



Department for
Energy Security
& Net Zero

Draft Strategy and Policy Statement for Energy Policy in Great Britain

February 2024

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Presented to Parliament pursuant to Section 135(8) of the Energy Act 2013



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Introduction

The power to designate a Strategy and Policy Statement (SPS) for energy policy in Great Britain was introduced by the Energy Act 2013. This is the first time that this power will be exercised. As provided for in section 131(2) of the Energy Act 2013, this statement sets out:

- the strategic priorities, and other main considerations, of His Majesty’s government in formulating its energy policy for Great Britain (“strategic priorities”),
- the particular outcomes to be achieved as a result of the implementation of that policy (“policy outcomes”), and
- the roles and responsibilities of persons who are involved in implementing that policy or who have other functions that are affected by it.

Government has set out the wider context of its strategic priorities for the energy sector in several papers over the years, including the [Energy White Paper](#) (2020), [Ten Point Plan for a Green Industrial Revolution](#) (2020), [Net Zero Strategy](#) (2021), [British Energy Security Strategy](#) (2022), [Energy Security Plan](#) (2023), [Net Zero Growth Plan](#) (2023) and [Transmission Acceleration Action Plan](#) (2023). These publications detail government’s aims of reaching its net zero targets¹, driving economic growth, reducing dependence on imported fossil fuels for heating and power, enhancing energy security, promoting infrastructure investment, creating green jobs, levelling up the country, protecting and improving the environment, and ensuring bills are affordable.

This statement complements these publications, providing guidance to the energy sector on the actions and decisions that are needed to deliver government’s policy goals, and places emphasis on where government expects a shift in the energy industry’s strategic direction. This statement does not introduce new roles or duties for bodies in the sector, it is comprised of only existing government policy, commitments and targets. It does not replace or override Ofgem’s principal objective or other duties Ofgem has. Nor does it replace the National Energy System Operator’s (NESO’s) objectives and duties set out in the Energy Act 2023. NESO was previously referred to in government documents and consultations as the Future System Operator (or FSO) but was re-branded in January 2024. Therefore, references to the NESO in this document should be read as referring to that body.

Ofgem, the independent energy regulator for Great Britain, has a duty to have regard to the strategic priorities set out in this statement when carrying out its regulatory functions. (In this context, “regulatory functions” are those under Part 1 of the Gas Act 1986 or Electricity Act 1989, and others to which its principal objective under those Acts applies, with some

¹ In 2019, the UK adopted a legally binding target to reach net zero greenhouse gas emissions by 2050 (Climate Change Act 2008). Scotland and Wales have since separately established their own legally binding targets of reaching net zero by 2045 (Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 and 2050 (Environment (Wales) Act 2016), respectively.

exceptions, such as when determining disputes²). Both the Secretary of State and Ofgem must carry out their respective regulatory functions in a manner that they consider is best calculated to further the delivery of the policy outcomes in this statement. This duty is not extended to some of the social and environmental schemes delivered by Ofgem³.

As the independent energy regulator, Ofgem is free to determine how it should make decisions and how it prioritises its duties within its decision making. Therefore, this statement does not direct Ofgem on how a strategic priority or policy outcome should be achieved, nor does it provide an indication of which strategic priority or policy outcome should be prioritised over another.

Government has taken powers to establish the NESO as part of the Energy Act 2023 and NESO will also have a duty to have regard to the strategic priorities set out in this statement when carrying out its functions. Given the NESO is currently being brought into existence, new NESO roles are still in development, and it will take time it to reach full maturity as a new organisation, we have kept references to NESO at a higher level in this statement. We instead plan to reflect how best to cover NESO in its substantive role once it is established.

Government has the power to review and revise the SPS in preparation for, or in connection with, the NESO's designation and will therefore consider in future when it is appropriate to do so.

Ofgem and NESO play important roles in the energy system and in the wider economy. Government expects private sector investment of around £100 billion in the energy sector in the period to 2030, with the expectation that this will support up to 480,000 jobs in 2030⁴. Through the effective pursuit of their statutory objectives, undertaken with reference to this SPS, Ofgem and NESO will help grow the economy, facilitate the net zero transition, and keep bills down for energy consumers, while maintaining a secure supply of energy.

How to read this document

The 'Roles and Responsibilities' chapter outlines the high-level roles of government, Ofgem and NESO. NESO's role in meeting the strategic priorities is set out in more detail in this chapter, as this SPS will be designated before the NESO is in existence and we consider it is important at this stage to set out NESO's roles in one place. Further details on government's and Ofgem's roles regarding specific policy areas are outlined within the subsequent three chapters, where appropriate. The remainder of this document is broken down into three chapters:

² Regulatory functions for the purposes of this SPS do not include Ofgem's functions in relation to the transport and storage of carbon dioxide under Part 1 of the Energy Act 2023, for which a separate SPS is provided for in Part 2 of the Energy Act 2023. In preparing an SPS for designation under Part 2 of the Energy Act 2023, the Secretary of State must take account of any SPS designated under section 131 of the Energy Act 2013.

³ For example, in general terms, this statement does not apply to the heat schemes which are enacted under section 100 of the Energy Act 2008.

