

Written evidence submitted by E.ON (IND0016)

About E.ON

E.ON's goal is to ensure the energy transition works for everyone. Through E.ON Next, E.ON Energy Infrastructure Solutions and npower Business Solutions, our mission is to help make energy more affordable and sustainable across homes, businesses, cities and communities.

Globally E.ON is a major provider of energy solutions and clean energy networks with around 47 million customers across 17 countries, with planned investments of EUR 42 billion across Europe between 2024-28. In the UK, we serve nearly one in seven households and businesses, alongside being the UK's largest supplier of electricity to industrial clients.

We are also actively building tomorrow's energy infrastructure today, becoming equity partners in companies including Naked Solar, the market-leading solar technology company, and partnering with Amber, a solar and battery solutions company, which will help customers take advantage of dynamic energy prices while also reducing their carbon footprint.

At E.ON, we believe in a fair energy future for everyone, not just the affluent or energy engaged. With energy prices at record highs for over two years, we face two immediate challenges as a responsible supplier.

First, helping customers afford their bills today. Through Winter 23-24, E.ON ran its own winter support scheme worth £80m to support our customers through debt write-offs and up to 50% off bills for those in real need. Our support scheme for winter 24-25 provides even more total support (up to c£100m). However, regulatory reform is required to ensure greater financial support for those who can't afford energy, irrespective of their supplier.

Second, building a fairer, more sustainable energy market for tomorrow – one that empowers customers and fuels the shift to renewables. This requires a multi-pronged approach: making smart meters standard to unlock customer flexibility and access to innovative tariffs; reforming the price cap to reflect the true cost of serving diverse customer needs, including vulnerable households; establishing a shared industry fund to support low-income customers via a Social Tariff; and promoting customer-centric solutions within REMA.

A sustainable energy market also means supercharging energy efficiency and home flexibility. We've installed around 1.5 million energy efficiency measures in homes over the last 12 years, enabling households to access over £10 billion in lifetime savings on energy bills, and more than 5 million smart meters. We delivered over 47,000 new solar PV & battery solutions, 24,000 private EV charging points – accompanied with an industry-leading smart EV tariff and, in Europe, more than 1,000 high-speed public EV charging points. And we're continuing to expand our installation of heat pumps, helping customers transition to cleaner heating solutions.

E.ON's partnerships with local authorities and organisations across the country are showing how energy improvements can benefit entire communities – from creating skilled local jobs to reducing pressure on health services by preventing cold-related illnesses through our “Warm Homes on Prescription” trial. All of this shows that the energy transition can transform energy from a source of stress into an engine for warm homes and good green jobs if we can, together, work to get it right.

E.ON agrees with Government's identification of Clean Energy as one of the eight growth sectors within “Invest 2035: The UK's Modern Industrial Strategy” and would like to highlight that access to this resource underpins all sectors.

We therefore believe there is an urgent need to reduce the cost of clean power to stimulate Government's growth ambitions.

Executive Summary

- The UK needs to adopt an approach of increased anticipatory investment in energy infrastructure and markets, for example: renewable generation, flexibility, storage and networks. Whilst requiring some upfront investment ahead of time, the consequences of not doing so will result in higher costs for consumers as well as the UK failing to meet its CP2030 and Net Zero targets.
- Alongside this, Government must take immediate action to address the hugely inflated costs of electricity relative to gas. Government policy (to date) of funding green measures via levies on electricity bills has driven up this price differential, leaving the UK behind its international counterparts in Europe and the USA, and is undermining the transition to electrified heat (including industrial heat) and transport. As such, E.ON strongly advocates rapid Government action to shift policy costs away from electricity bills.
- The regional/city-based approach to the Industrial Strategy aligns fully with E.ON's strategic approach to partnership with cities and communities as a vital part of our growth strategy. However, we have concerns in relation to the current Government funding landscape for innovative technologies such as green hydrogen and Carbon Capture Usage and Storage CCUS. These centre around the highly restrictive nature (in number and location) of Government's designated industrial clusters. We would therefore urge Government to revisit this approach – for example through creating a greater number of smaller clusters and/or allowing shovel and investment ready schemes – which find themselves outside of the current designated areas – access to Government support, ahead of stalling projects.
- We would also advocate a clearer pathway from initial Research Development & Innovation (RDI) funding to full fruition of a technology. Many projects, such as the E.ON led Hydrogen for Decarbonisation of Sheffield Steel (HYDESS) scheme - which aims to use green hydrogen produced at our Blackburn Meadows combined heat and power (CHP) station to decarbonise the local steel industry - remain trapped in the pilot phase due to the high upfront costs and long payback periods. The absence of tailored Government intervention to allow the scheme to transition to full scale commercial viability could mean the difference between a successful pilot, and the commercial adoption of hydrogen (H₂) as a primary fuel source for decarbonising defence grade steel. Forgemasters are a key member of the HYDESS Consortium, and it should be noted that they will also be playing a significant manufacturing role under Government's recently announced "UK-Germany Trinity House Agreement on Defence"
- In order to support the local steel industry in its endeavours to decarbonise, and for HYDESS to reach full scale hydrogen production, Government Hydrogen Business Model (HBM) price support is needed. At present the site is ineligible for this, owing to a small volume of emissions associated with residues embedded within its waste-wood fuel source¹. Not only is this exclusion not in line with the original intent of the Low Carbon Hydrogen Standard (LCHS), as we have expanded upon in our response to Question 20, but without HBM Government support, the scheme cannot reach commercial viability whilst also supplying its local steel partners with a competitive price against natural gas.
- Blackburn Meadows is also looking to deliver an ambitious low carbon heat network expansion and so will be providing wider societal benefits. We believe this is also a

compelling reason as to why the scheme should be considered for HBM funding: not only can Blackburn Meadows deliver wider greenhouse gas (GHG) emissions savings, it can also play a central role in heating local homes and businesses, maintaining local jobs and supporting regional economies.

