

Ofgem's Multiyear Strategy



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Foreword - Chair and Chief Executive

Since Ofgem last produced a strategy five years ago, we have faced unprecedented challenges. The gas crisis has reminded us how fundamental energy is to our economy, and the subsequent price hikes have had enormous knock-on effects across every sector. While prices have now fallen somewhat, we know many households and businesses continue to struggle to pay for the energy they need alongside other cost of living pressures.

With a more stable market, we believe now is the time to look beyond the crisis, to consider how we can keep protecting customers, particularly the most vulnerable, and build a brighter future for our energy system. A system where customer standards and trust are high, infrastructure is well planned and delivered on time, where our markets work to drive innovation and efficiency, getting us to net zero at the lowest cost, and investors get fair but not excessive returns.

This Multiyear Strategy, alongside our regular annual Forward Work Programme, is about setting out our vision for that future, how we plan to get there, and how we will engage our partners to do so.

To protect households and businesses from the impact of future price shocks, we need to accelerate the transition from gas to renewables and other low carbon sources of energy. To achieve this, we are developing a much more outcome focused form of regulation, playing our part to strategically plan out and coordinate the energy system we will need clearly and in advance. This will minimise investor uncertainty, ensuring new infrastructure is built quickly and at reasonable cost, and that the sector remains at the cutting edge of innovation and smart investment. This will mean close partnership with all our stakeholders, including energy companies, consumer groups, charities, local and national government, and the new National Energy System Operator.

We are now at the start of a transformation that is going to open up new opportunities for consumers and bring down the costs of our increasingly renewables-based system. With the falling cost of batteries, the increasing uptake of electric vehicles, and the spread of smart technologies stimulating rapid growth in time of use tariffs, that transformation is already happening. It will be Ofgem's role to help further shape this new and more flexible electricity market, such as supporting the roll out of smart meters, half hourly settlement, flexibility

auctions, as well as delivering government schemes that promote energy efficiency and renewable energy, and help with affordability.

We also recognise that Ofgem itself needs to change: doing more, moving faster, and becoming a much broader organisation. This will be essential both to fulfil our new net zero duty, directly linking our duty to protect consumers' interests to specific net zero targets, and our growth duty, requiring not only good regulatory decisions made in a timely fashion, but also provide the foundation for British business to prosper and grow.

At the same time, we must continue to work with the industry to rebuild public trust in the sector. Customers have a right to expect good customer service, bills that are fair and accurate, and a prompt response when they contact their supplier. It is essential that we carry the public with us, showing empathy and understanding for the genuine concerns of local communities, while not losing sight of the urgency of our net zero goals. This will become even more crucial as we build out the new energy system, and as a regulator we will be monitoring sector performance more closely and intervening robustly when standards and behaviours do not meet our expectations.

This document outlines how we intend to deliver all these outcomes over the coming years. It does not shy away from tackling difficult issues head on, including decisions which will not be cost-free upfront but are in the best interests of consumers in the long term. Ultimately, this Strategy is about looking beyond the crisis to realise the greatest opportunity the energy sector and wider British economy has seen for a generation. Working together, we can deliver the deliver the clean, affordable, and secure energy system our customers need and



Mark McAllister

Chair

My Mixeliste

Chief Executive Officer

Jonathan Brearley

Executive Summary

The energy sector is in a period of rapid change

The energy sector is at a pivotal moment. We are hopefully through the worst of the energy crisis: markets have stabilised, and prices have come down from their peaks. However, British households and businesses continue to struggle with high energy costs. A secure and stable energy supply remains as important as ever – but the nature of the challenge is changing. The country has made major progress towards net zero, but the transition is entering a new, more challenging phase. The rest of this decade will be a period of rapid change, bringing challenges and opportunities – and a long-term view will be essential for success.

Key changes we are likely to see:

- By 2035, there could be 35 million electric vehicles and over 10 million heat pumps in Great Britain.¹ Smart technologies will become more widespread. Together, these changes will transform how many people consume energy. This will bring opportunities for many, but we, the industry, and Government will need to keep pace with these changes, to maximise the opportunities and ensure the transition does not disadvantage some people.
- Electrification will drive up electricity demand, potentially by over 50% by 2035²,
 adding to the need for new low carbon generating capacity. Most of this will be
 renewables, alongside other sources such as nuclear, carbon capture and storage,
 and hydrogen.
- Managing a renewables-dominated electricity system at least cost will require
 greater flexibility. This will be enabled by market reforms, smart meters, and market
 wide half hourly settlement, helping the country to take advantage of abundant
 power when the wind is blowing and sun is shining, while cost-effectively keeping

¹ Data is based on the Consumer Transformation Scenario on Future Energy Scenarios (<u>FES</u>) <u>2023 Data Workbook</u> by the National Grid ESO, but uptake is based on a range of factors. ² Ibid.

the system running when they are not. Electricity markets (both retail and wholesale) will change as a result.

 And we will need to address the likely decline in the demand for gas over time, and its implication for how the costs of gas networks are recovered.

We are at the heart of this transition and, with Government and the sector, will shape how these changes are delivered and their impact on consumers. This Strategy sets out our plans to **protect** the interests of energy consumers now and in the future, **build** more low carbon infrastructure at the lowest costs, **change** the energy system to become more efficient, fairer, flexible, and low carbon, and **deliver** Government schemes to promote energy efficiency and low carbon energy, and help with affordability.

Ofgem must change to meet the needs of the moment

The sector must change to meet the needs of the future – and so must we. New approaches are needed to ensure a clean, fairly priced, and secure energy system. As market stability returns, now is the right time to set out our strategy for the next five years and beyond:

- The complexity and scale of the challenge has increased substantially since we last published a long-term organisational strategy in 2019.³
- We recently welcomed a new Chair and Board who bring a fresh perspective on our priorities.
- We have two new duties to support net zero and economic growth.
- And we have new regulatory responsibilities, for sectors like heat networks and hydrogen, and for the National Energy System Operator.

We have already taken important steps to respond to the needs of the moment, including robust action to protect consumers through the energy crisis, and further steps to enable new infrastructure at pace. We have shown we are willing to have public debates on complex and controversial issues, such as on standing charges and how to evolve price protection.

Now we are setting out our longer-term plans, covering the next five years and beyond, to

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³ Ofgem strategic narrative: 2019-23 | Ofgem

ensure we deliver for consumers in this time of change. This includes new approaches to specific issues: taking a fresh look at affordability and debt; our assessment of key questions for the system, including on the future of gas; our response to the need for greater pace in network build; and new detail on how we expect the different levels of strategic planning to interact.

Fundamentally, this Strategy seeks to show consumers and the sector how we will be the dynamic and bold organisation that the moment requires, by:

- Regulating to deliver a clean, fairly priced, and secure energy system:
 - o Shaping a retail market that works for consumers.
 - Enabling infrastructure for net zero at pace.
 - Establishing an efficient, fair and flexible energy system.
- Administering energy efficiency, low carbon energy and affordability schemes.
- Strengthening Ofgem as an organisation to ensure we can meet consumers' needs.

These priorities continue to be informed by the four pillars of our Consumer Interest Framework: fair prices, quality and standards, low cost transition, and resilience. Although each of these pillars – and the priorities set out in this document – have their own sets of challenges and opportunities, they are also increasingly inter-related. Understanding and managing these connections is now a crucial factor in whether we deliver for consumers.

Shaping a retail market that works for consumers

The retail energy sector has been under significant strain. We acted at pace during the crisis, but challenges remain. We must address the pressures on consumers, particularly those struggling most to pay their bills. That means asking what the role is for the sector, Ofgem, and Government in ensuring energy is affordable and delivers for consumers. Our immediate concern is the implications of rising consumer debt and prices that – despite welcome falls – are likely to remain well above pre-crisis levels for the coming winter. We are committed to exploring changes to manage the impact of this on consumers and the market.

We will also prioritise raising standards and doing more to facilitate net zero in a way that works for consumers – as the public increasingly adopts electric vehicles, heat pumps, and other new technology.

The retail market is fundamentally linked to what is happening across the sector. The transition to net zero will affect how people use energy and what they pay – and the system is becoming more diverse, flexible, and data-rich. The retail market will be the main way that consumers interact with these changes – and must respond to the challenges and opportunities they bring. Our key objectives will be to:

- Ensure fair prices: we have a role in helping to ensure fair costs for consumers, including in how they are allocated. This requires us to use our powers effectively, and to influence the decisions and actions that others take, particularly Government. It includes tackling the challenges of debt and affordability, and reviewing standing charges and effective price protection as the retail market changes. Fair prices are also a priority for how we deliver the infrastructure for net zero and create a more efficient and flexible system.
- Ensure high quality of service: using our regulatory powers to drive up standards
 and hold the whole sector to account, including publishing more data on supplier
 performance. This must serve all consumers, from the most vulnerable to heavy
 industry, as new products and services emerge, and consumer needs evolve.
- Enable competition and investability through financial resilience: establishing a
 more financially resilient sector. This will help prevent supplier failure and minimise
 the risks to consumers if they do. At the same time, we will facilitate new entry and
 more effective competition to enable the market to deliver better outcomes for
 consumers.
- Support new and evolving markets: regulating new markets, such as heat networks
 and evolving how we regulate in response to a fundamentally different market –
 including considering more substantial reforms to our regulatory framework.

Enabling infrastructure for net zero at pace

Delivering net zero requires a massive increase in investment in clean electricity generation and network infrastructure. To enable such a complex transition at pace, we need a decisive shift towards central planning and coordination, driven by the new national and local strategic plans. It will be crucial that these plans deliver on consumers' interests, and that all

relevant policy instruments – including our price controls and Government's Contracts for Difference – act in concert to deliver them.

We are approaching critical decision points and major trade-offs around how net zero will be delivered and its impact on consumers and the sector – for example on how the costs of the gas grid should be recovered. In this period of unprecedented transition, Ofgem and Government must also ensure that our energy supply is secure and the system resilient to growing risks – not least from cyber-attack and the effects of climate change. Our key objectives will be to:

- Progress strategic planning: enabling a decisive shift towards system planning and coordination through new functions including the Strategic Spatial Energy Plan, which will help to coordinate decision making, minimise investor uncertainty, and keep costs down.
- Expand electricity networks: delivering the electricity networks at transmission and distribution level that will underpin the transition to net zero and be a key driver of economic growth; evolving our regulatory frameworks including by developing a framework for shared assets to enable construction at pace and fair cost.
- Prepare for the future of natural gas: regulating future spending and the return of past investment on the gas networks, including through our network price controls. To reduce uncertainty for consumers and the sector, there is also a need for a clear decision on the role of hydrogen in home heating at the earliest possible date.
- Facilitate deployment of low carbon technology: developing new regulatory
 frameworks to facilitate investment in low carbon technology, particularly new
 nuclear, carbon capture and storage, and hydrogen while minimising consumer
 costs.
- Network performance and connections: strengthening how we hold network
 companies to account through our price controls, ensuring a high-quality service, for
 example ensuring companies respond quickly when things go wrong. We must go
 further in reforming the entire connections queue, ensuring that it prioritises the
 viable, ready-to-connect projects that will deliver net zero and unlock economic
 growth.

• Ensure secure resilient supplies: maintaining secure and continuous supplies of energy through the transition to net zero, strengthening resilience to financial, climate, and cyber risks. This includes developing a regulatory framework to ensure that costs and benefits of climate resilience actions are accounted for in decisions.

Establishing an efficient, fair and flexible energy system

How the system operates is changing rapidly. We know that our current market and regulatory approaches will not deliver a net zero energy system at least cost to consumers. We are working closely with Government on a series of reforms to address this, including establishing and regulating the National Energy System Operator (NESO). A renewablesdominated system – particularly if we want to minimise costs – will require us to be more flexible in how we use energy, including by incentivising use away from peak times.

Across the system, digitalisation will only increase. This will improve our ability to plan and manage the system and enable flexibility, but raises questions about how we manage this digitalised, data-rich system. Artificial intelligence (AI) is likely to transform the sector in ways we cannot predict, including how customers interact with their suppliers and how infrastructure is planned and maintained. Our key objectives will be to:

- Ensure the right governance and institutions are in place: managing major reforms to how the system is governed particularly NESO and ensuring this new landscape is coordinated, clear, and effective.
- Deliver effective and efficient market incentives and signals: working with
 Government and the sector to ensure critical decisions, including the Review of
 Electricity Market Arrangements and our own network charges, minimise system
 costs and maintain fairness while delivering a strong investment environment.
- Enable consumer-focused flexibility: enabling the flexibility that will transform how consumers use electricity and deliver net zero at fair cost. This includes driving the rollout of market-wide half hourly settlement and smart meters and creating a new market facilitator role to grow and develop local flexibility markets.
- Make a more digital system work for consumers: unlocking innovation and evolving our approach to a rapidly digitalising and data-rich system, including publishing guidance for the sector on AI.