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1148252/powering-up-britain-energy-security-plan.pdf

1. Enabling Clean Energy and Net Zero Infrastructure
2. Ensuring Energy Security and Protecting Consumers
3. Ensuring the Energy System is Fit for the Future

Each of these chapters begins with a list of the relevant strategic priorities and policy outcomes for that respective chapter. Additional context is then provided to clarify why this is a priority for government and to provide further context on the roles of those involved, at a high level.

Strategic priorities are high level statements on government's priorities for the energy sector. Policy outcomes are the specific results that government would like to see as a result of the strategic priorities.

The Legislative Framework

Part 5 of the Energy Act 2013 (sections 131-138) sets out the legislative framework for the Strategy and Policy Statement (SPS). The SPS replaces the previous Social and Environmental Guidance published in 2011 pursuant to section 4AB(4) of the Gas Act 1986 and section 3B(4) of the Electricity Act 1989.

Under section 131, the Secretary of State may designate a statement as the SPS for the purposes of Part 5. Section 131(2) prescribes the contents of the SPS as: the strategic priorities, and other main considerations, of His Majesty's government in formulating its energy policy for Great Britain ("strategic priorities"), the particular outcomes to be achieved as a result of the implementation of that policy ("policy outcomes"), and the roles and responsibilities of persons (the Secretary of State, the Authority or other persons) who are involved in implementing that policy or who have other functions that are affected by it.

Section 132(1) states that Ofgem must have regard to the strategic priorities in the SPS when carrying out its functions under Part 1 of the Gas Act 1986 and Part 1 of the Electricity Act 1989 and other functions of Ofgem to which the principal objective applies (with certain exceptions, for example in relation to disputes). Section 131(2) provides that the Secretary of State and Ofgem must carry out their regulatory functions in a manner which is best calculated to further the delivery of the policy outcomes, subject to the application of the Ofgem's principal objective. Section 133(3) provides that the duties imposed by section 132(1) and (2) do not affect the obligation of Ofgem or the Secretary of State to perform or comply with any other duty or requirement. This includes the Secretary of State's legal duty to have regard to the achievement of statutory targets set under the Environment Act, and the ambitions, goals and targets set out in the Governmental Environmental Improvement Plan 2023.

Government has extended the existing SPS framework to the National Energy System Operator (NESO). The Energy Act 2023 creates a duty for the 'Independent System Operator and Planner (ISOP)' (as NESO is referred to in the Act) to have regard to the strategic priorities set out in the SPS. The Act states that the ISOP must notify the Secretary of State if, at any point, it thinks that a policy outcome in the SPS is not realistically achievable. The notice must include the reasons for the conclusion and what (if anything) the ISOP is doing or proposing to

do for the purpose of furthering the delivery of the policy outcome so far as reasonably practicable.

Under section 135 of the Energy Act 2013, before designating the SPS, the Secretary of State must consult Ofgem, Scottish Ministers and Welsh Ministers on a draft statement, and then issue the revised draft for the purposes of further consultation to the required consultees and to such other persons as the Secretary of State considers appropriate. The statement must be approved by a resolution of each House of Parliament before the Secretary of State may designate it as the SPS. The Secretary of State will be required to consult with NESO on future iterations of the SPS as set out in the Energy Act 2023.

Under section 134, the statement must be reviewed as soon as reasonably practicable after five years of its designation. However, under section 134(4) the statement may be reviewed prior to the five-year period elapsing only if there has been: a general election; a significant change in the Government's energy policy which was not anticipated and would have led to the statement being materially different; Ofgem has given notice that a policy outcome contained in the statement is not realistically achievable; or the Parliamentary approval requirement in relation to an amended statement was not met on the last review.

Pursuant to section 137 (which amends the Utilities Act 2000), as soon as practicable after the designation of the statement, Ofgem must publish a document setting out: the strategy Ofgem intends to adopt for the purposes of furthering the delivery of the policy outcomes in the statement; the things Ofgem proposes to do in implementing that strategy (including when); and the ways in which Ofgem has had regard to the strategic priorities contained in the statement in setting out these plans. Ofgem must also report on the required information in its forward work programme for each financial year and include a review in its annual report of the ways it has carried out its duties under sections 132(1) and (2) and the extent to which it has done the things set out in its forward work programme or other document in relation to the statement.

Energy System: Roles and Responsibilities

This section sets out the roles and responsibilities within the existing legal and policy framework of government, Ofgem and the National Energy System Operator (NESO), as the bodies that have a duty to have regard to the strategic priorities in this statement. These roles and responsibilities may change or evolve over the period that this statement is in effect.

At a very high level, government is responsible for setting energy policy direction across Great Britain, Ofgem is the independent economic regulator and makes decisions on business and investment plans, and NESO will be whole system planner, operator of the electricity system and expert advisor to government and Ofgem as the key decision makers. Further details on the roles of each organisation are set out below.

