new domains of growth that cut across traditional sectors.[15] Many of these domains, including digital infrastructure, advanced manufacturing and clean energy, are fundamentally underpinned by access to reliable and affordable electricity.

The rapid growth of data centres and compute-intensive applications to underpin this growth needs reliable, plentiful, affordable and secure electricity, with many countries setting this goal as a priority for economic success. This is reinforced by strong global investment in digital infrastructure, particularly data centres, with global annual spending projected to rise from around $256bn in 2024 to over $320bn by 2050.[16] In an increasingly global and mobile economy, capital can locate anywhere. Investment decisions are shaped by a combination of cost, risk, long-term competitiveness and predictability. Energy is at the centre of this competition, and global governments are increasingly intervening to support priority sectors, onshore supply chain capabilities and develop sovereign capabilities.

Electricity forecasts show the pace of change. Global electricity demand is expected to grow by 17% between 2025 and 2030, over 2.5 times faster than overall energy demand and outpacing global economic growth.[17] India and China alone are expected to drive around 50% of all electricity growth, driven by industrial demand. Forecasts suggest advanced economies will also increase their electricity demand, but at a lower rate and will be more driven by transport and data centres.[18] NESO's Future Energy Scenarios (FES) scenarios reflect this, modelling a 3% year on year growth of electricity demand to 2050, with over 40% of this coming from transport and data centres.[19]

The UK Government's Industrial Strategy signalled a shift towards a more productive, innovation-led economy, focused on sectors such as digital and technology, clean energy and advanced manufacturing.[20]

[15] PwC, Value in Motion 2025 [16] PwC, Global Infrastructure Outlook 2025–50
[17] IEA, Electricity 2026 [18] IEA, Electricity 2026
[19] NESO, Future Energy Scenarios 2025: Pathways to Net Zero
[20] UK Government, The UK's Modern Industrial Strategy

Reliable and affordable energy is key to the eight priority areas of the Government's Industrial Strategy (below) in addition to core sectors of the economy.

1. Advanced Manufacturing
2. Digital and Technologies
3. Creative Industries
4. Life Sciences
5. Clean Energy Industries
6. Financial Services
7. Defence
8. Professional and Business Services

> "The Government must act now to tackle the core drivers of high energy costs for all businesses, rather than focusing on sticking-plaster support for only a few sectors, funded by other bill payers. This is the only way to bring down bills now, while ensuring energy is affordable and secure for the long term.

Dhara Vyas
CEO, Energy UK

Countries are taking different approaches to deliver the energy security and competitiveness needed to grow their economies

With an increased focus on local secure energy, countries are taking different approaches to build competitive advantage.

Energy importers are diversifying their energy mix, driven by energy security concerns and industrial strategy ambitions. China has taken a deliberate state-led approach to control electricity demand and diversify its supply. This has included significant investment in nuclear and low carbon energy as well as investing behind the supply chain needed to deliver on this. China now accounts for over 80% of the global solar PV value chain, produces 75% of batteries sold globally, and 50%-70% of the global capacity of wind energy components manufacturing.[21,22,23]

The US has pivoted its approach, placing hydrocarbons and accelerated nuclear development - both large and small modular reactors - at the centre of its energy strategy.

Europe varies and there is no one size fits all. France is heavily investing in renewable generation and is expanding its nuclear capacity. Germany has also heavily invested in low carbon energy but retains substantial coal generation and has decommissioned nuclear capacity.