Advancing decarbonisation through low carbon energy and social schemes

A core part of our work is administering low carbon energy and social schemes on behalf of Government through our Delivery and Schemes directorate. These schemes focus on renewable heat, renewable electricity, energy efficiency, and fuel poverty, and so complement our regulatory priorities on net zero and affordability. In the years to come, we expect to take on additional activities that align to our core role and capabilities. We will also improve how we deliver existing schemes for the benefit of energy consumers and other scheme users. Our key objectives will be to:

- Contribute to the policy design of schemes throughout their life cycle, increasing
 impact for our customers, ensuring they are feasible, and delivering net zero and
 fuel poverty outcomes.
- Maximise the value for taxpayers' money in public spending, ensuring schemes
 are administered in a way that provides a positive experience for scheme users and
 meets expectations of our funding partners.
- Improve what it is like to work in Delivery and Schemes through a focus on people, alignment to values, and ensuring clarity of purpose.

Strengthening Ofgem as an organisation

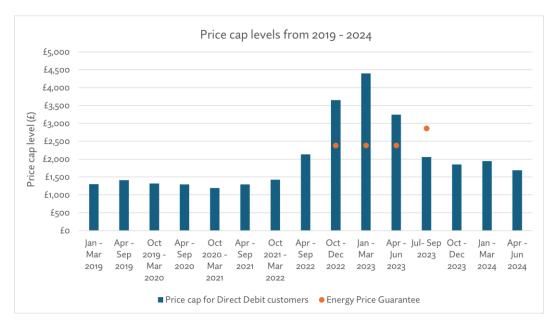
In a rapidly changing world, we must be more flexible, forward-thinking, and accountable than ever. To achieve this, we are committed to ensuring we are:

- Consumer-focused, including making greater use of market monitoring and other data to help us understand consumers' experiences of the energy system.
- Accountable and transparent, including improving the quality of our performance reporting, reporting annually against metrics that flow from this Strategy.
- Evidence-based, including investing in our skills and capabilities so that we are
 applying the most relevant approaches to our decision making.
- Meeting consumers' needs in a changing world, including publishing an annual update on key changes to this Strategy alongside our Forward Work Programme.

Introduction

The energy sector in 2024

The past few years have been very challenging for consumers. While the UK continues to have a stable supply of energy, we have seen record prices and volatility driven by the Russian invasion of Ukraine. At its peak, most households were paying more than double for energy than they were before the crisis⁴, and businesses often much more – a situation that would have been worse without unprecedented Government subsidy (the Energy Price Guarantee, EPG), see graph below showing price cap levels over time, including the maximum cost for a typical household energy bill under the EPG.⁵

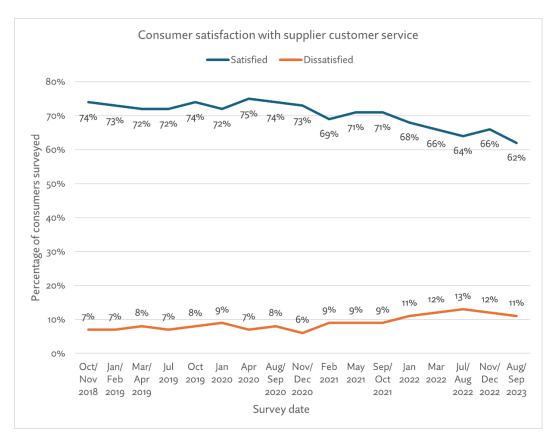


While energy prices have declined, they remain significantly above pre-crisis levels, and sources of volatility remain in international energy markets. There is a significant group of people – often the most vulnerable – who are struggling to afford their energy needs and undergoing considerable hardship as a result.

⁴ Domestic energy prices | House of Commons Library

⁵ For direct debit customers, in real prices, 2023, Consumer Prices Index including owner occupiers' housing costs (CPIH) adjusted at 2023 Typical Domestic Consumption Value (TDCV)'. For more information on the price cap: Energy price cap | Ofgem.

At the same time, customer service levels have fallen. Our research shows overall domestic consumer satisfaction with customer service delivered by their supplier has fallen from 74% in 2018 to 62% in 2023 (see graph below)⁶. Of those that had contacted their supplier, 23% reported finding it difficult to contact them in August/September 2023, compared to 15% in October 2019.⁷ Research also shows that domestic energy consumers are less trusting of energy suppliers than of service providers in other sectors.⁸ Small business customers have found themselves locked into expensive contracts with their suppliers, with very little recourse. Overall, the reputation of the energy sector is too low, and it needs to do better.



Although there is much still to do, there have been positive developments. We acted on the lessons from the energy crisis, putting in place interventions to make the market more

⁶ Energy Consumer Satisfaction Survey: August to September 2023 | Ofgem

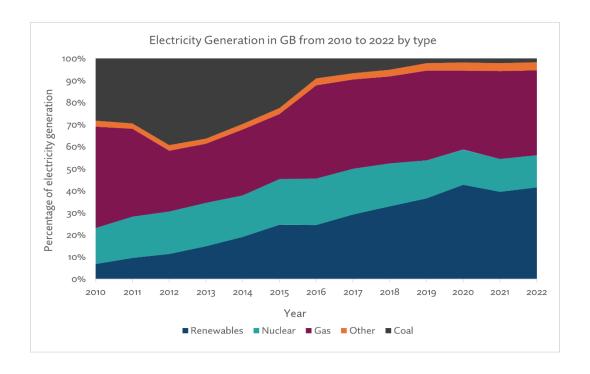
⁷ Ibid.

⁸ Consumer impacts of market conditions survey - wave 4 (July 2023) | Ofgem

resilient to future price shocks - reducing the likelihood of future supplier failures, and reducing the costs to consumers should suppliers fail. We have also set new rules to drive up standards and better protect customers, for example, in the installation of prepayment meters.

Digital technology is playing an increasingly active role in the system. More than half of all households are now on smart meters9, enabling a more flexible energy system. We are increasingly seeing new tariffs, products, and services coming into the market which empower customers to easily shift their consumption and benefit financially as a result.

GB's energy generation and consumption are fundamentally shifting away from fossil fuels. The majority of electricity now comes from low carbon sources, with low or zero carbon electricity sources providing 53.4% of electricity generated in 2023¹⁰ (see graph below).¹¹ Recent high prices have reinforced the need to accelerate away from gas for electricity generation and heat, towards a cleaner, more affordable, and secure system.



⁹ Update on the rollout of smart meters | UK Parliament

¹⁰ Britain's Electricity Explained: 2023 Review | ESO

¹¹ Energy Trends: UK electricity | DESNZ

The future

As the energy sector emerges from this period of volatility, and looks toward a net zero future, it must focus on the four fundamental outcomes in our Consumer Interest Framework:

- Fair prices that allow people and businesses to meet their essential needs.
- Quality and standards particularly for the most vulnerable.
- **Low-cost transition** in line with achieving net zero by 2050 and other Government targets.
- **Resilience** with sufficient supply to meet the country's needs.

The transition to net zero will be the major factor shaping the energy system, and how consumers experience it. Despite rapid progress in decarbonising electricity, we are entering a period that will require deeper changes. With coal now almost absent from electricity generation, the next challenge is to remove unabated gas and continue the growth of renewables and low carbon sources of flexible generation. Significant Government commitments have been made to the technologies that are likely to power our net zero future, including nuclear, carbon capture, usage, and storage (CCUS), offshore wind, and hydrogen.

We expect a significant increase in electricity demand - but overall decrease in total energy consumption. Improvements in energy efficiency and the rollout of heat pumps and electric vehicles will reduce total energy consumption, however the latter two will significantly drive up electricity demand. This requires major investments in generation infrastructure, networks, and – importantly – a more flexible system than we have today.

We expect demand for gas to fall, requiring us to plan for a range of potential pathways, including the National Infrastructure Commission's recommendation that electricity provides the majority of home heating in the future.¹²

There will be opportunities make the system more efficient. Homes should become more energy efficient: saving people money, making their homes healthier and more comfortable,

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¹² Second National Infrastructure Assessment | NIC

and reducing emissions. We are moving to tariffs where costs vary depending on when energy is used, with technologies like electric vehicles giving people greater flexibility and control. Those able to flex their use will see direct savings on their bills, but this flexibility should also reduce the need for expensive investments in the whole system, which will benefit everyone. Many of these changes will be driven by digitalisation and potentially artificial intelligence (AI), generating new opportunities alongside new challenges.

Net zero is likely to benefit consumers in the long run – but it could add to costs in the years to come. Renewables generated in Great Britain will make us less dependent on the volatility of the international gas market. Credible analysis suggests a net zero energy system will also be cheaper to run,¹³ with cheap wind and solar generation, more energy efficient homes, and electric vehicles already cheaper to run than petrol cars in many cases.¹⁴ However, building a net zero energy system requires significant investment – most of which is likely to be funded from energy bills. These impacts could be offset by changes in gas prices which are likely to remain a key driver of energy bills for some time. Government decisions on energy taxes, policy costs, and redistributive schemes such as the Warm Homes Discount will also impact the level and distribution of energy bills.

There are difficult choices ahead for Ofgem and Government. We are committed to always representing the consumer interest in these trade-offs – both in how we use our powers and how we work with others. This includes using our regulatory regimes to minimise the costs of the investment needed for net zero while enabling the transition that, in the long-term, will be in consumers' interests.

Ofgem's role

Our status

We are a non-ministerial departmental body. Our role is to regulate the electricity and gas sectors in the interests of consumers. In practice, we do this by:

 Licensing energy companies to carry out regulated activities, such as generating, transmitting, or supplying electricity.

¹³ Sixth Carbon Budget | Climate Change Committee

¹⁴ Electric vehicles: costs, charging and infrastructure | Office for Zero Emission Vehicles

- Regulating NESO (see Objective 11).
- Setting frameworks for energy company revenues, including across gas and electricity networks and through the Default Tariff Price Cap (the 'price cap').
- Overseeing industry codes.
- Monitoring the sector and taking enforcement action where needed.

We also oversee and deliver an increasing range of Government schemes to enable the net zero transition and tackle fuel poverty.

Government and devolved administrations collectively set the overarching policy and regulatory framework for the energy sector in the UK and Parliament determines our powers. We work closely with the Department for Energy Security and Net Zero (DESNZ), as our sponsor department. Many key decisions, including the overall policy framework, sit with Government. Government has overall responsibility for ensuring a secure energy supply, setting the UK's decarbonisation ambitions, and much else – albeit with Ofgem often acting as an advisor as policies and schemes are developed, and delivering many of them.

Our duties

Our principal objective, enshrined in legislation, is to **protect the interests of current and future consumers**. In 2023 we published a Consumer Interest Framework (see next page), which helps to explain what this duty means in practice.

Our duties have recently been updated by Government to include net zero and growth. The new **net zero duty** defines our principal objective to include consumers' interests in meeting the 2050 net zero target and other associated targets. This means we will take decisions, using Government's delivery plans as our baseline, that proactively enable net zero. Fulfilling this duty also requires us to better understand the full range of consumer interests in the transition to net zero, to better help deliver a fair and cost-effective transition that works for them.

We will soon have a new **growth duty** to have regard to the promotion of sustainable economic growth through our regulatory activities. Our primary contribution to economic growth is through regulation that minimises energy costs, keep supply resilient and energy markets functioning effectively. As we integrate the Growth Duty, we will clarify how we will factor the new duty into our regulatory approach. We expect this will include developing

metrics to assess our contribution to growth across our regulatory decision making, reviewing our regulatory practices for pace, and doing more to understand the needs of business consumers.

This Strategy

This Strategy sets out our major priorities for the rest of the 2020s and, in some cases, beyond. One of its important roles will be to act as a strategic framework for our annual public planning process - the Forward Work Programme (FWP) - whose 2024-25 edition is published alongside the Strategy. We will also use future FWP publications to update this Strategy - based on changing circumstances and consumer need. This Strategy supersedes our previous organisational strategies, eg our strategic narrative for 2019-23.

Ofgem's Consumer Interest Framework



Fair prices

Costs are efficient and fairly distributed. Undue price discrimination is prevented and action to minimise consumer welfare (eg fuel poverty and self-disconnection) is supported.



Quality and standards

Customer services throughout energy supply chain are accessible, transparent, and responsive. Consumers are suitably empowered and protected from harm, with enhanced protections for the vulnerable.



Low-cost transition

Sustainable, carbon-free energy and associated infrastructure at least cost to consumers (and taxpayers). Consumers are supported to make greener choices and are fairly rewarded for their contributions to the system.