Government

Government is responsible for setting the policy and regulatory framework for the energy sector in Great Britain. The Department for Energy Security and Net Zero is the sponsor department for Ofgem and the Secretary of State has a role in keeping Parliament informed of Ofgem's performance. Ofgem's relationship with the UK Government through the Secretary of State for the Department for Energy Security and Net Zero is primarily set out in Part 1 of the Utilities Act 2000. HM Treasury has principal oversight of Ofgem's finances.

Certain functions in the energy sector are reserved for the Secretary of State, including defining the extent of the regulated industry by deciding on licence exemptions, and appointing members of the Gas and Electricity Markets Authority ('the Authority'). The Secretary of State is subject to the same principal objective and general duties as Ofgem (see below) in respect of carrying out most of its statutory functions. The Secretary of State is also a statutory consultee with respect to certain powers of Ofgem to amend licence conditions and some decisions cannot be implemented if the Secretary of State objects. In addition, the Secretary of State's consent is required before the Authority can make particular regulations.

The Secretary of State will be the sole shareholder of the NESO, with responsibilities of the parties involved in the relationship between government and NESO set out in NESO's Framework Agreement, which will be published in due course.

Some aspects of energy policy fall within the legislative competence of the Scottish Parliament and government and the Senedd / Welsh Ministers. However, the policy areas that fall within Ofgem's remit are reserved to the UK Parliament and Ministers (see Schedule 5 to the Scotland Act 1998 and Schedule 7A to the Government of Wales Act 2006).

Ofgem

Ofgem, the Office of Gas and Electricity Markets, is the non-ministerial government department that supports the Authority. The Authority is established as the independent economic regulator of gas and electricity markets in England, Scotland and Wales under the Utilities Act 2000. We use "Ofgem" in this document as a short-hand way of referring to the Authority as well as Ofgem itself. Ofgem is an independent regulator and thus takes its regulatory decisions independently, and within its regulatory powers it is free to decide on the most appropriate regulatory approach to a particular issue. Ofgem is directly accountable to Parliament for the performance of its functions and duties. This section summarises Ofgem's existing statutory duties.

The Authority determines strategy, sets policy priorities, and makes decisions on a wide range of regulatory matters, including price controls and enforcement. The Authority's powers and duties are provided for in statute: these include, but are not limited to, the Gas Act 1986, Electricity Act 1989 and Utilities Act 2000. As set out in statute, the Authority's principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution or transmission systems. The interests of such consumers are their interests taken as a whole, including their interests in the security of the supply of gas and electricity to them.

The Energy Act 2023 has recently provided for the modification of Ofgem's duties, as set out in the Gas Act 1986 and Electricity Act 1989, by including a duty for Ofgem to consider consumers' interests in the Secretary of State's compliance with the net zero targets and five-year carbon budgets provided for in sections 1 and 4(1)(b) of the Climate Change Act 2008. Government has also confirmed that it intends to add Ofgem to the list of regulators that must comply with the growth duty provided for in the Deregulation Act 2015. Once implemented, this would require Ofgem to have regard to the desirability of promoting economic growth when carrying out its core regulatory functions.

The Authority must carry out its functions in the manner which it considers best calculated to further the principal objective, wherever appropriate, by promoting effective competition within the electricity and gas sectors. Before deciding to carry out its functions in a particular manner with a view to promoting competition, the Authority must consider the extent to which the interests of consumers would be protected by that manner of carrying out those functions and whether there is any other manner (whether or not it would promote competition) in which the Authority could carry out those functions which would better protect those interests. The Authority must also, in this context, have regard to the need to: secure that all reasonable demands for electricity and gas are met; secure that licensees can finance their regulated activities, and contribute to the achievement of sustainable development. Furthermore, it must have regard to the interests of those who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas, and may have regard to other types of vulnerability.

The Authority must also carry out its functions in the manner which it considers best calculated to protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of

electricity; to secure a diverse and viable long-term energy supply, and shall, in carrying out those functions, have regard to the effect on the environment.

Ofgem has powers under consumer protection legislation, including the Competition Act 1998, Consumer Rights Act 2015 and the Business Protection from Misleading Marketing Regulations 2008, to investigate and enforce against breaches of consumer protection law.

Ofgem will also be the regulator of NESO. It will be responsible for approving its business plan, ensuring cost-efficiency and driving high performance.

National Energy System Operator (NESO)

Government has taken powers, as part of the Energy Act 2023, to establish a new, publicly owned National Energy System Operator⁵ (referred to as the Independent System Operator and Planner or ISOP in legislation).

Our energy landscape is becoming increasingly integrated and complex in our drive to net zero. This calls for a central body that is able to weigh up and advise on the impacts and trade-offs across energy sectors and plan and co-ordinate our energy system from a more strategic, whole system perspective. This is why we are establishing the NESO at the heart of the energy system. NESO will take on responsibilities across electricity, gas and hydrogen, including all the existing functions of the electricity system operator (ESO), so it is able to take an enhanced whole system approach to planning and operating the energy sector.

As set out in the Energy Act 2023, NESO will be required to carry out its functions in the way that it considers is best calculated to promote the objective of ensuring security of gas and electricity supply, meeting our statutory decarbonisation targets and promoting coordinated, efficient and economical systems for the conveyance of electricity and gas (as well as efficiency and economy on the part of key players in the energy supply chain).