- There are 640,000 green jobs in the UK, growing at a rate 4 times faster than overall UK employment. The UK Government must double down on this green industrial revolution. The Industrial Strategy Advisory Council and Climate Change Committee should work closely together from a shared set of assumptions to advise Government in a transparent manner on the potentially difficult policy trade-offs that may be required to optimise clean growth.

INQUIRY QUESTIONS:

How can UK plc capture its fair share of the economic potential of emerging or less developed energy technologies?

E.ON has an existing low carbon generation asset (Blackburn Meadows: a combined heat and power (CHP) plant fuelled by locally sourced waste wood), with huge industrial decarbonisation potential.

The site already provides low carbon electricity to the grid whilst simultaneously supplying highly efficient waste heat to local businesses and is looking to invest in less developed energy technologies such as hydrogen (H₂) and Carbon Capture and Usage (CCU).

In 2024, Blackburn Meadows celebrated the final stage of a successful engineering study in collaboration with key local industrial partners (including Forgemasters), and academic institutions (University of Sheffield), proving hydrogen as a viable source of heat in high grade steel manufacturing.

The site is also looking to install Carbon Capture and Usage (CCU) technology to capture the greenhouse gas (GHG) emissions embedded within its waste wood fuel. CCU would allow the scheme to deliver negative emissions, combined with the opportunity to produce e-fuels for the decarbonisation of hard-to-treat transport sectors such as maritime transport.

Since Blackburn Meadows is on a dispersed industrial site – i.e. outside of the previous Administration’s designated “Industrial Clusters” - it is currently ineligible for Government funding to support its ambition to invest in emerging green technologies.

Government could unlock this growth potential, through granting the South Yorkshire Combined Mayoral Authority (CMA) industrial cluster status. This region, which includes Doncaster (the site of two of the highest GHG emitters in the UK), has greater emissions (and therefore savings potential) than the two Government Clusters initially earmarked for funding - Teesside and Merseyside – and is adjacent to one of Government’s two approved H₂ and CO₂ transport and storage (T&S) clusters (“Viking”).

E.ON is already working with local organisations such as the South Yorkshire Energy Strategy and Industrial Decarbonisation group to decarbonise the region, showcasing a collaborative approach to ensure that the interests of the region are prioritised over and above a given party’s individual interests. There is therefore already significant local momentum in place to deliver this vision of a South Yorkshire Industrial Cluster.

Does the UK have the supply chain capacity to deliver the required energy infrastructure by 2035, including an expanded electricity network?

The UK needs to adopt an approach of better anticipatory investment in energy infrastructure and markets - for example: renewable generation, flexibility, storage and networks. Whilst requiring some upfront investment ahead of time, the consequences of not doing so will result in higher costs for consumers as well as the UK failing to meet its Clean Power 2030 (CP2030) and Net Zero targets.

Government could do more to model and accurately reflect the huge potential role of flexibility across all of their CP2030 and net zero assumptions and objectives. As a resource, we believe flexibility can play a much greater role in avoiding un-necessary infrastructure upgrades as well as provide cost savings for all consumers than currently in Government plans. For example, flexibility can alleviate network constraints through absorbing excess renewable generation and will also be able to reduce network strain as electrification picks up pace at a consumer level.

Government can take immediate action to unlock flexibility investment through addressing the artificially inflated costs of electricity relative to gas. The policy of funding certain policy measures via levies on electricity bills (rather than gas bills or through general taxation) has driven up this price differential, leaving the UK behind its international counterparts in Europe and the USA, and blunting flexibility signals for small scale assets such as heat pumps.

If this counter-intuitive imbalance between gas and electricity prices is not addressed as a matter of urgency, it risks undermining the transition to electrified heat (including industrial heat) and transport. As such, E.ON strongly advocates rapid Government action to shift policy costs away from electricity bills.

What are the key concerns with respect to the availability of raw materials in the supply chain and how might those be addressed?

We welcome the relatively recent publication of Government's UK Battery Strategy, setting out commitments to address the raw materials gaps (and associated risks) within the battery supply chain.

E.ON is supportive of these efforts in light of the critical role battery technology will play both in transport (EVs) and as a flexibility asset on a domestic and larger scale. However, we are of the view that the objectives set out within this document are sometimes intangible and that efforts may need to be expediated in light of DESNZ's condensing of the timeline to decarbonise the UK's electricity system.

We believe there are solid foundations laid out within this document from which to build and which could provide a blueprint for policy in other areas of the supply chain subject to similar shortfalls.

It should also be noted that, alongside risks relating to the availability of raw materials, the UK is also facing a potential skills shortage¹ across the energy and energy infrastructure sector. This needs to be addressed via anticipatory measures alongside infrastructure build and securing the availability of materials.

February 2025

¹ E.ON's submission to the Committee's inquiry into 'workforce planning for clean, secure energy' has more to say on this topic