Resilience

Consumers have secure supply and trust that industry Participants are resilient to market shocks. The sector attracts sufficient long-term investment to delivery consumer interests.



Shaping a retail market that works for consumers

1. Shaping a retail market that works for consumers

The retail energy sector has been under significant strain. We acted to support consumers and the sector by introducing new financial resilience measures, making the price cap more resilient to shocks, and driving up consumer protections, especially for the most vulnerable (for example, through our new consumer standards).¹⁵

We will continue to do what we can to protect consumers. Despite wholesale market prices stabilising, we know that energy remains unaffordable for many, resulting in increased debt, self-rationing or people disconnecting to save money. We need to work with Government, industry, and consumers to ensure fair energy prices and tackle affordability challenges, while holding the market to account for delivering a high quality of service. This covers the breadth of the market, ranging from vulnerable consumers, business customers, and heavy industry.

As we hopefully move past the worst of the crisis, there are meaningful choices ahead. The retail market is changing fast, with the spread of electric vehicles, heat pumps, solar panels, and smart technologies, alongside half hourly settlement, unlocking a host of new energy products and services. We are considering how we should regulate this increasingly complex market, promote competition and innovation, and ensure the retail market facilitates a net zero transition that works for consumers.

Objective 1: Ensure fair prices

Fair pricing is a central objective for us – across all the work set out in this Strategy, including to minimise the costs of new and existing energy infrastructure. Within retail specifically, we administer price protections through the price cap, with an ongoing focus on ensuring it reflects efficient costs, protecting consumers from the 'loyalty penalty'.

The price cap has successfully protected inactive consumers from over-charging but may not be sustainable in a more flexible and diverse domestic market. While major reforms to the price cap are a decision for Government, we are considering whether alternative forms of price protection could deliver better outcomes for consumers in the future.

¹⁵ Consumer standards decision | Ofgem

Even with price protections in place, energy affordability continues to be an issue for many, with high levels of consumer debt and record demand for support. We are also considering how costs are allocated between consumers, for example on the issue of standing charges.

1.1: Operate and evolve price protection

We operate the price cap, setting a limit on what suppliers can charge domestic customers on a default tariff. It is crucial that the price cap is set accurately – that it reflects fair pricing, and that suppliers can recover efficient costs.

We recognise that the balance of costs in the price cap has significant impacts on customers. That is why we have delivered the levelisation of standing charges for prepayment customers and consulted on wider issues around standing charges (see Objective 1.2),

While any major change is for Government, we are also mindful of ensuring that the price cap is compatible with the wider changes that net zero is bringing. In particular, the move towards a more granular price signals about when, and potentially where, people use energy (see Objective 13.3). This may require evolution or reform of the current cap.

What are our priorities for the years to come?

- **Updating the existing price cap.** Reviewing key elements of the price cap methodology to ensure they are fit for purpose in a changing market. We recently published an updated price cap Programme of Work, which outlines the areas of review we intend to carry out over the next 1-2 years. 16
- Considering whether different forms of price protection might deliver better
 outcomes as the market changes, particularly to better accommodate flexibility.
 This will build on our March 2024 discussion paper.¹⁷ Any substantive changes to the
 price cap are for Government, but we have power to intervene to protect consumers
 where we identify harms.

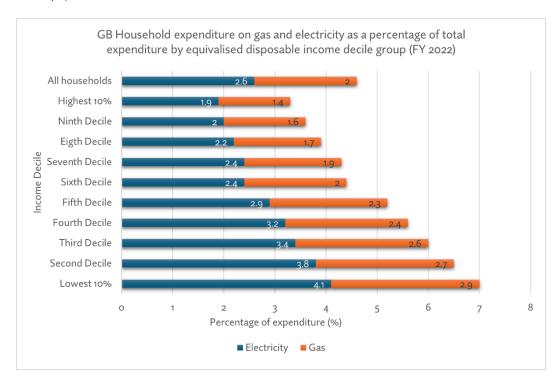
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¹⁶ Energy price cap programme of work for 2024 and 2025 | Ofgem

¹⁷ Future Price Protection Discussion Paper | Ofgem

1.2: Work with others to tackle the affordability crisis

Energy is unaffordable for many, and debt and arrears are at record highs. The most vulnerable households have been hit hardest by high prices, spending on average 3.7% more of their income on energy compared to those in the highest income decile group (see graph below) ¹⁸, with disabled households even worse off.



Total customer debt and arrears has increased by about 50% to £3 billion in 12 months, and at its peak, affected 2.3 million households¹⁹. Many consumers have debt repayment plans, but others do not. Large amounts of unrecoverable debt hurt people directly and create costs for suppliers that are passed on to others.

At the same time, there are complex questions about how costs fall between different people. Standing charges are an important example of this – where we recently received the highest ever number of responses to a consultation.²⁰ This is a complex issue where any

¹⁸ Family spending in the UK | Office for National Statistics

¹⁹ Affordability and debt in the domestic retail market – a Call for Input | Ofgem

²⁰ Standing charges – call for input | Ofgem

change creates winners and losers – and is indicative of more fundamental questions about how costs are allocated in a rapidly changing system.

What are our priorities for the years to come?

- Taking a fresh approach to affordability. In February 2024 we launched a Call for Input on affordability and debt in the retail market. The results of this will inform future steps to address affordability, including those where we work with Government, industry, and consumer groups. We are also looking at possible changes in supplier processes towards managing debt.
- Working with Government to tackle affordability challenges and represent consumers' interests when decisions are taken about the future costs and design of the retail market.
- **Determining the future approach to standing charges,** building on the call for input launched in 2023.
- Considering further changes to the allocation of costs, for example considering
 action to levelise bad debt charges between standard credit and direct debit
 customers.

Objective 2: Ensure high quality of service

Our role is to ensure that all consumers, including businesses and other non-domestic consumers, receive a high quality of service. This includes ensuring vulnerable consumers are protected. We need to hold suppliers to account, through monitoring, compliance, and enforcement – particularly as consumer needs, systems, and markets evolve. To do so we need to make the best use of our data and technology.

2.1: Improve protections for all consumers, particularly the vulnerable

In 2019 we published the Consumer Vulnerability Strategy.²² Since then, the sector has experienced significant upheaval and price rises, particularly affecting vulnerable consumers. Further, many consumers have found themselves subject to poor supplier

²¹ Affordability and debt in the domestic retail market – a Call for Input | Ofgem

²² Consumer Vulnerability Strategy 2025 | Ofgem

practices (eg forced installation of prepayment meters). While we have established new protections and welcome the steps taken voluntarily by suppliers (eg Winter Voluntary Debt Commitment²³), more is needed. Our approach needs to stay ahead of a rapidly developing sector and target action to ensure vulnerable consumers are better protected and benefit from the growth of new products, services, and technologies.

What are our priorities for the years to come?

- Continuing to prioritise vulnerable consumers, refreshing our Consumer
 Vulnerability Strategy to be more targeted towards key outcomes, and reflect a rapidly changing sector and evolving social and economic environment.
- Improving the visibility of vulnerable consumers. This is building on our work in 2024 supporting the Government to establish a multi-sector Priority Services Register²⁴, building on existing efforts to improve data sharing between energy suppliers, network operators, and water companies.
- Continuing to use our full range of regulatory powers to protect consumers in payment difficulty and ensure that related rules remain fit for purpose.

2.2: Protect the interests of non-domestic consumers

We represent the interests of all energy consumers. Businesses are the backbone of our economy and consume more than half of electricity and gas in the country. In a rapidly changing economy, we must have effective oversight of the business energy market, and, in line with our duties (including our incoming growth duty), protects business customers' interests where appropriate. This includes understanding that certain types of business may require different protections and regulations, in part driven by their capacity to engage in energy markets.

In 2023 we conducted a review into the non-domestic market.²⁵ It found clear cases of poor conduct by some suppliers towards business customers and proposed targeted reforms to

²³ The Winter 2023 Voluntary Debt Commitment | Energy UK

²⁴ Get help from your supplier - Priority Services Register | Ofgem

²⁵ Non-domestic market review: Findings and Policy consultation | Ofgem

ensure they deliver better customer support, and improved monitoring to enable us to identify issues and course-correct quickly.

What are our priorities for the years to come?

- Acting on our non-domestic market review findings. We aim to implement agreed rule changes and update guidance and standards by Winter 2024/25.
- Continuing to identify issues and drive voluntary actions that improve the
 experience of non-domestic consumers, including building our network of nondomestic stakeholders who can help us scan for issues and provide insights.
- **Determining how our incoming growth duty** will impact decision making in relation to non-domestic consumers.

2.3: Deliver effective and proactive monitoring, supervision, compliance, and enforcement activities

The energy crisis changed our approach to Monitoring, Supervision, Compliance and Enforcement (MSC&E) – leading us to strengthen our capacity and set higher expectations across the sector – including in how infrastructure is built and managed (see Objective 9.1). This is critical for ensuring that regulated companies adhere to the rules for the market, and that consumers receive a high quality of service. Our MSC&E work must continue to evolve and target areas of greatest harm. Our approach must set clear expectations of the sector and be underpinned by robust, timely data and strong collaboration. Above all, it must remain up to date in a changing world, where new technologies, retail offerings, and risks are rapidly emerging.

What are our priorities for the years to come?

- Operating a more integrated, focused, responsive, and data-driven MSC&E function. Utilising the revised approach, we are developing in 2024/25 to better enable us to work across Ofgem's remit and deliver rapid and proportionate interventions.
- Reviewing our approach to using enforcement powers, including creating a
 'compliance and enforcement toolkit' to articulate our range of enforcement powers
 and tools to deal with different circumstances.

2.4: Use data to drive up supplier performance

We are entering an increasingly data-rich energy system. We are committed to using this to improve how the system operates. We need to better understand the data we currently have available, and where appropriate, streamline or increase data collection to support our strategic aims. This will help us to hold suppliers accountable for their performance, identify where rule changes may be required, and help consumers make informed decisions.

We must improve our ability to quality assure, analyse, integrate, and escalate our data, to quickly identify and act on developments across the market. In 2023 we released our decision on an overarching consumer standards framework²⁶ – setting out how we plan to balance driving up supplier performance with the associated impacts on competition.

What are our priorities for the years to come?

- Using data to drive up standards in the market. We will publish an improved and
 more reliable set of supplier performance indicators. This will help consumers make
 more informed choices (eg when switching suppliers) and incentivise better supplier
 performance.
- Improving collection and integrate supplier performance data, drawing on a wider range of sources, and using the insights to inform decisions made across our organisation (eg on MSC&E).
- Strengthening supplier adherence to data requirements. Building on our plan to
 develop a compliance framework, setting out how we will secure required
 information from energy companies and how we will respond to suppliers who do
 not action information requests appropriately.

Objective 3: Enable competition and investability through financial resilience

Volatility in recent years had a profound effect on the retail sector. Households will pay on average an estimated £83 to manage the costs associated with supplier failures in 2021-22. ²⁷

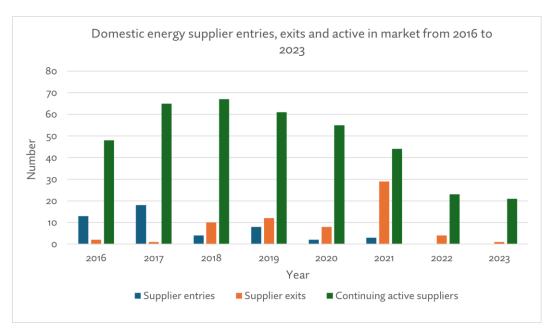
²⁶ Consumer standards decision | Ofgem

²⁷ SoLR Levy Offset Policy Consultation | Ofgem

In 2021 there were 29 supplier exits (see graph below). ²⁸ A resilient sector is an important foundation for an enduring, successful, competitive, and innovative market. We are looking to strike the right balance between driving up resilience and avoiding placing additional costs on suppliers which ultimately fall to consumers.

We have taken considerable steps to establish a more financially resilient sector, aimed at ensuring suppliers are less likely to fail, and if they do, costs to consumers are minimised. A rapidly changing energy system means we must ensure that there is effective competition, that consumers have access to innovative products and services, and there is proportionate regulation and incentives to invest and innovate. We have a key role to remove unnecessary barriers to entry and expansion, while limiting the risks and costs to consumers from supplier failure.

We will only enable those new entrants with viable business models that meet financial resilience and other standards. A well-functioning market must also allow for companies to exit, and we must continue to ensure that, when this happens, nobody is left without an energy supplier. To understand how policy decisions may impact competition in the market, we have recently published a competition framework.²⁹



²⁸ Retail market indicators | Ofgem

²⁹ A competition framework for the household retail market | Ofgem

What are our priorities for the years to come?