NESO will be a public corporation, that will be independent from other commercial energy interests as well as from operational control of government. The government will be sole shareholder of NESO, and thus retain ultimate responsibility, however it will not exercise control over NESO's operations. NESO will be licensed and regulated by Ofgem and funded by consumers through price control arrangements.

⁵ This is the name currently given to the body that will be designated as the Independent System Operator and Planner (ISOP) under Part 5 of the Energy Act 2023. References to NESO in this document should be read as referring to that body. Part 5 of the Energy Act provides for the ISOP to have duties in respect of any Strategy and Policy Statement (SPS) designated under the Energy Act 2013. Accordingly, this SPS includes references to the ISOP and NESO (meaning the same body in either case). However, this SPS may be designated before a body is designated as the ISOP, and although the ISOP, when designated, will take on some functions that already exist (e.g., the role of electricity transmission system operator), many of its responsibilities (including those related to the SPS) will be completely new. Until an ISOP is designated, no body (including any entity that government may indicate as likely to be designated as ISOP) is subject to any of the duties assigned to the ISOP in respect of the SPS. However, as and when an ISOP is designated, the SPS will apply to NESO in the way envisaged by the legislation.

We set out below an overview of the core roles, responsibilities and statutory duties of NESO that will enable it to meet its statutory objectives. We have listed these under the relevant chapters set out in this statement for ease of reference. Given NESO has not yet been brought into existence and new NESO roles are still in development, this is not meant to be an exhaustive list or description and may change or evolve over the course that this statement is in effect.

Enabling Clean Energy and Net Zero Infrastructure

Economically efficient, co-ordinated and flexible system: As part of ensuring a more flexible, coordinated and economically efficient energy system that meets our decarbonisation targets, NESO will need to take a strategic approach to whole system planning, that is able to deliver investment ahead of need. When in place, this will initially be delivered via a [Centralised Strategic Network Plan \(CSNP\)](#) for electricity transmission onshore and offshore, building on ESO's current role in delivering the Holistic Network Design. This will include early consideration of the deliverability, economic cost and environmental and social impacts. As part of this, NESO should be considering opportunities to shift and manage demand through smart solutions, such as electricity or hydrogen storage, demand side response and low carbon generation. From Day 1, NESO will also be undertaking strategic gas network planning and building up capability to undertake its future role in hydrogen strategic network planning to ultimately combine to produce a whole system energy plan. It will work with Government to produce a Strategic Spatial Energy Plan, bridging the gap between Government policy and energy infrastructure development plans, including engaging on wider work to map land and marine use, as well as wider planning reform. Ofgem also confirmed plans for NESO to take on responsibility for implementing a number of Regional Energy System Planners (RESPs) across Great Britain, tasked with strategic planning at a distribution level. We expect these approaches to all align and complement each other.

Whole system impacts: As above, NESO should build up capability to take a whole system view of network planning, design and markets across electricity, natural gas and hydrogen, which also considers the system impacts of nuclear, heat, transport, renewable generation and other emerging technologies, such as carbon capture usage and storage (CCUS) and Direct Air Capture (DAC)⁶. This will require NESO to build-up strong system modelling expertise within its organization, so it can effectively analyse problems and find solutions in a way that cuts across traditional sectoral siloes, looking across vectors and end-to-end (i.e. offshore and onshore, from generation or source across transmission and distribution through to demand). This would be underpinned by its statutory duty to have regard to whole system impacts, its efficiency and economy objective and its duty to keep under review developments in the energy sector that may be relevant to the carrying out of its functions. This will enable NESO to provide independent recommendations from a whole system perspective to Ofgem, and advice to government to inform key policy decisions needed to meet net zero.

⁶ This is not intended to be an exhaustive list of what should be considered as part of whole system impacts, and further technologies may develop that need to be considered.

Competition and innovation: Subject to the Secretary of State's discretion, NESO is expected to be the tender body for onshore electricity network competition. This should be delivered at scale and pace to meet decarbonisation targets in the most fair and cost-effective way. More generally, NESO will have a statutory duty to have regard to the need to facilitate competition and also to have regard to the desirability to facilitate innovation within itself and in the wider sector, where it should be seeking to drive effective change and innovation across the energy system.

Ensuring Energy Security and Protecting Consumers

Security of supply and resilience: NESO will have an objective to ensure security of supply of the electricity and gas infrastructure when carrying out its functions. In electricity this includes continuing ESO's roles in maintaining real-time operation and balancing of the electricity system and delivery of the Capacity Market, as well as supporting government's Review of Electricity Market Arrangements (REMA). NESO will also adopt a whole energy system coordination role for improving the security and resilience of gas and electricity systems and undertake assessment of medium range gas supply security as set out in the [Energy Security Plan](#) (2023). National Gas Transmission will retain responsibility for real-time operations and balancing for the gas network.

Consumer impacts: NESO will have a statutory duty to have regard to how the actions of energy sector participants (including themselves) impact or may likely impact current and future consumers, and vice versa. Increasingly, moving to net zero will depend on the choices made by consumers as well as industry, and NESO should seek to understand how the behaviours and preferences of each party influences the other, to ensure the energy system is flexible to meet the needs of users and the end consumer in Great Britain.