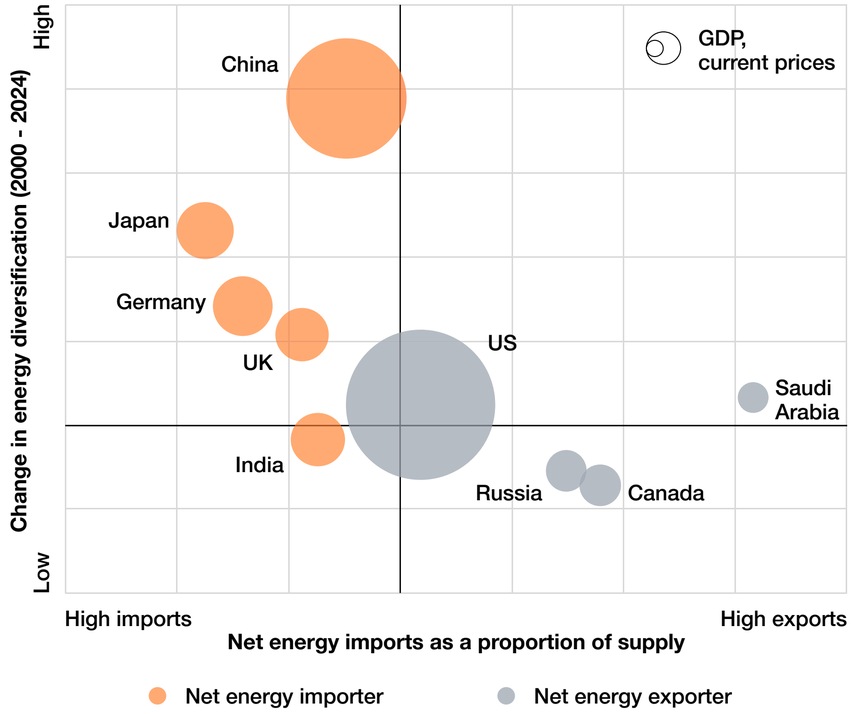
The UK has historically relied on market-led investment to expand supply. But policy is now moving towards a more actively coordinated model, with government aiming to play a greater role in shaping infrastructure delivery, market design and system outcomes.

These approaches reflect different choices. A central motivation being to achieve a greater level of energy security, whilst balancing cost and investment. Different countries' approaches remain fluid as they adapt to geopolitical disruption, changing demand patterns and technological innovation. Recent geopolitical events are likely to accelerate this divergence. The disruption to global energy markets has reinforced how closely energy security, economic security and competitiveness are linked. As countries seek to reduce exposure to supply shocks and geopolitical dependencies, energy policy is increasingly being used as an instrument of industrial strategy, driving different choices on supply, technology and investment.

For the UK, the key objective must be to drive to an energy system that will deliver competitive, reliable, and secure energy.

[21] IEA, Solar PV Global Supply Chains [22] IEA, The battery industry has entered a new phase [23] IEA, Wind

Figure 6: Divergence in energy policies



Notes:

Analysis covers a selected subset of nine G20 economies representing different energy policy archetypes. Net importer/exporter status is based on PwC UK analysis of IEA Energy Statistics data on energy imports, exports and total energy supply for 2023. Change in energy diversification is based on our analysis of Energy Institute consumption data for 2000 and 2024, calculated using an inverted Herfindahl index across fuel sources; positive values indicate a less concentrated, more diversified energy mix. Bubble size reflects real GDP in current prices, based on PwC UK analysis of IMF data for 2024.

04 The scale of the opportunity

Our analysis indicates that closing the UK's electricity price gap with the G7 median could unlock up to £250bn of additional economic output and £110bn of additional tax revenue for the Government cumulative over the next 10 years.[24]

Closing the price gap would materially strengthen the investment case for energy intensive industries, many of which sit at the heart of wider manufacturing and industrial supply chains. Greater cost competitiveness would enhance the UK's ability to retain, expand and attract investment, particularly in globally mobile sectors.

The effects would extend across the economy, as lower input costs support higher output, rising real incomes strengthen consumption, and increased investment and reallocation of capital drive productivity and export performance.

The opportunity extends beyond energy intensive sectors into the whole economy. The ONS reported that UK businesses spent nearly £60bn in 2023 on gas and electricity.[25] As the energy system evolves, businesses must be able to move from consumers to active participants. Our analysis supports this. In manufacturing, a more energy-intensive sector, lower electricity costs could increase GVA up to £12bn. A less energy-intensive sector such as wholesale and retail sector could see gains of around £15bn over the same 10-year period to 2035. Realising this opportunity will require addressing the structural features of the system.

With the UK economy generating **£3tn of output in 2025**, an additional

£250bn

over 10 years (equal to 8% of today's GDP) represents a substantial growth opportunity.[26]

Lower electricity costs could increase GVA by up to

£12bn

over 10 years in the **manufacturing sector.**

Lower electricity costs could increase GVA by up to

£15bn

over 10 years in the **wholesale and retail sector.**

[24] See modelling note for details on calculation
[25] ONS, Energy, goods and services used by UK businesses: 2023
[26] Gross domestic product (GDP): Economic indicators

05 The UK’s path to energy security and economic growth

The evidence in this report points to a clear conclusion. The UK's persistent electricity price gap, its impact on investment decisions and the scale of the economic opportunity lay bare the need for a fully integrated and deliverable national energy plan. Not as an aspiration, but as a practical framework for coordinated action between government, business and investors.