- Implementing and continuing to develop our financial resilience framework to keep pace with the needs of the retail sector. This includes developing a proactive, risk-based, and holistic approach to financial supervision, monitoring the financial strength of suppliers, and emphasising the integral role that effective governance and risk management should play in their strategy.
- Enabling resilient and innovative market entrants. We will maintain a retail market that is open to new entrants, while ensuring that they are equipped to meet their operational and financial obligations. We will assist applicants in understanding licensing procedures through clear communication and guidance.
- Maintaining readiness for market exits through our Supplier of Last Resort safety net or the Special Administration Regime, to minimise the impact of a supplier's failure on consumers.

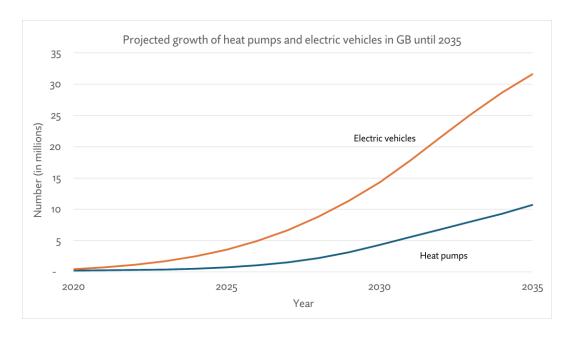
Objective 4: Support new and evolving markets

New technologies present new opportunities for delivering a clean, affordable, and secure energy system. As we adapt to a rapidly changing world, we must make sure that regulation enables rather than stands in the way of products and services that could deliver benefits to consumers. This will include regulating new sectors, notably heat networks, where the Government has named us as the future regulator.30

People are increasingly using low carbon technologies (see graph below) 31 and generating their own renewable energy at home. Increased data sharing, the rollout of smart meters, and half hourly settlement are changing the incentives and information around how people use energy. Taken together, these changes require us to continue assessing whether our regulatory framework remains fits for purpose as the market develops.

³⁰ Heat Networks | Ofgem

³¹ Data is based on the Consumer Transformation Scenario on Future Energy Scenarios (FES) 2023 Data Workbook by the National Grid ESO.



4.1: Develop and implement heat network regulation

We are working with Government to develop regulation to ensure that heat network customers, especially those in vulnerable circumstances, receive a fair price and a reliable supply. We will also support the government's aims to create market conditions to attract investment and accelerate the deployment of reliable, decarbonised heating and cooling networks.

Heat network companies represent a more diverse set of businesses (including not-for-profits and local authorities) than the gas and electricity companies that we currently regulate. As such, we will need to work closely with key stakeholders, including DESNZ, industry, and consumer bodies, to develop a regime that is fit for purpose. This includes developing our role as the Scottish heat network licensing authority.

What are our priorities for the years to come?

- Establishing a regulatory framework for new and existing heat networks, which
 includes protections to mitigate and manage risks associated with network failure.
 We aim to begin introducing consumer protections in 2025.
- Establishing authorisation, monitoring, compliance, and enforcement processes that are proportionate and protect consumers.
- Creating consumer protection processes, supported by the independent

Ombudsman complaint escalation process.

• Supporting Government to establish a code manager to monitor compliance with new technical standards on heat network efficiency and reliability.

4.2: Explore reform of the retail market and respond to future developments

The future retail market will need to adapt to rapid changes in how consumers use, and engage with, their energy. These will create new opportunities. We expect consumers will be able to choose from a greater range of more sophisticated products and services and that smart technologies will give them greater control over how they meet their energy needs and help them save money. Some of these changes are already happening, for example the growth in tariffs targeted at EV drivers.

Nobody can fully predict the pace, scale and impacts of these changes. We must make sure that regulation does not stand in the way of new products and services that could benefit consumers. We must also be agile to ensure that all consumers remain protected as the world changes. Not all consumers will have the same ability to participate in these new products and services. For instance, some consumer may have debt which could prevent them from accessing the capital to invest in new technologies. An important aspect of ensuring our regulation remains fit for purpose will be to protect vulnerable consumers as the market advances and prevent them from being left behind.

In all this, it is essential that we adapt how we regulate to ensure we remain a responsive, cooperative, and proactive regulator that engages actively with market participants, innovators, and consumers, and clearly communicates its thinking and direction of travel to give companies the confidence to invest.

What are our priorities for the years to come?

- Assessing our retail regulatory framework: how the current framework can deliver
 the best long-term outcomes for consumers, and whether more substantial reforms
 are needed to enable alternative business models and market structures.
- Enabling innovation across the sector (see Objective 14.2).
- Protecting consumers against potential harms as new products and services
 enter the market (eg digital exclusion, new unregulated markets, bundled products).

Considering the need for regulatory interventions to unlock engagement and
trust in new products and services (eg price transparency) and protect consumers
who cannot engage. We will respond to gaps we have already identified (eg
domestic consumers, such as care home residents, that are being supplied via nondomestic contracts) and work closely with DESNZ where emerging issues fall
outside our power to intervene.



Enabling infrastructure for net zero at pace

Ofgem's Multiyear Strategy

2. Enabling infrastructure for net zero at pace

Reaching net zero requires a complete transformation of how we produce, transport, and use energy. This transformation will ultimately benefit consumers but will be challenging to deliver. The clearest and perhaps most immediate challenge lies in building new electricity infrastructure in the right place and at the right time while unlocking investment at pace. This includes new generators (from large-scale nuclear power to millions of individual renewable assets), new storage solutions to use excess generation, and the network infrastructure that will transport energy around the country.

Achieving the scale of infrastructural change needed at pace and fair cost requires a decisive move in favour of a strategically planned, centrally co-ordinated, and integrated system. At the same time, we expect natural gas demand to decline while new vectors develop (including hydrogen), potentially leading to repurposing some of the existing gas network. Maintaining a safe and resilient gas network through the transition remains paramount, and we must ensure that our gas regulatory frameworks can respond to how the future unfolds.

While we enable this transformation, we must ensure that a secure, uninterrupted supply of energy to homes and businesses is maintained. The system must also be resilient to changing physical, financial, and cyber risks. Above all, we must ensure the transition is delivered in a way that meets consumers' interests: that they receive a high-quality service at a reasonable cost, and that new connections are facilitated as electrification of the system increases. This means reviewing and iterating how we regulate in a rapidly changing system. We must take a cohesive approach to the whole sector, that recognises a fundamental link between how we deliver infrastructure and how the retail market operates.

Objective 5: Progress strategic planning

As we progress towards net zero, the energy system will become more interconnected and the pace and complexity of planning will change. The introduction of more coordinated planning will contribute to ensuring that the right generation, network, and storage technologies are built in the right place and at the right time. Decisions will need to be made across the system in a coordinated way to ensure that different levels of planning are aligned, deliver the right outcomes for consumers, and maintain security of supply.

Three plans are central to this objective:

- Strategic Spatial Energy Plan (SSEP): The SSEP will be a whole system plan that
 maps, at a high level, the optimal mix and locations of generation technologies
 needed to deliver net zero by 2050.
- Centralised Strategic Network Plan (CSNP): The CSNP will lay out the design of the onshore and offshore transmission networks necessary to deliver the SSEP.
- Regional Energy Strategic Planners (RESPs): While the SSEP and CSNP focus on
 the national level, RESPs set direction and coordinate actors (including network
 operators, devolved and local governments, and communities) at a regional and local
 level. This will facilitate decision-making that is more tailored to local needs and
 ambitions.

These anticipatory plans will allow infrastructure to be built at pace, ahead of when it is needed, while minimising cost to consumers. They will be iterative and cyclical; they should be able to adapt to future scenarios while giving sufficient certainty for the investment needed to meet future need. NESO will be regulated and licenced by Ofgem (see Objective 11.1). It will take on responsibility for producing strategic plans once it goes live later in 2024.

This will also require adjustments to how we operate. The CSNP and RESP, for example, will inform funding decisions in future price controls. We will also need to ensure coordinated planning interacts properly with other objectives including connection reforms (see Objective 9.2). Finally, strategic planning needs to be complemented by market and systems reform to ensure successful outcomes: planning will guide how the system is built, while new market incentives and signals will enable that system to be realised and effectively operated.

5.1: Oversee production and implementation of a new Strategic Spatial Energy Plan

The SSEP is a significant shift in how we plan and deploy energy infrastructure. It should increase certainty and confidence for industry and investors and accelerate regulatory approvals processes. The SSEP will need to align with other activity to deliver the changes we need to see. This includes investment signals for new generation, other new planning tools (particularly the CSNP), and network company price controls. The first SSEP is expected to be published by the end of 2025.

What are our priorities for the years to come?

- Ensuring strong governance by building on the framework developed with Government and NESO and ensuring alignment with other strategic plans. This will enable us to input, view, and shape the SSEP in consumers' best interests.
- Overseeing the development of the SSEP as per the Government's statement in their Transmission Acceleration Action Plan (TAAP).
- Ensuring the SSEP delivers an optimal and credible input into the CSNP and network company price controls.

5.2 Establish and implement mechanisms to realise the Centralised Strategic Network Plan

The CSNP will provide a coordinated and longer-term approach to network planning in GB. By having a clear network plan, with all parties agreeing on the needs for these investments, the costs of this investment should be kept as low as possible. This will enable us to make quicker investment decisions to deliver network capacity for future connections. The primary input to the full CSNP will be the SSEP.

The initial focus of this plan will be the electricity transmission network. It will lay down a firm path for the transmission network development for the first 12 years to 'lock in' priority investments and a longer-term, 25-year outlook to achieve net zero by 2050. It will also be a key enabler for connection reform, prioritising grid connections for low carbon generation and storage assets that the SSEP identifies as necessary to reach net zero. The first full CSNP will be published in 2026.

What are our priorities for the years to come?

- Setting up the regulatory framework to ensure the successful delivery of the CSNP.
- Setting the objectives, principles and scope of the CSNP.
- Approving the CSNP.

5.3 Establish Regional Energy Strategic Planners

The transition to net zero will look different across the country as people transform how they heat their homes and charge their vehicles at different paces and in different ways.

National plans therefore need to be complemented by tailored local planning at the

distributional level. This ensures that investment reflects the needs of individual locations, thinks long-term, and ensures good value for money for consumers. We are establishing RESPs to enable this. They will be delivered by NESO to ensure a joined-up approach to strategic planning at all levels of the system. Their output will be a regional strategic energy plan for each area to set the direction for infrastructure investments, particularly for network capacity.

What are our priorities for the years to come?

- **Establishing the RESPs at pace**, building capability iteratively and proportionately alongside the wider suite of strategic planning responsibilities of NESO.
- Developing the detailed design of the policy framework for the RESPs and working closely with NESO and Government to ensure clear direction for the setup of RESPs and the methodologies they use to develop their plans.
- Working closely with network companies, devolved governments, local governments, and wider stakeholders to ensure RESPs builds on existing best practice and learnings.

Objective 6: Expand electricity networks

Our net zero ambitions necessitate unprecedented electricity network expansion over the 2020s and 2030s as we electrify large sectors of the economy, such as transport and heating. Government's recent TAAP³² aims to halve transmission build timelines from 14 to 7 years. This plan and other actions taken in recent years represent important steps forward, but we recognise more is needed.

Our role is to scrutinise and determine GB network investment through our onshore network investment mechanisms and offshore transmission and interconnector frameworks. We will continue to work with Government to drive acceleration of electricity network expansion, acting decisively to enable anticipatory investment and building on the successful approach adopted through our Accelerated Strategic Transmission Investment (ASTI) framework. We must ensure that our frameworks support delivery of strategic plans at pace,

³² <u>Transmission Acceleration Action Plan: Government response to the Electricity Networks</u> <u>Commissioner's report on accelerating electricity transmission network build | DESNZ</u>

offer the stability and predictability needed for investor confidence, and ultimately ensure efficiency and fair prices for consumers.

6.1 Continue to drive accelerated onshore network investment

To connect future renewable and low carbon infrastructure to our energy system, we need to develop new approaches and strengthen existing ones to drive onshore network investment. Our ASTI framework – introduced during RIIO-2 – was an important step towards accelerating network investment. It streamlines regulatory approvals for key large onshore transmission projects and puts a powerful incentive on network companies to deliver on time. We will build on this successful approach to create a dynamic regulatory process that will allow us to adapt to changing market conditions, while maintaining stability and predictability for investors and for consumers in the high-quality service that they should expect to receive. This will ensure that new large network investment identified in the CSNP can flow quickly through the regulatory approvals process as we implement our next of set price controls, RIIO-3. 33

While we have moved towards identifying urgent projects for approval on a programmatic basis, there continues to be a role for competitively tendered projects. Competition, while potentially adding time and uncertainty, can reduce costs and increase innovation. The CSNP can identify potential projects that may be suitable for onshore competition.

What are our priorities for the years to come?