Ensuring the Energy System is Fit for the Future

Flexible and responsive markets: NESO should be looking to support the delivery of market developments through a whole system lens, engaging with industry participants and recommending changes across electricity and gas that support effective market arrangements for the system. NESO will be expected to drive competitive, coordinated, and effective markets which are open to flexibility technologies of all types and sizes.

Digitalisation: NESO will be expected to be a data-led organisation, with a strong digital and IT systems capability, and lead by example in improving sectoral energy data practices that are integral to the well-coordinated and cost-effective delivery of net zero. This will also be supported by its duty to have regard to the desirability to facilitate innovation, and its power to request information from licensees and other relevant parties.

Cross-cutting

Advice: NESO will have a statutory duty to provide advice, analysis and information to Ofgem and government, when requested, in connection with NESO's functions, duties and objectives. The purpose of this is to enable government and Ofgem to draw on the specific expertise of NESO and allow policy decisions to be based on robust evidence, with NESO's independent

consideration of whole system network impacts and requirements. As part of this role, we expect NESO to be adaptable to respond to these requests for advice, and flexibly react and intelligently engage with government and Ofgem to actively shape the key decisions that will determine the energy system of the future. As part of its independence, NESO would come to its own view on the appropriate advice to give to Ofgem and Government.

NESO's roles will continue to evolve as it builds up capability to take on this wider whole system remit, and therefore we expect NESO to be prepared and adaptable to take on new roles in future.

Modifications will be needed to industry arrangements, including codes and licences, to reflect the establishment of NESO. Depending on a number of factors, including agreeing timelines with key parties, our aim is for NESO to be operational in 2024.

Section One: Enabling Clean Energy and Net Zero Infrastructure

Government's Strategic Priorities are:

- To meet the UK's net zero and climate change targets, including the carbon budgets set under the Climate Change Act 2008 and the target for a decarbonised electricity system by 2035, subject to security of supply
- A strategic, whole system approach to plan and build reliable, resilient, sustainable network infrastructure which is appropriately connected to wider markets.
- Enabling anticipatory investment to build network infrastructure at scale and pace, ahead of need, to meet the demands of a decarbonised energy system as electrification grows, while controlling system costs by facilitating a smart, flexible and digitalised energy system.
- Driving a net zero transition by achieving government targets for renewable and low carbon deployment, innovation and uptake of clean technologies, and providing opportunities to increase energy efficiency.
- The transition to net zero alternatives from the unabated use of natural gas is planned and operated in a strategic and coordinated way, giving consideration to security of supply, system resilience, and costs for consumers, enabling necessary investment and promoting the move to the most cost-effective low carbon options wherever possible.
- Competitive and effective markets and regulation that facilitate the anticipatory investment required in innovation, clean technologies, and infrastructure to meet government's net zero targets while ensuring an appropriate balance between economic, environmental, and social costs, and addressing undue barriers to entry, growth, and innovation.
- Ensuring the benefits of investment in clean energy and net zero infrastructure are felt across the UK, from emissions reduction to economic development and job creation, in line with government's levelling-up agenda.

Government's Policy Outcomes are:

- Network regulation, including the appropriate use of competition, that enables the accelerated delivery, ahead of need, of electricity network and storage infrastructure to accommodate rapidly expanding and variable renewable generation capacity and demand from low-carbon technologies.
- As outlined in the [British Energy Security Strategy](#) (2022) and [Transmission Acceleration Action Plan](#) (2023), dramatically reduce timelines for delivering strategic

onshore transmission network infrastructure and halve the end-to-end process, from system need identification to solution delivery, by the mid-2020s.

- A strategic, whole system approach to long-term energy planning that incorporates generation, demand, and network infrastructure, including their spatial characteristics, and takes early consideration of the deliverability, economic cost, and environmental and social impacts.
- A strategic approach to the development of hydrogen transport and storage infrastructure, ahead of need, to enable the decarbonisation of relevant sectors and the realisation of whole energy system benefits, supported by appropriate business models and regulation.
- Ensuring NESO has the relevant licenses and codes to effectively undertake whole system strategic and spatial planning, with the capability to incorporate hydrogen alongside electricity and natural gas, and consider the deliverability, economic cost, environmental and social impacts.
- Gas networks are prepared for a transition to a low carbon future, with the feasibility and costs associated with different low carbon options or decommissioning assessed and appropriately prepared for, including in relation to strategic decisions on domestic heating in 2026.
- Electricity system operability that is consistent with government's commitments on carbon emissions reduction, energy security and reducing costs for consumers, including addressing constraints on the electricity network.
- Significant and urgent reform of the electricity connections regime so that new generation and demand projects critical to net zero can connect to electricity networks in a cost-effective and timely manner, and in a way that meets the needs of connection customers and the energy system as a whole.
- Greater visibility of network data to inform decisions by both network operators and consumers, and drive innovations.
- Significantly increased uptake of low carbon heating by 2035, including meeting government's ambition to deploy 600,000 heat pumps per year by 2028, in line with the target to cut emissions by 78% by 2035.
- For heat networks, enforcement of carbon emission limits, evidence of compliance with technical standards on the design and build of heat networks, appropriate consumer protections, and a licensing regime for heat network developers.
- Development and implementation of an effective regulatory framework for carbon capture, usage and storage (CCUS) that enables a regulated rate of return to incentivise investor confidence and protects the interests of the relevant infrastructure users.
- Sustainable funding models, alongside well-coordinated public and private investment, to best enable successful testing and rollout of innovative solutions, and to ensure that private finance investments does not distort the market.