The overall direction of policy is becoming clearer through Clean Power 2030 and supporting policies. However, it does not yet amount to a deliverable framework aligned to the UK's economic growth ambitions covering all aspects of UK energy needs; for example, aligning the needs of AI and datacentres on the grid and electricity demand to ensure investors can scale at pace.

Such a plan should bring together decisions on generation, networks, demand, planning and regulation into a single, coherent approach. It must set clear priorities, define trade-offs across cost, security and speed, and provide a transparent framework for how decisions are sequenced over time. It should also reflect the UK's position in a more competitive global market, recognising that energy is now a key determinant of where capital, industry and innovation locate.

As this report has set out, UK companies facing structurally higher energy costs must respond with a breadth and urgency that goes well beyond energy efficiency. Taking ownership of the full cost base, accelerating technology adoption, rethinking resilience and reshaping supply chains are now prerequisites for competitiveness, not optional extras.

Realising the full opportunity, estimated at up to £250bn of additional economic output over the next decade, will depend on both government and business acting with purpose. For the Government, that means translating ambition into an integrated plan that aligns with and underpins the UK's Industrial Strategy, bringing together policy, infrastructure and market design. For business, it means treating the energy transition not as a compliance exercise but as a catalyst for reinvention.

To be effective, the national energy plan must address these critical priorities:

- Reallocate policy costs to support price competitiveness
- Recalibrate and simplify regulation to prioritise economic growth

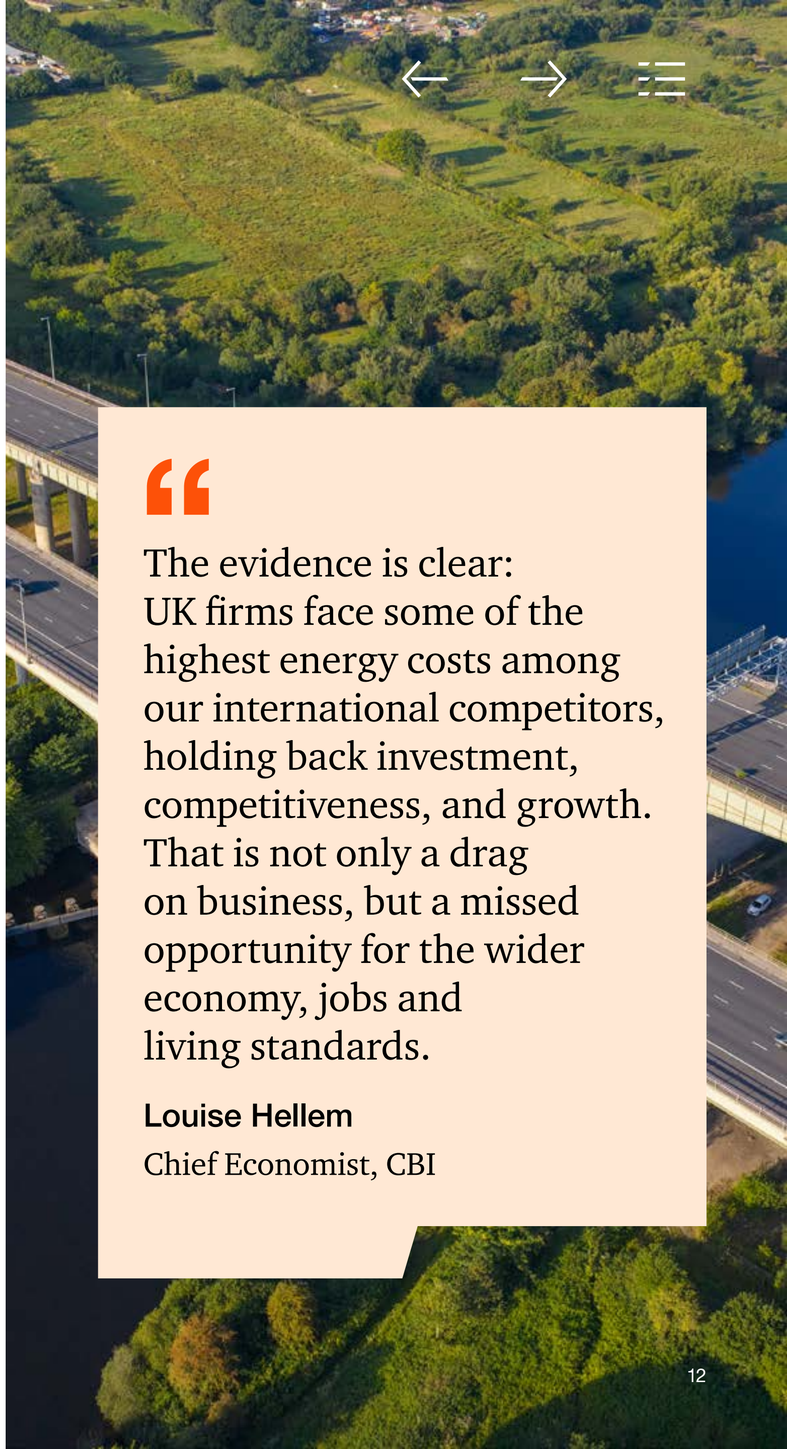
At the same time, businesses must act with equal urgency to:

- Embrace innovation and technology to manage demand
- Reshape supply chains and workforce to create delivery resilience

And investors also have a key role to play to:

- Unlock long term investment to address the need to smooth intergenerational cost

Together, these five imperatives define the core areas for action if the UK is to unlock investment, reduce costs and compete effectively. Delivery must be coordinated and it must be fast. With the right approach, the UK can position itself as a globally competitive destination for investment in an increasingly contested world.



> “The evidence is clear: UK firms face some of the highest energy costs among our international competitors, holding back investment, competitiveness, and growth. That is not only a drag on business, but a missed opportunity for the wider economy, jobs and living standards.
>
> **Louise Hellem**
> Chief Economist, CBI

06 Appendix – Modelling note

PwC has used a computable general equilibrium (CGE) model to assess the economic impact of lower electricity prices and regulatory simplification. The CGE model is a structural representation of the economy built on equations describing production, consumption, trade and government activity. Solving these equations simultaneously captures the linkages between sectors, factor markets and regions, and shows how shocks propagate across the economy. This makes CGE a standard tool for policy and scenario analysis where multiple markets adjust at once. CGE models capture how changes in one part of the economy flow through to output, investment, trade and consumption by modelling interactions across sectors, households and firms.

The model is not used as a stand-alone forecast. Instead, it is anchored to an external baseline and used to assess the directional impact of different scenarios. We consider two scenarios:

- A reduction in electricity prices, closing the gap with G7 peers
- An improvement in regulatory burden, closing the gap with the frontier OECD economy

Economic growth from lower electricity prices

Electricity prices are determined endogenously in the model. To simulate a price reduction, we apply a productivity improvement to the electricity sector, lowering production costs and, in turn, electricity prices. To calibrate the magnitude of the shock, we reduce electricity prices by 27%, reflecting the average gap between UK industrial electricity prices and the median across G7 economies over the 2022–2024 period, based on IEA data on industrial prices. These lower prices propagate through the economy via:

- Reduced input costs for firms, increasing output
- Higher real incomes for households, boosting consumption
- Increased investment and reallocation of labour and capital
- Improved competitiveness, supporting exports

Regulatory simplification opportunity

Regulatory simplification is modelled as a productivity improvement in the energy sector, based on OECD evidence linking better infrastructure governance and regulation to higher productivity.[27,28,29]

We apply a 0.2 percentage points uplift per year over ten years to productivity based on the OECD evidence. This reflects improved efficiency from better planning, coordination and reduced administrative burden. Spillover effects are captured by applying the productivity gain across upstream sectors we deem would be affected by the productivity shock, based on their linkages with the energy sector, using ONS input-output data.

Survey methodology

In March 2026, PwC surveyed investors involved in energy-sector investment across 100 organisations.

The survey examined their views on the UK's attractiveness as an investment destination and how energy-related factors affect their decision-making process.

27 OECD, Do sound infrastructure governance and regulation affect productivity growth? New insights from firm level data

28 OECD, Infrastructure Governance Indicators

29 OECD, Regulation and Growth: Lessons from nearly 50 years of product market reforms

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