- Continuing to oversee the delivery of and evolving the ASTI framework to ensure it enables the desired outcomes in relation to the 2030 targets.
- Supporting delivery of actions set out in the TAAP, including enabling development of the supply chain to increase capacity.
- Creating a supportive investment environment for major transmission investments in RIIO-3 and future price controls to contribute towards objectives in the Connections Action Plan³⁴ and wider net zero goals. Simplifying and refining

³³ New price controls will be implemented from 2026 for gas and electricity transmission and gas distribution, and from 2028 for electricity distribution.

³⁴ Connections Action Plan | Ofgem and DESNZ

existing regimes will help ensure the right balance between pace and robust consumer protections around value for money, reliability, asset health, customer service, vulnerability, and environmental performance.

- Coordinating with RESPs to ensure that future electricity distribution price controls
 have strategic planning input and address regional network investment challenges.
- Capitalising on opportunities for onshore network competition by developing the
 onshore competition framework with NESO and Government and identifying
 projects that will be subject to competition.

6.2 Continue to operate and iterate the Offshore Transmission Owner framework

Offshore wind plays a significant role in GB energy generation, and Government has an ambitious target to increase this to 50GW by 2030.³⁵ This will require a large increase in offshore transmission capacity. We are responsible for managing the Offshore Transmission Owner (OFTO) regime, the competitive tender process that minimises the costs to consumers of financing and operating these assets. 27 transmission assets valued at £9.5bn have been licenced so far, with another 10 assets worth ~£8bn anticipated within the next few years as the number and scale of transmission projects continues to increase. Additionally, in line with the Holistic Network Design and future CSNPs, coordinated offshore assets may come to fruition.

To that end, we need to maintain clear regulatory frameworks to support offshore anticipatory investment and delivery models that are suitable for coordinated offshore assets. We need to ensure the OFTO regime for radial assets continues to deliver the outcomes desired. We are also developing a policy framework for extensions as some of the earlier OFTO projects come to the end of their initial revenue period.

What are our priorities for the years to come?

Running competitive tenders for increasingly large transmission assets, engaging
closely with stakeholders to broaden the pool of bidders and ensure a strong and
well-financed pipeline of licenced OFTOs going forward.

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³⁵ British Energy Security Strategy | DESNZ

- Iterating existing OFTO policy where appropriate, for example in developing a
 framework for extensions to maximise the life of offshore windfarms and
 transmission assets.
- Developing an OFTO build model for shared assets, enabling third parties to build coordinated transmission assets (rather than generators of the relevant wind farms).

Goal 6.3 Enhance flexibility through electricity interconnection

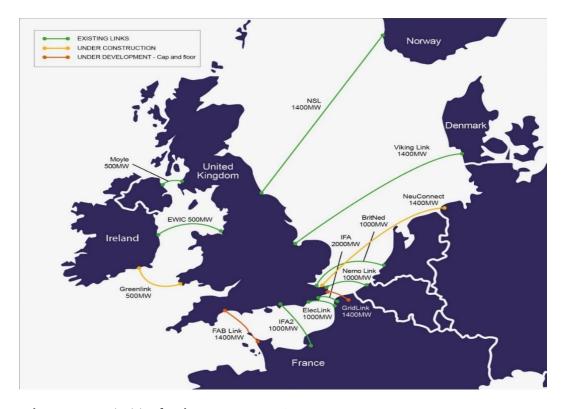
Interconnectors are high-voltage cables that connect the electricity systems of neighbouring countries. They enable excess power to be traded and play an important role in our security of supply. They can also enable the efficient integration of new renewable energy sources across connected markets. In the long term, they will help reduce waste by providing routes to sell power to neighbouring countries when we are generating excess electricity, and to import power to meet demand when generation is lower.

Electricity interconnectors will play an important role for flexibility as we move towards a renewables-driven system. While they can increase network constraints costs at certain times, interconnectors returned £319.6 million to consumers in 2023 and 2024 by paying revenues in excess of a cap to consumers. To ensure they enhance flexibility going forward, we need to ensure their locations are strategically planned and that our market signals drive the optimal flows in our system.

We regulate interconnectors primarily through a cap and floor regime. Our first and second cap and floor windows in 2015 and 2018 attracted 9.5GW investment (see map below). The third opened in Autumn 2022 for projects to connect by 2032 and attracted an additional 9GW of interconnector applications.

Our novel, Offshore Hybrid Asset (OHA)³⁶ pilot scheme combines interconnection with wind generation and aims to use infrastructure more efficiently and can reduce the amount of onshore infrastructure. It will also be a first step towards a meshed grid in the North Sea that can exploit resources with neighbouring countries.

³⁶ OHAs connect offshore windfarms (and other offshore assets) directly to interconnectors without the need to bring electricity back onshore first.



What are our priorities for the years to come?

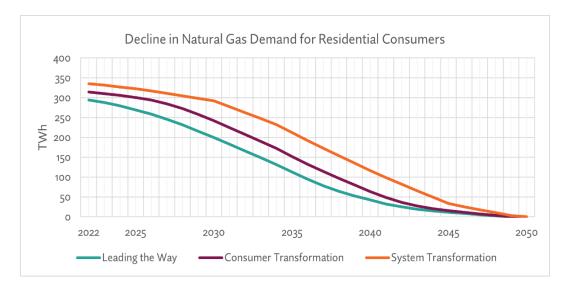
- **Enabling investment in new interconnectors** and ensuring existing interconnectors are delivered in the interest of consumers.
- Developing a regulatory regime and cross border market mechanisms that support OHAs through our novel pilot scheme.

Objective 7: Prepare for the future of natural gas

As electrification of the economy increases, we expect to see a sustained reduction in demand for natural gas (see graph below)³⁷, even if some uses remain (for example in power plants providing infrequent back-up power or equipped with carbon capture and storage). We need to understand the implications of, and prepare our regulatory regimes for, this change.

³⁷ The graph details the main three scenarios, in which residential natural gas demand declines, with varying degrees of residential electrification. Data is based on Future Energy Scenarios (FES) 2023 Data Workbook by the National Grid ESO.

The speed and geographical variance in the transition away from natural gas is uncertain – it depends on factors like the roll out of heat pumps. We expect Government decisions and policies to set a clear path for the future role of gas. Hydrogen is expected to play an important role in the net zero economy, notably in power and industry. The future of existing natural gas networks is therefore linked closely to the future extent of hydrogen networks, as well as how much of the existing network can be repurposed for hydrogen. Government decisions and policies, alongside technology development and consumer behaviour, will determine the extent and timing of repurposing, decommissioning, and any retention of natural gas assets.



A key decision for Government is the role of hydrogen in home heating. This decision is currently due in 2026. There is growing evidence, for example from the National Infrastructure Commission³⁸, in favour of electrification as the dominant route to decarbonise the UK's home heating. A clear Government decision on the role of hydrogen in home heating at the earliest possible date will help remove the significant uncertainty that is affecting network planning and certainty for industry and consumers. Given the implications for future gas price controls, including RIIO-3 from 2026, we would welcome an earlier Government decision.

In the meantime, we are preparing for significantly reduced use of the gas network while maintaining the flexibility to enable a higher hydrogen route if Government chooses that

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³⁸ Second National Infrastructure Assessment | NIC

scenario. Our goal is to protect consumers' interests, ensuring secure energy supplies, efficiency, fairness, and certainty for investors to keep costs down.

7.1 Recover the cost of the existing gas network

Through the RIIO framework, we set price controls for the companies that own and operate GB's natural gas networks. The uncertainty over the speed and timing of changes to the gas network need to be considered when setting the next price control. Under RIIO we approve network investment and operations spending for the gas network companies that is recovered through energy bills. This funding ensures that the networks remain safe and resilient, while holding network companies to account to deliver at the fairest cost to consumers.

What are our priorities for the years to come?

- Setting the next gas network price (RIIO-3) control in winter 2025 to provide funding to maintain a safe and resilient gas network for the period 2026 to 2031.
- As part of this, considering whether to accelerate the recovery of the costs of
 investment in the gas network through gas consumers' energy bills, to help ensure a
 fair balance between current and future consumers as the transition to net zero
 gathers pace.
- Considering the need for gas networks to finance their activities and for investors to make a reasonable return on capital invested.

7.2 Prepare for repurposing and decommissioning of the gas grid

In the scenario in which hydrogen plays a limited or no role in heating, we would expect a large share of the gas grid to be decommissioned. If government decides that hydrogen will play a major role in heating, then large portions of the gas grid may be repurposed. Decommissioning and repurposing will be complex, multi-decade processes, requiring detailed planning, legislation, funding, public buy-in, and political commitment. Neither is likely to start at scale before the mid-2030s, but there is merit in beginning the debate with Government, industry, and consumer groups on how best to approach these challenges. In the coming years, we may also see increasing numbers of individual disconnections, for which we must ensure the processes are safe, efficient, and work for consumers.

What are our priorities for the years to come?

- Working with Government to determine legislative and regulatory regimes and identify changes needed to enable an effective gas grid transition, including in our own role and for NESO, the Health and Safety Executive, the industry, and local authorities.
- Developing a shared understanding with industry and Government, on options for how a safe, effective, and least-cost decommissioning process could be conducted.

Objective 8: Facilitate deployment of low carbon technology

Net zero requires a change from carbon-intensive electricity generation to low carbon generation and storage. We also need to ensure key energy intensive industries continue to operate while reducing their emissions. This means that major investment is needed in low carbon technology and infrastructure. New regulatory frameworks are required to support the development of whole new sectors. A regulated asset base (RAB) model, which allows investors to receive a guaranteed return on investment for the lifetime of the asset, is the preferred model for regulating these evolving sectors. This will be crucial for attracting the investment needed and for keeping costs down for consumers. We will continue to work with DESNZ in an advisory capacity on developing the RAB regimes for nuclear power, carbon capture, usage, and storage (CCUS), and hydrogen transport and storage. We will then become the economic regulator in these areas once projects reach a final investment decision and are formally licensed and regulated.

8.1 Establish and oversee a regulatory regime for nuclear power

Government aims to deliver up to 24GW of nuclear capacity by 2050. To do so, they need to attract new investment to the sector and develop different funding mechanisms for new nuclear technologies. The regulatory regime we are developing for the Sizewell C plant could act as a blueprint for subsequent nuclear projects. As we take on our role as economic regulator for designated nuclear projects, we will help ensure that the regulatory model provides value for money for customers and appropriate returns for investors.

What are our priorities for the years to come?

 Building on collaboration with Government for Sizewell C to manage and deliver projects beyond Sizewell C.

- Ensuring successful implementation of the new nuclear RAB regime, building on economic guidance to be published in 2024, including developing all relevant regulatory documents and processes.
- Beginning our formal role as regulator during the construction phase of Sizewell C.

8.2 Regulate carbon capture, transport, and storage (CCUS) transport and storage

CCUS has a significant role to play in the government's expected pathway to net zero³⁹. This will require a more active role for us in growing the sector following the initial four CCUS clusters.

What are our priorities for the years to come?

- Working towards successful implementing new transport and storage licences, building on work in 2024 to finalise the price control model and begin regulation of new networks, including developing the regulatory framework and guidance.
- Working with DESNZ to shape the future of the CCUS sector beyond the initial four clusters, where we may play a greater role in developing markets.

8.3 Develop new hydrogen transport business models

The 2021 UK Hydrogen Strategy set out Government's ambition to deliver up to 10GW of low carbon production hydrogen capacity by 2030⁴⁰. Hydrogen transport and storage infrastructure is expected to be a key enabler. We are the default economic regulator for gas (including hydrogen) conveyed through pipes. In August 2023, Government set out its position for the high-level design of the Hydrogen Transport Business Model. This will consist of a RAB and an external subsidy mechanism.⁴¹ The economic regulatory framework now needs to be developed to ensure that charges to network users are not prohibitive, while allowing network operators to earn a return on their investment.

What are our priorities for the years to come?

³⁹ Carbon capture, usage and storage: a vision to establish a competitive market | DESNZ

⁴⁰ UK hydrogen strategy | DESNZ

⁴¹ Hydrogen transport and storage infrastructure: minded to positions | DESNZ

- Providing advice and support to Government on support for hydrogen, building
 on support for the design of the Hydrogen Transport Business Model in 2024. This
 includes interactions with the regulatory and market framework for natural gas and
 ensuring the Business Model is compatible with natural gas network price controls.
- Agreeing roles and responsibilities for initial and subsequent regulatory periods with Government.
- **Developing a clear approach for how we will regulate** the hydrogen transport sector and how we will account for any repurposed assets in our regulatory regime.