- Barriers to multi-purpose interconnectors and other hybrid or novel assets are removed, and interconnectors support security of supply by operating as efficiently, economically, and transparently as possible.
- The flexibility of demand and system benefits provided by different low-carbon energy technologies can be sufficiently monetised by the providers of that flexibility.

Investment, Innovation and Competition

As set out in the [Net Zero Growth Plan](#), investment is the key to delivering our energy security and carbon targets, and seizing the economic benefits of the transition to net zero.

Government will ensure that the legal and institutional framework exists which can promote investment and competition and have the best chance of cost-effectively delivering a net zero energy system which is resilient and maintains security of supply. Ofgem shall be responsible for promoting effective competition, wherever appropriate, and ensuring there is fair competition between existing players in the energy sector and new entrants. Electricity Systems Operator (ESO) should prepare to undertake the role of developing the commercial model and tender process for early competition, with a view that this role should transition to NESO. Ofgem will need to balance the need to drive competition with other factors such as the need for accelerated deployment of infrastructure, the benefits of stable, predictable, and transparent regulatory arrangements, supply chain challenges (including around long-term procurement) and the need to support whole market growth and the impact of costs and barriers on all consumers.

Ofgem's role will be to encourage cost-effective anticipatory investment – facilitated by the network price control, charging regimes and the appropriate use of competition – in the low carbon infrastructure and technology needed to deliver net zero ensure that it is efficiently spent. Ofgem should consider the impact of regulatory decisions on market participants' ability to deliver large infrastructure projects required to achieve net zero and procure necessary components in an economically efficient fashion.

New technologies and innovative business models will be crucial for meeting net zero, and innovation requires the right market, policy, and regulatory environment to be successful. Alongside competitive markets, government is working to ensure effective policy support and stability to encourage innovation. Ofgem has a key role as the sector regulator, ensuring that regulation is proportionate and allows for key innovations that will contribute to net zero and drive down costs for consumers.

Strategic Spatial Energy Planning

Government acknowledges that a more strategic approach to spatial planning will enable a coordinated, whole systems approach to the planning of generation and network infrastructure, creating a more efficient system and reducing waiting times for generation projects to connect to the grid.

Government has therefore committed to the production of the first ever Strategic Spatial Energy Plan (SSEP), giving industry the certainty needed to build with confidence. The SSEP will define the optimal location of generation and infrastructure required to meet forecast demand and our 2050 targets. This will allow us to provide industries with the certainty they need and enable the creation of a transmission network blueprint in the CSNP.

In the [Electricity Networks: Transmission Acceleration Action Plan](#) (2023), we announced plans to commission the ESO, in advance of becoming NESO, to work with government to develop an interim SSEP. This also includes alignment with statutory planning and consenting processes, wider planning reform and work to map out economy-wide land and marine use, whilst respecting devolved competencies. This will cover infrastructure for power generation, including offshore generation in Great British waters, and hydrogen assets, so we can create a more efficient electricity network and reduce waiting times for generation projects to connect to the grid. Our intention is that this will evolve to cover the whole energy system plan in the future.

Ofgem also confirmed plans for NESO to take on responsibility for implementing a number of Regional Energy System Planners (RESPs) across Great Britain, tasked with strategic planning at a distribution level. Government will work with Ofgem and NESO to ensure that the SSEP and Regional Energy System Plans, including the processes and outputs, are aligned and complimentary.

Increased Network Capacity for Low Carbon Supply and Demand

The electricity and gas transmission and distribution networks need to be transformed to meet the demands of a decarbonised energy system and to meet government's ambitions for low-carbon and renewable energy generation. The growth of low-carbon electricity generation will need to accelerate significantly. The mass uptake of electric vehicles and heat pumps (both for individual dwellings and in heat networks) will create significant new and variable demands for power. Network capacity will therefore need to adapt and expand ahead of need. Such a significant transformation requires a new approach to network development including: the accelerated rollout of electricity transmission and distribution networks; halving the end-to-end process for onshore transmission network infrastructure by the mid-2020s; reforms to ensure cost-effective and timely connections; the adoption of flexible and whole systems solutions; and enabling strategic and anticipatory investment. These are likely to require appropriate adjustments to Ofgem's regulatory framework.

As both electricity demand and the intermittency of generation increases, Ofgem and NESO should work together to consider opportunities across the whole system to shift and reduce demand through smart solutions such as energy storage and demand side response. Flexibility should be prioritised in the management of network use, including resolving network constraints, where this would be best value for consumers.