8.4 Support the development of long-duration electricity storage

Long-duration electricity storage (LDES) will be a key part of a decarbonised electricity grid, allowing us to store energy for when demand exceeds supply. The governance of LDES is still under discussion. A core part of this discussion is roles and responsibilities, including our role. Government has consulted on a policy framework to enable investment in LDES. Depending on the outcome, we could play a role in regulating LDES using a new cap and floor regime similar to that for interconnectors. Should Government decide that this is the best approach, we will work with them to develop the framework in consumers' interests.

Objective 9: Network performance and connections

Amid a rapidly changing landscape, it is more important than ever that consumers receive a high quality of service at a fair cost. Our existing and future price controls must operate effectively to ensure the assets that consumers have paid for deliver for them now and in the future. Price controls are used to ensure that companies meet clear outputs in environmental performance, the needs of network users, and safety and resilience. We are committed to rigorous and transparent monitoring, and will make tangible improvements to ensure a strong, proactive, and enduring compliance and enforcement function that holds regulated companies properly to account.

There are currently particular concerns around how long customers are waiting to be connected to the transmission and distribution grid. Reforms are required to the connections process. Obligations on regulated parties will also be reviewed to increase the pace of new connections and achieve a material reduction in the queue. In the long run, we expect strategic planning (see Objective 5) and our regulatory efforts to drive accelerated network

investment (see Objective 6) to ensure capacity exists to enable connections as needed. The connections process must therefore be fully aligned with strategic planning. We will also ensure that NESO is proactively regulated to deliver on its wider obligations, including its role in reducing the connection queue.

9.1 Use our regulatory tools to ensure high quality service and supply

Consumers have paid for the investment in the networks. It is essential that those networks continue to provide them with a truly reliable service, as well as all the other things valued by networks users (such as environmental performance and resilience).

The role of monitoring delivery has never been more important in ensuring high quality services. The current round of network price controls (RIIO-2) has been set and we need to see companies deliver on their plans. Where companies fall short in their service, in supply consumers, or in the delivery of the infrastructure they have committed to, we will take robust action, including enforcement where necessary. Looking ahead, we will work closely with stakeholders to learn lessons from RIIO-2 to develop and set the next set of network price controls (RIIO-3). RIIO-3 will place an increased focus on network companies to demonstrate asset health.

An increasingly important part of our work is our approach to price control and network data, which we will monitor closely. We will make this as accessible as possible so that all stakeholders can understand how network companies are doing, deepening accountability. Looking forward, we will be able to go further to hold companies to account by making greater use of the data that becomes available as the digitalisation of the networks increases.

What are our priorities for the years to come?

- Enhancing our monitoring of network company performance under RIIO-2, to
 ensure networks are held to account for delivery. This includes enabling
 stakeholders to assess how effectively companies are delivering on their behalf.
- Setting the next network price (RIIO-3) controls, in winter 2025, which will reset and introduce new stretching outputs to ensure network companies deliver a high-quality and resilient service for consumers and other network users.

9.2 Enable faster electricity network connections

A significant risk to decarbonising our power system by 2035 is the time it takes to connect viable generation and demand projects. A step change is required to break the cycle of uncertainty that invites speculative applications and further increases connection timescales.

We are shifting our focus to create a more strategic connections process by effectively unlocking investment in the right locations and technologies. Together with Government, we will set direction for a more transparent, data-driven, connection process. Our process will seek to ensure alignment with wider system reform, spatial planning, and strategic network build to achieve a timely and efficient transition to net zero. This will benefit consumers and provide more certainty for networks and investors.

What are our priorities for the years to come?

- Taking bold action to reduce the entire connections queue by raising barriers to
 entry, removing stalled projects, and increasing the quality of projects applying for
 connections.
- Facilitating the shift to more effective use and allocation of network capacity, moving away from the first-come, first-served approach to a process that accelerates projects that are ready to connect.
- Leading an end-to-end review of the incentives, obligations, and requirements for electricity connections to improve quality of service and deliver timely connections.
- Setting direction for a future connection process that aligns with the strategic spatial planning of the energy system.

Objective 10: Secure and resilient supplies

A secure and reliable energy system is a basic societal need. The recent energy crisis has reiterated the importance of being well-prepared for supply risks. Security of supply is a critical part of ensuring the energy system is delivering for consumers. As the system fundamentally shifts towards more renewable and distributed assets, we are considering longer-term supply issues and how we can build a more resilient system. From cyber attacks to simply not having enough energy to meet demand, there are many threats to the security

and resilience of our energy system. It is vital that we manage these threats at reasonable cost to consumers and work with Government, particularly on managing emerging threats.

10.1 Pursue security of supply

Recent geopolitical shocks have highlighted the importance of secure, reliable supplies of energy for the GB market. We have a role in providing technical advice on security of supply to DESNZ, but Government is ultimately responsible for security of supply policy. Further action may be required to minimise potential supply shortfalls and their impacts on consumers. We have sharpened our focus by conducting our own medium and long-term assessment of supply risks to consumers.

For all aspects of security of supply, we must balance a complex range of trade-offs, considering benefits and costs to consumers. For example, more renewables can help displace higher-cost and higher-carbon imported gas, but their more intermittent nature requires other interventions to ensure security of supply at times when there is limited wind and sun. Our analysis supports Government's position that unabated gas plants will be needed into the 2030s to ensure security of supply.

What are our priorities for the years to come?

- Continuing to work closely with Government on electricity supply scenarios,
 providing expert advice and advocating for consumers' interests. Collaborating on a
 comprehensive programme to look at those scenarios through the late 2020s and
 beyond to assess risks to security of supply.
- Ensuring that our wider approach to delivering the infrastructure required for net zero properly considers security of supply.
- Building on collaborations on long-term planning tools, including strategic planning and CfD policy, to ensure they work to ensure security of supply.

10.2 Implement monitoring to ensure regulated network companies are financially resilient

The financial resilience of regulated network companies operating in and developing the network is a key aspect of the system's overall stability. Without it, consumers can see poor quality of service and substantial insolvency costs can be passed to them in the event of

company failure. It is therefore important that the companies we regulate are financially resilient with sufficient financial safeguards or headroom.

What are our priorities for the years to come?

- Delivering proportionate and systemic monitoring of licensees' financial resilience and a robust financial resilience governance framework.
- Evolving existing financial resilience measures to ensure appropriate levels of protection are maintained for consumers.

10.3 Strengthen cyber resilience

As energy systems become increasingly connected and cyber attacks become more sophisticated, we need to ensure that the GB energy system is mature in managing cyber security risks; that it can withstand, adapt to, and recover from critical attacks while preserving the functionality of critical infrastructure operations and minimising disruptions.

What are our priorities for the years to come?

- Accelerating resilience by providing guidance and carrying out assurance activities under the Network and Information Systems Regulations.
- Working with stakeholders to develop awareness of and mitigate against systemic cyber risks, where attacks on one part of the system may cause problems elsewhere.

10.4 Build resilience to extreme climate events and long-term climate change

Rapid action is needed to manage the risks to supply from extreme weather and the impact of climate change (including the increased likelihood of storms). These will grow as the system becomes increasingly reliant on renewables. There are a range of measures we can take to make the sector more resilient to climate impacts and minimise the impacts on consumers. These include working with Government to provide greater clarity on acceptable levels of resilience, ensuring infrastructure is resilient, and ensuring the new strategic planning processes consider how climate change may affect patterns of supply and demand.

What are our priorities for the years to come?

Developing a regulatory framework and new approaches to ensure that the costs
and benefits of climate resilience actions are better understood and accounted for in
decision making.

- Developing an economic framework and tools / guidance that account for climate change and high-impact, low-probability events and take a consistent approach to stress testing. We will use this in our own decisions, for example in price controls, but also aim to enable improved decision-making across the wider sector.
- Work closely with Government and NESO to support and influence their decisions, and ensure consistency in our approaches at system, regional and asset level. This will include providing evidence and thinking to inform acceptable levels of risk / resilience within new performance standards.



Establishing an efficient, fair and flexible energy system

3. Establishing an efficient, fair and flexible energy system

A net zero energy system will be cleaner and, in the long-run, cheaper to operate. However, an increasing reliance on renewable energy will require important changes to ensure energy demands are met when the sun is not shining and/or the wind is not blowing. When and where energy is used and generated will also become increasingly important.

We need strong institutions and governance in the sector to facilitate these changes to how the system operates and how we use it. A transformation is already under way, with a decisive shift towards more strategic planning and coordination, alongside changes to system operation. We are playing a key role here – including establishing and regulating NESO and reforming code governance.

Reforms to market arrangements are needed to support system efficiency and provide effective signals for the locating and operation of assets. These will need to work in tandem with strategic planning as a crucial determinant in delivering the required infrastructure.

We are also seeing changes to how and when consumers use energy, including incentivising people to use energy at times when demand is lower by making it cheaper. This will increasingly involve technology that can make these changes automatically, such as smart systems that charge electric vehicles when prices are lowest. These changes will not just help those people who can shift their energy demand but, by reducing the amount of new infrastructure needed to get to net zero, will reduce costs for everyone.

We will see the energy system becoming increasingly digital, resulting in a proliferation of data about the system and consumer activity. We could also see AI transform how the system works and people interact with it. Making best use of this data, and new assets and smart systems, will require innovation to unlock new opportunities and solutions.

Objective 11: Ensure the right governance and institutions are in place

As the system becomes more complex and interconnected, there is a greater need than ever for a coordinated and coherent approach to planning and system operation. This requires cohesive governance, with clear direction, roles, and responsibilities – to facilitate high quality decision-making, information sharing, and delivery, including in areas of rapid change like data and digitalisation. The establishment of NESO by Ofgem and Government will represent a fundamental shift in how the energy system is governed, planned, and managed.

We are also taking on a greater role in reforming the industry codes governance structure underpinning the way energy companies interact with energy markets.

11.1: Establish and regulate National Energy System Operator

NESO will be GB's first independent system operator: an impartial, expert public corporation licensed and regulated by us. It is expected to go live in 2024. It will take on responsibilities for planning the electricity and gas systems and networks (see Objective 5), as well as continuing to operate the GB electricity system in real time. It will have statutory duties for driving progress towards net zero, maintaining energy security, and contributing to fair costs for consumers.

What are our priorities for the years to come?

- Ensuring clarity on NESO's purpose and responsibilities to support performance and provide overall accountability and legitimacy in the eyes of the sector and consumers.
- Establishing regulatory, legal, and financial frameworks for NESO, including a
 performance oversight regime that provides sufficient regulatory assurance, routes for
 industry scrutiny, and creates the conditions for NESO to step up and proactively lead
 the transition to a net zero energy system.

11.2: Reform energy code governance to enable faster, more strategically aligned rule changes across the sector

Energy industry codes set out the terms under which industry participants can access electricity and gas networks, as well as detailed rules for operating in the relevant markets. It is usually a condition of energy companies' licences that they must become party to, and/or comply with, relevant industry code(s).

Energy code reform⁴² is a joint project between us and Government to ensure that industry codes can respond to the significantly changing sector, enabling change to be delivered more efficiently and effectively in the interests of consumers, and to support the transition to net zero. The current system of industry governance will be replaced by a new licensing regime for 'code managers', as set out in the Energy Act 2023 alongside our new strategic role setting direction for the codes' development.

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⁴² Energy Code Reform | Ofgem

What are our priorities for the years to come?

- Delivering energy code reform with Government our role is to implement, transition and embed the new governance framework this decade.
- Appointing code manager(s) from 2025-26, whose role will include ensuring the
 effective and efficient delivery of strategic change. This will build on the framework
 for code manager selection being developed in 2024-25.
- Developing and issuing an annual Strategic Direction Statement for codes, setting out our vision for how the codes should evolve.

Objective 12: Deliver effective and efficient market incentives and signals

We are entering a world in which 'when and where' energy is used and generated is becoming increasingly important. Unless we manage this properly, the system balancing costs borne by consumers will continue to increase. In the existing national market, there are poor signals and weak incentives for generation, demand, and storage to locate near each other. Many large, new generation assets are necessarily connecting in remote areas, often offshore, far from demand, and with limited network capacity to transmit the power to where it is needed. This is putting a strain on infrastructure, leading to increased congestion and, in turn, increased costs to manage the network. The cost to consumers of managing constraints rose as high as £1.75bn for 2022 and, while falling in 2023, we expect it to rise again in the coming years.⁴³

While we know that accelerating network build will contribute towards alleviating capacity constraints, guided by system planning, it must be complemented by a set of coherent market signals and incentives enabling the system to be realised and effectively operated if we are to avoid unnecessary costs and get to net zero at least cost.

12.1: Work with Government to deliver reforms which set efficient locational incentives for investment and operation across the energy system.

Fundamental reforms to the wholesale market require action by Government. The Review of Electricity Market Arrangements (REMA) programme is under way, and we will continue to work with Government to pursue a coherent package of market and charging reforms.