Government and Ofgem will work with ESO/NESO to ensure a regulatory environment that delivers investment ahead of need in the electricity, gas, and future hydrogen networks, while ensuring consumer costs are proportionate, including considering environmental and social impacts. In undertaking its statutory duty to protect consumers, Ofgem should consider the cost to consumers of delays to infrastructure delivery and the impact of disruption by multiple increases in network capacity over time, as opposed to a single significant strategic upgrade. To facilitate strategic investment and achieve the necessary acceleration in network deployment, Ofgem should significantly expedite the regulatory approvals process for strategic network infrastructure, as it did in its December 2022 decision on Accelerating Strategic Transmission Investment. Ofgem will have a role in enabling Transmission Owners to deliver community benefits to communities close to electricity network infrastructure, by considering the appropriate balance between adequate provision of benefits and affordability for consumers.

Ofgem will also be responsible for taking steps to remove regulatory barriers to Offshore Hybrid Assets, which includes Non-Standard Interconnectors (NSIs) and Multi-Purpose Interconnectors (MPIs), and to work closely with the system operator and industry to ensure domestic and cross-border market arrangements maximise the benefits of interconnection and facilitate their efficient use. To address the absence of a legal framework for MPIs, government will bring forward a licence for the operation of an MPI, under the Energy Act.

Additionally, Ofgem should work with ESO/NESO, industry partners and government to urgently address barriers to the efficient and timely connection of new low carbon generation and demand projects critical for net zero to the electricity network. This includes accelerating and significantly reforming the connections process and acting to address current delays, ensuring that connection costs are proportionate, and all network companies deliver strong and consistent customer service.

In its role of approving the design of network tariffs, Ofgem will need to balance several competing principles alongside the key principle of cost-reflective network charges, including:

- Enabling net zero: network charges may have a significant effect on how net zero is delivered, including through any locational price signals that are sent. Alongside this, charging design should take due account of other relevant system factors that influence location. Supporting arrangements should also continue to recognise the relative value, benefits and disbenefits of all technologies connecting – or already connected – to the electricity network.
- Fairness: including that there should be no undue discrimination between network users; earlier adopters of key low carbon technologies should not be unduly penalised through network charging arrangements; network users should not be able to unduly avoid network charges; and consumers in vulnerable situations should receive an adequate level of protection.
- Predictability: the evolution of the energy system means that network charges will inevitably need to evolve over time, but charges should be clear to stakeholders and as predictable as possible.

- Transparency: the level of network charges and the possible impact of any proposed reforms should be transparent, and accessible to all relevant parties.

The Role of Natural Gas and Hydrogen

As we decarbonise our economy we will continue to rely on unabated natural gas. Alongside clean technologies, unabated natural gas can provide a flexible and reliable source of energy to provide peaking generation, ensuring security of supply whilst we develop and deploy low carbon alternatives that can replicate its role in the electricity system. Government will work with Ofgem to prevent distortions in the gas market and ensure the right price signals are in place to enable a cost-effective transition to net zero. In the meantime, the natural gas system plays a vital role in our energy mix, including contributing towards security of supply. The continued resilience of necessary infrastructure remains a key priority in order to maintain our safe, efficient and reliable gas networks.

As unabated natural gas is phased out, renewable and low carbon sources of gas, including hydrogen, will be critical alongside electricity to provide greener energy for industry, power, transport and potentially home heating. An integrated hydrogen network can link producers and consumers and provide resilience, support energy security and system balancing by storing energy, including at scale and seasonally. A well-developed network of hydrogen transport and storage (T&S) infrastructure is considered to be a central component of the UK hydrogen economy and a key enabler for government's ambition of up to 10GW of low carbon hydrogen production capacity by 2030, subject to affordability and value for money. As set out in the [UK Hydrogen Strategy](#) 2020s roadmap, government envisages hydrogen T&S to develop within clusters and then on a regional and/or national scale from the late 2020s into the mid-2030s onwards, serving an increasing number and variety of end users.

Cross-cutting strategic planning for hydrogen infrastructure will be beneficial to ensure that whole energy system benefits are realised. Given government's commitment to developing the hydrogen economy at pace, government will continue to work collaboratively with Ofgem to consider what work needs to happen now and what appropriate funding mechanisms could be used to support the development of hydrogen network infrastructure. Ofgem will have an important role, working closely with NESO (as it takes on strategic network planning for hydrogen T&S), industry partners and government, in addressing any barriers which prevent the development of this hydrogen infrastructure in the near-term. This, in addition to government's commitment to design new transport and storage business models by 2025, will help ensure that a suitable framework is in place to support the growth of the hydrogen economy.

Government is working with Ofgem to support industry to deliver a low carbon hydrogen heating neighbourhood trial by 2024 and plans for a hydrogen heated town by 2025. The neighbourhood trial and planning work, together with evidence from a wider research and development and testing programme and international trials, will enable government to make strategic decisions in 2026 on the role that hydrogen heating should play in heat decarbonisation, alongside heat pumps and heat networks. Enabling early feasibility studies for

hydrogen network projects within and potentially beyond industrial clusters could contribute to the evidence base that will inform decisions in 2026 on the role of hydrogen for domestic heating.