⁴³ Constraint costs and forecasts are published by the ESO, to note there are a range of factors which will influence future constraint costs.

Our view is that current market arrangements do not provide strong enough incentives for new electricity assets (generation and storage) to locate in places that are optimal for the system, and to operate efficiently. Similarly, there are limited incentives for electricity demand to respond effectively to system constraints. If market reform can expose generators and demand to price signals that better reflect market conditions, then less new infrastructure will be needed, less renewable generation will be curtailed, and energy bills will be lower.

There are two options being considered through REMA that would significantly strengthen locational signals: a zonal wholesale market, and reforms to generators' transmission access rights ('access reform'). We published a major analysis of locational wholesale market options for GB in 2023 and found that a zonal model would significantly improve operational and investment signals, delivering more efficient market outcomes. 44 We are currently working with Government to develop and assess access reform options that could deliver some of the same efficiencies, without a locational wholesale market. These options would reduce constraint costs by reducing or eliminating payments to generators when their planned output cannot be accommodated by the system due to constraints.

Exposing generators to new risks through either of these options could increase the cost of capital and disrupt the pace of renewables investment, so we support developing options such as deemed CfDs that could mitigate these risks where appropriate. We believe that the REMA programme, through use of the CfD instrument and the revenue certainty that it brings, will likely deliver both a strong and efficient investment environment for large capital-intensive investments like offshore wind, and effective locational signals for other assets with more flexibility in their location.

What are our priorities for the years to come?

- Working with Government through REMA to strike the right balance between improvements to system efficiency and preserving a strong environment for net zero investment. We will seek to ensure that any options pursued through REMA are part of a coherent reform package.
- Ensuring any decisions on these packages complement the move towards more strategic planning (see Objective 5).

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⁴⁴ Assessment of locational wholesale pricing for Great Britain | Ofgem

12.2: Introduce low-regrets near-term reforms to support system efficiency

Major market reform could take years to develop, finalise, and implement. We want to ensure that we are not waiting for fully formed proposals where there are significant improvements that can be made in the near-term that would complement any long-term changes and do not compromise on quality. Therefore, we will act where it is within our remit to do so to reduce system costs and improve system efficiency in the near-term – albeit recognising that these are interim improvements and will not deliver the benefits available from more comprehensive market reform.

What are our priorities for the years to come?

- Considering improvements to transmission charging, including to the investment signal sent by transmission network charges to create siting efficiencies, and reforms to ensure charges are not a barrier to investment in new assets that will enable net zero and greater system efficiency.
- Reducing balancing costs: we will support NESO's planned programme of improvements to the balancing market, which should increase competition and efficiency, bringing down costs for consumers.
- Acting against market manipulation and uncompetitive behaviour that results in unfairly high balancing costs through enforcement where necessary, and potential changes to licence conditions.

Objective 13: Enable consumer-focused flexibility

There are significant new opportunities arising from the emerging energy system, including to reduce the peaks of energy demand and better match demand to periods of high or low supply. This involves consumers adjusting their energy use in response to surpluses or deficits of supply in the electricity system in return for cheaper power. New smart technology can enable such responses automatically - for example, electric vehicles set to charge at the cheapest time of day.

Empowering consumers to adjust their consumption patterns will enable many to reduce their bills directly by using energy when it is cheaper. More importantly, it will also reduce the total cost of the system. This will benefit all consumers' bills by reducing the amount of infrastructure we need to build and the cost of paying generators to turn off when demand is

too low. We are committed to enabling this flexibility while ensuring that the system works for people who cannot easily adjust how and when they use energy.

Digitalisation, innovation, and smart infrastructure are needed to create a system with increased flexibility options for consumers. Smart meters will provide the up-to-date information about what people are using and real-time costs that will underpin the flexible system. Batteries and microgeneration (eg rooftop solar panels) will connect to the system at the distribution level, creating new opportunities to generate energy when it is needed and store it when it is not.

13.1: Unlock distributed flexibility and regulate load controllers

Flexibility in electricity consumption is increasingly valuable. The challenge is how we unlock the value of 'distributed flexibility' from assets connected to the distribution network. This means enabling consumers individually to flex their use and creating the infrastructure that makes that technically feasible. Flexibility already exists in our system. However, we are not seeing the scale that we need due to market access and coordination issues.

Flexibility services are provided by a number of market participants including suppliers, aggregators, and EV manufacturers. We regulate many of these entities but, as part of Government's Smart Secure Energy Systems (SSES) Programme, we will also begin regulating 'load controllers'. These are companies that remotely control consumers' energy usage via smart devices (such as electric vehicle charge points). We expect load controllers to play an increasingly important role in offering automated services that provide flexibility as part of the energy transition.

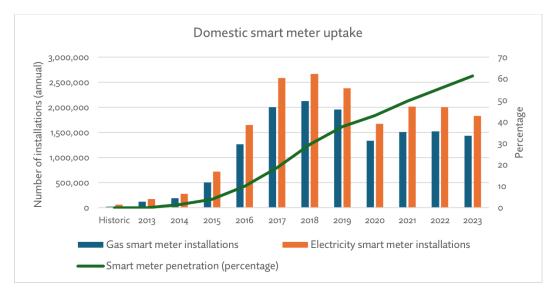
What are our priorities for the years to come?

- Establishing a clear direction of travel to enable the growth of distributed flexibility capacity in the system by working to identify and address barriers, building on a planned publication in 2024.
- Encouraging the adoption of a Flexibility Exchange or Marketplace with standardised products so sellers and buyers of flexibility can easily access all available products and markets.
- Creating a new market facilitator role, comprising a single, expert entity with a mandate to grow and develop local flexibility markets.

- Improving understanding of the impact of flexibility on consumers, including how it interacts with key components of the retail market (eg the price cap).
- Developing and operating a load controller licensing regime, working with
 Government. This should allow for a competitive market and not be a barrier to
 innovation. It should give consumers confidence to participate in load controlling
 flexibility services and address risks such as cyber security and large volumes of
 demand (load) being controlled in one place.

13.2: Continue to drive the benefits of smart meters through regulatory oversight of rollout and data flows

Smart meters are a critical enabler of minimising the costs of the transition to net zero. They are increasingly used by domestic and non-domestic consumers (see graph below),⁴⁵ allowing consumers to better understand and take control of their energy usage. This includes time of use tariffs or allowing prepayment customers to top up their gas credit without going to a shop. Readings from smart meters also help system operators and innovators improve the efficiency of the electricity network and unlock the benefits of flexibility for consumers. We also regulate the Data Communications Company (DCC), who operate the secure telecommunications network that links smart meters in homes and small businesses with suppliers, network operators, and energy service companies.



⁴⁵ DESNZ Smart Meters Statistics Report (Dec 2023) | DESNZ

What are our priorities for the years to come?

- Priving forward the rollout of smart meters by suppliers. Currently Government requires 74.5% rollout to domestic and 68.7% rollout to non-domestic premises by 2025.⁴⁶ We will closely monitor suppliers and, should they fail to deliver, take enforcement action where appropriate. We also expect an increase in the delivery of smart meters to prepayment customers, ensuring vulnerable consumers have access to the best services. In addition, we will assess suppliers' performance in relation to the operation of smart meters in smart mode.
- Reviewing the regulatory framework that will underpin DCC's role from the
 expiry of its current licence to 2040. This review provides a crucial opportunity to
 ensure licencing fits the needs of a more mature organisation, for example by
 transforming DCC into a not-for-profit organisation, having an independent majority
 board, and moving to an ex-ante price control framework. We will also explore
 DCC's future role including provision of additional services relating to system data.

13.3: Ensure successful rollout of Market-wide Half-hourly Settlement

MHHS is a mechanism whereby suppliers pay for electricity based on their customers' exact usage during each half-hour period rather than paying for electricity based on a typical consumption pattern. Moving to this more granular charging mechanism will be an important driver of the future retail market, setting stronger incentives for suppliers to create new tariff structures that reflect the true cost of the energy being consumed, encouraging consumers to flex their demand, and hence incentivising more efficient use of the system. The combination of smart meters and MHHS will see consumers able to fully participate in a flexible system. To realise these benefits, MHHS must be rolled out as soon as feasible.

What are our priorities for the years to come?

Ensuring the successful rollout of MHHS in 2026-27 by overseeing the company
responsible for delivery, Elexon, and engaging closely with Government and other
stakeholders.

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⁴⁶ Smart Meter Targets Framework | DESNZ

Objective 14: Make a more digital energy system work for consumers

Digital technology will transform the energy system and how people interact with it. This will partly be driven by new physical assets, including electric vehicles and solar, connecting at the distribution (local) level. To maximise efficiency and fully benefit from these new technologies, the sector will need increased knowledge and transparency of this more complex system. This will require improved data collection, storage, and access – and enhanced governance to ensure data is shared when this is in consumers' interests, and protected when it is not. Innovation will be critical for capitalising on the emerging opportunities from digitalisation, identifying solutions to deliver flexibility and maximise efficiency.

At the same time, the energy sector may be on the cusp of transformational effects from Al. While the pace and impact of this technology is difficult to predict, it is vital that we proactively monitor these developments to ensure they work in the interest of consumers.

14.1: Set governance and standards to digitise system data and improve data sharing

Building the right frameworks for data use is important for reducing system costs and improving security and will support both strategic planning and more effective signals. Data can help us understand what is and will be connected at a given time, make informed decisions on what gets built and where, and empower consumers to be aware of their use and capitalise on flexibility (see Objective 13). Consumers can benefit from market access to energy data, enabling tailored business models and services. This will necessitate overcoming some of the restrictive elements of the current regulatory framework, while ensuring that consumers can manage and protect their data.

What are our priorities for the years to come?

• Improving the use of demand side data with consumer awareness. This will build on work in 2024 to progress Consumer Consent to give consumers the ability to share their data securely with trusted market participants who can help them lower their bills and carbon footprint. This will be supported by enabling better access to half hourly settled data, including the MHHS programme (see Objective 13.3).

- Improving the discoverability and interoperability of energy infrastructure data.

 This will build on work in 2024 to progress Data Best Practice as our approach to create underpinning principles for how data is managed and treated, which is necessary to create interoperability and maximise the value of data.
- Developing a safe, reliable, and secure method of sharing these datasets across
 the people who need them to build the digital future, building on work in 2024 to
 progress Data Sharing Infrastructure. We are leading industry with Virtual Energy
 System, National Digital Twin Programme, and others in the design of this platform
 and input to initial use cases.

14.2: Enable innovation across the sector

As we drive towards a decentralised, digitalised, and net zero system, we need to ensure that innovative services, products, and technologies can be trialled and brought into the mainstream. We know that the complexity of the energy sector and regulation – sometimes designed for out-dated models – can pose a challenge to innovation. We have introduced support for innovators, for example, through our Energy Regulation Sandbox⁴⁷. Where barriers are due to another regulator or government rules, we will proactively work with them to explore options for change.

We will continue to build innovation incentives into market and regulatory design, as well as providing network innovation funding of £450m through the Strategic Innovation Fund (SIF),⁴⁸ which will run until at least 2028. The SIF will support networks and their partners to undertake research, development, and demonstration work exploring new technologies and services to deliver more efficient network management and operations. It will also enable networks to undertake the research and testing required to rollout out low carbon technology across and around the networks, improving market signals and lowering emissions.

What are our priorities for the years to come?

 Targeting innovation at the most strategic and transformative issues, providing direction to the market by setting strategic challenges that reflect our priorities for

48 Strategic Innovation Fund (SIF) | Ofgem

⁴⁷ Innovation Link | Ofgem

innovation, and facilitating the building of diverse perspectives to develop innovations that best address these challenges.

- Supporting an increased rollout of innovation-funded projects. We will work with
 our SIF delivery partners to ensure innovation funds are administered to a high
 standard, establishing mechanisms that directly support smaller innovators and
 facilitate the deployment of innovation funded projects.
- **Maximising the benefits of innovation learning** by establishing clear mechanisms for identifying, extracting, and embedding policy insights.
- **Developing a Future Regulation Sandbox**⁴⁹, to enable us to trial new regulations and innovations. This will generate evidence to make timely decisions that lead to more flexible, inclusive, and robust regulation.
- Continuing to support and provide strategic leadership to innovators through
 existing Innovation Link services such as our Fast Frank Feedback service, the Energy
 Regulation Sandbox, and our published guides.
- Interrogating the current regulatory regime for inappropriate barriers, building on a consultation in 2024/25 on removing undue barriers from legacy rules.

14.3: Establish a framework for responsible use of Artificial Intelligence in the energy sector

Al could rapidly modernise the energy sector, for example through quicker analysis of complex system data, automatic identification (and fixing) of faulty assets, or improved interfaces between consumers and the sector. Consumers could benefit from higher service standards and a more efficient, lower-cost system. We anticipate rapid growth in its use by energy companies, as has happened in other sectors. The energy sector's use of Al must be responsible, ensuring consumers are protected from risks or negative outcomes resulting from its use, including error, bias in data/outcomes, system failure, and system vulnerabilities.

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⁴⁹ Proposal to introduce the Future Regulation Sandbox | Ofgem

The Department for Science Innovation and Technology set out five key principles for the responsible use of AI.⁵⁰ We are considering how these might operate in the energy sector and establishing a framework for responsible future use which does not stifle innovation. Al's use must be safe, secure, and robust, appropriately transparent, explainable, and fair, with routes of redress, and with clear accountability and governance.

What are our priorities for the years to come?

- Setting direction for AI in the energy sector. Building on the approach set out in an upcoming strategy in Spring 2024, we will publish guidance for the sector, which will be updated iteratively to cater for the fast evolution of the technology and Government's regulatory framework.
- Working collaboratively with all stakeholders on AI guidance, including DESNZ, industry, academia, and other regulators.
- Strengthening our understanding, by increasing internal AI capabilities.

⁵⁰ <u>UK unveils world leading approach to innovation in first artificial intelligence white paper</u> to turbocharge growth | Department for Science, Innovation and Technology



Advancing decarbonisation through low carbon energy and social schemes

Ofgem's Multiyear Strategy

4. Advancing decarbonisation through low carbon energy and social schemes

We have a specialised directorate (Delivery and Schemes) that administers schemes on behalf of Government. These schemes have an annual spend of £9.9bn (2022/23 – increasing by more than £4bn since 2014/15, see graph below) and aim to protect vulnerable people and contribute to achieving net zero and reducing fuel poverty. The schemes complement our other priorities by encouraging a move to low carbon energy sources and reducing energy demand and therefore bills through insulation of homes, particularly for those experiencing fuel poverty. We expect to be asked to deliver further schemes as the net zero transition proceeds.



Government sets the overall framework and policies for meeting its targets, including net zero by 2050. In doing so it must make the highest-level decisions about how the costs of the transition will be met, and how to balance different objectives. This includes decisions on the policy design of schemes, specific targets and how schemes are funded. We may provide advice and expertise on potential delivery models for meeting Government's policy aims and how schemes can be implemented efficiently and effectively. Most funding for the

administration of schemes that we deliver comes from DESNZ, who we work with closely to agree budgets and workplans to deliver an agreed set of schemes, outcomes, and benefits.

It is our intention for Delivery and Schemes to be a go-to administrator for Government's low carbon energy and social schemes that align to our unique organisational expertise and regulatory powers. Our goal is to provide a high-quality service to our scheme users in the effort to meet net zero targets while protecting current and future energy consumers.

The directorate has three strategic outcomes that it is driving:

- Contribute to the policy design of schemes throughout their life cycle, increasing impact for our customers, ensuring they are feasible, delivering net zero and fuel poverty outcomes through the achievement of policy outcomes and intent.
- Maximise the value for taxpayers' money in public spending, ensuring schemes are administered in a way that provides a positive experience for scheme users and meets expectations of our funding partners.
- Always improving what it is like to work in Delivery and Schemes through a focus on people, alignment to values, and ensuring clarity of purpose.

External context

Energy efficiency is an important part of the transition to net zero – as well as reducing energy costs for people. Government signed up to the COP28 commitment in late 2023, which includes an 18% improvement in economy-wide energy efficiency. British homes are among the worst insulated in Europe. 51 Government committed to reducing energy consumption by 15% in 2030, requiring ~6 million homes to attain significant upgrades to their insulation.⁵² In the latest estimates around 13% of households in England were classed as fuel poor, 25% in Scotland, 14% in Wales, and 24% in Northern Ireland.⁵³ In England, Government aims to bring as many fuel-poor homes to a minimum energy efficiency rating of B and C by the end of 2030 as is reasonably practicable. The concerning trend is that the

⁵¹ Filling the gap – Transforming Energy Efficiency in Britain's Homes (June 2023) | Frontier **Economics**

⁵² Ibid.

⁵³ Fuel Poverty | House of Commons

number of energy efficiency measures installed under Energy Efficiency Obligation (ECO) has declined from an average of nearly 70,000 measures installed per month in October 2013 to September 2014, to an average of just below 17,000 measures installed per month in October 2022 to September 2023.⁵⁴

Additionally, there are fears that the rate of change to low carbon heat sources is too slow. 55 This is despite applications for Government grants surging after the subsidy for heat pump installations was raised from £5,000 to £7,500 last year. 56

It is projected that 80% of the UK buildings that will exist in 2050 have already been built.⁵⁷ This means that low carbon heat and energy efficiency retrofit (improving the insulation of housing through things such as cavity wall or loft insulation) is critical.

Concerns relating to scheme delivery

Our scheme administration function is large, managing significant operational volumes of work across several specialist teams. The work is complex and fast paced. Given the huge importance of meeting net zero and fuel poverty targets, it is imperative that we are well positioned to readily respond to any increases in scale or schemes that may be required, in a way that optimises spend of public money, while mitigating delivery risk through good systems, processes, and governance.

A key consideration is how to ensure these schemes reach those who would benefit most or are in the greatest need of support. In a climate of significant change, we will focus our attention on new scheme activities that: align to our position as GB's independent energy regulator; make effective use of our deep understanding of delivery; enable us to utilise the scheme user insight available to us; and where applicable, bring to bear the wider expertise that exists across our organisation.

^{54 &}lt;u>Household Energy Efficiency Statistics (January 2024) | DESNZ and Department for Business, Energy & Industrial Strategy</u>

⁵⁵ Fewer than 1 in 4 MPs believe UK will meet heat pump targets | MCS Foundation

⁵⁶ Heat pump grants increased by 50% | DESNZ

⁵⁷ Scaling Up Retrofit 2050 | The Institution of Engineering and Technology

We also work collaboratively with Government, and other stakeholders, to agree on decisions (including the role of Delivery and Schemes as it relates to individual schemes) to ensure the best chance of delivering policy goals.

Where we will focus our energies to maximise impact

To deliver the above strategic outcomes, we have six focus areas. These will improve our scheme delivery function, enabling more effective delivery against our current remit and existing scheme portfolio, while improving our ability to tackle the mission critical challenges of net zero and fuel poverty.

- 1. Recognising that people are our most important asset: The development and subsequent administration of schemes is complex and dependent on the expertise of the people that work in this area. Across our organisation, it is fundamentally important that we attract, develop, and retain diverse people with the right skills, ensuring that the working environment nurtures and gets the best out of everyone.
- **2. Delivering next generation platforms:** We must make the transition to net zero easy for scheme participants and consumers: data and digital is at the centre of this. We will continue to invest in the next generation of platforms. These will help us use data to amplify the voice of the customer and allow us to better meet and exceed their expectations by making it easier for them to understand the benefits of scheme participation and streamlining the application process where possible. New platforms will also make schemes more flexible, cost effective, and secure.
- **3. Embracing AI and automation:** We will invest in AI pilots that, over a 5-year period, allow the application of AI and automation to become embedded and widespread. This will lead to a more efficient organisation, where some process-heavy work is automated, and scheme users benefit from improved experiences and availability of information.
- **4. Enhancing our counter fraud capabilities:** Each year we administer billions of pounds across our schemes (£9.9bn in 22/23). Based on international estimates, public bodies generally lose between 0.5% and 5% of their spending to fraud and related loss.⁵⁸ In the face of this level of risk, enhancing our counter fraud capabilities is of paramount importance. We

⁵⁸ <u>Guide to Understanding the Total Impact of Fraud | International Public Sector Fraud</u> <u>Forum</u>

will build on the robust systems we have in place to identify and mitigate risk – by deploying technology to spot trends and facilitate analysis, and by building relationships with the best counter fraud practitioners. We aim to be recognised as leaders in counter fraud practice.

- **5. Reflecting our administrative experience and core role:** We will facilitate the net zero transition by administering schemes that are well aligned to our regulatory scope. We will increase pace with early policy development, working closely with Government during scheme design, sharing our advice and expertise on scheme development and implementation. Our experience shows that early engagement with Government on new schemes and potential delivery models enables a thorough assessment of the potential approaches and delivery partners helping to reach the best approach for any scheme.
- **6. Mitigating delivery risk through corporate excellence and flexible delivery:** The work involved in the administration of schemes is markedly different to other functions within our organisation, with a far greater focus on operational delivery. This increases the importance of our support functions and activities (for example planning, risk management, assurance, and continuous improvement) that increase the quality, value for money, and effectiveness of the work we do.

Through the schemes that we administer there is an opportunity to significantly contribute to the big societal challenges of achieving net zero and fuel poverty targets. In many instances the schemes are a direct touch point with energy consumers, bringing to life the principal objective we have to protect the interests of existing and future energy consumers and our new net zero duty.



Strengthening Ofgem as an organisation

Ofgem's Multiyear Strategy

5. Strengthening Ofgem as an organisation

We must evolve to deliver for consumers in a fast-changing and increasingly complex sector.

We have made important changes, learning the lessons from the energy crisis, and are committed to going further to ensure that we are:

- Consumer-focused
- Accountable and transparent
- Evidence-based
- Meeting consumer needs in a changing world.

Across our work, we want to be innovative and agile. This means being intelligent in how we operate in a more complex system – making better use of data and applying systems thinking to navigating the increasing interlinkages between our objectives. It also requires us to attract and retain people with the capabilities, diversity, and experience needed to deliver on this Strategy.

Consumer-focused

We are putting consumers at the heart of our decision-making and delivery by:

- Applying our Consumer Interest Framework across our work (see 'Introduction').
- Proactively engaging with consumers, consumer groups, and charities. We are
 looking to embed a direct understanding of the consumer experience at every level
 of the organisation including our CEO regularly joining our consumer helpline team
 and taking complaints calls from consumers, and our Board hearing directly from
 consumer groups.
- Actively seeking input from business and domestic consumers and their advocates when making policy decisions.
- Making greater use of market monitoring and other data to help us understand how consumers are treated and their experience of the energy system.

Accountable and transparent

In an increasingly complex and interconnected system, how we work with others and communicate is more important than ever. This means being transparent about our decision-

making and accountable for delivery and working collaboratively on the strategic choices for the sector – where we often will not have all the answers or the levers to deliver change.

We are already accountable and transparent through:

- Being held to account by Parliament, including giving evidence sessions on request to parliamentary sub-committees, and our new Board who are appointed by Government and holds us to account for our performance.
- An annual audit plan conducted by external auditors, which is also shared with the
 National Audit Office who regularly attend our Audit Risk and Assurance Committee.
- Consulting on and then publishing our plans each year through our Forward Work
 Programme so that stakeholders know exactly what our priorities are for each year.

We are committed to going further:

- Improving the quality of our performance reporting to provide greater visibility of our impact. We will publish more information on this in due course but expect to report annually against metrics that flow clearly from this Strategy's priorities.
- Building on the structured regular engagement we have across our key stakeholders
 with a clear focus on collaborating to continue publicly developing our Strategy.

Evidence-based

Our decisions are becoming more complex. Delivering for consumers in this context requires even greater rigour and accuracy in our decisions. We will achieve this by:

- Asking for evidence from across the sector when making decisions through formal calls for evidence and direct engagement.
- Investing in our skills and capabilities so that we are applying the most relevant approaches to our decision making. We are expanding our central research, modelling, and economic capacity by a third, strengthening our Monitoring,
 Supervision, Compliance and Enforcement function, and improving our ability to quality assure, analyse, integrate, and escalate data.
- Conducting our monitoring, evaluation, and impact assessments in accordance with published government standards.

 When publishing decisions also presenting our analysis of the evidence and consultation responses – so that stakeholders can understand how we reached our conclusions.

Meeting consumers' needs in a changing world

This Strategy covers Ofgem's main priorities for the coming years. The future, though, is uncertain. No static strategy document will ever be able to predict all possible change. This is especially true for the pivotal period that the sector is going through. We also recognise that we do not have all the answers or policy levers to deliver the change required.

We are therefore committed to ensuring that our Strategy is **regularly updated**, **easy to understand**, **and developed in partnership with consumers and the sector**. We will do this by:

- Renewing our Strategy as required: updating our annual public planning process –
 whereby we consult publicly on our plans for the year ahead by adding specific
 analysis of how this Strategy has evolved since its publication.
- Building on our established engagement with a wide range of stakeholders to embed, monitor, and evolve the Strategy, through:
 - Regular engagement that is cohesive and consistent, and not purely focused on publications or milestones.
 - A broad range of stakeholder insight, reflecting the range of parties involved in delivering the best outcomes for consumers.
 - o A commitment to amplifying the consumer voice in our decision-making.