Ofgem has and shall continue to play an important role working with government and industry to ensure the necessary work in the gas system is identified and planned effectively and efficiently. Funding allowed by Ofgem under the regulatory arrangements for networks has and will continue to be an important enabler of the necessary research and development, including the pioneering programme of trials of hydrogen heating.

Ofgem's continuing contribution to government policy development on hydrogen infrastructure, including market and regulatory frameworks, will be important in supporting hydrogen's role in reducing the UK's carbon emissions across multiple sectors.

Government will continue to work with Ofgem, the Health and Safety Executive, the Devolved Administrations, the gas networks, and wider industry to understand the case for hydrogen blending and help build the necessary evidence-base to determine whether blending meets the required safety standards, is feasible, and represents value for money. Government is aiming to reach a strategic policy decision in 2023 on whether to support blending of up to 20% hydrogen by volume into the GB gas distribution networks.

Heat Pumps and Heat Networks

Heat pumps and heat networks are established technologies that will be the primary means for decarbonising heating over the next decade and play a key role in all 2050 scenarios. Ofgem shall have an important role in helping government deliver the ambitions set out in the [Heat and Buildings Strategy](#) (2021). Whilst government decides heat pump policy, Ofgem is responsible for ensuring regulatory conditions support the heat pump market to grow and for ensuring the required infrastructure is in place to facilitate heat pump deployment up to 2050, through system planning and network investment. Ofgem could play an important role in facilitating other key policies on low carbon heat, such as minimising costs or increasing levels of flexibility through the system.

Heat networks are a crucial aspect of the path towards decarbonising heat and reaching net zero by 2050. In the right circumstances, they can reduce bills, support local regeneration and be a cost-effective way of reducing carbon emissions from heating. Government has appointed Ofgem as the heat networks regulator across Great Britain via the Energy Act 2023. Ofgem's role will include monitoring industry performance and engaging with regulated parties where it sees poor customer outcomes such as disproportionate pricing, poor levels of reliability, service and transparency. Ofgem's role will also include supporting and advising government on any heat pump and hydrogen rollout from a system perspective.

The regulatory framework will also facilitate market growth by providing heat network developers with access to powers equivalent to other utilities, such as gas and electricity, including powers to excavate roadways. It will ultimately introduce technical standards and

carbon emissions limits on heat networks to deliver more efficient, low carbon heat networks. Ofgem will be responsible for monitoring compliance and will have powers to take enforcement action where necessary.

Carbon Capture, Usage and Storage (CCUS)

Carbon dioxide transport and storage networks will be the enabling infrastructure for carbon capture from a range of potential sources, including power plants, industrial facilities, low carbon hydrogen production, carbon capture from energy from waste, carbon capture from bioenergy and potentially direct air capture.

Supporting the development and deployment of CCUS in the UK is a government priority and as such government is committed to supporting the deployment of four CCUS clusters by 2030. The Hynet Cluster and the East Coast Cluster were announced as Track 1 Clusters in October 2021. In July 2023, government announced that the Acorn and Viking carbon dioxide transport and storage systems were being taken forward in the Track 2 process. CCUS can play a key role in meeting the UK's 2050 net zero target and supporting the low-carbon economic transformation of our industrial regions, creating new high value jobs and levelling up the economy. The Climate Change Committee have described CCUS as a 'necessity, not an option' for the transition to net zero.

The Energy Act 2023 establishes a new economic regulation and licensing framework for carbon dioxide transport and storage, designed to attract private finance and remove market barriers to investment, providing long-term revenue certainty needed to establish and scale-up the first- of-a kind carbon dioxide transport and storage networks across the UK. The Act establishes Ofgem as the economic regulator for carbon dioxide transport and storage, with statutory objectives and legal powers to regulate the economic licensing regime. When carrying out its functions as economic regulator, it will be important for Ofgem to engage with relevant devolved authorities in order to promote efficient outcomes in areas of common interest.

Users of the carbon dioxide transport and storage networks are expected to include users from across the energy sector, but also other sectors, in particular industrial facilities. Given this broader scope, the Energy Act 2023 provides for a CCUS Strategy and Policy Statement to be designated by the Secretary of State, which must take into account any strategy and policy statement designated under section 131 of the Energy Act 2013 in respect of energy policy. Government will be publishing a CCUS Vision Statement by the end of 2023 setting out its view on the future development of CCUS.

Nuclear

Nuclear is a critical element of the UK's energy security and transition to net zero ambition. It is a form of low-carbon, home-grown, energy-dense electricity generation that has been proven

at scale, providing reliable, safe electricity when the wind does not blow and the sun does not shine, at prices that are not buffeted by international hydrocarbon markets.

Over the past six years, nuclear has typically generated between 15-20% of GB's electricity. However, eight of the UK's nine operating reactors (which account for 4.6GW of the UK's current 5.8GW current nuclear capacity) will be closed within this decade. Construction of Hinkley Point C – the UK's first nuclear power station in a generation, which will generate 3.2GW of electricity – is well underway in Somerset, but if government is to continue to work towards its Net Zero goals the supply of clean energy generated by nuclear must continue. This is why the British Energy Security Strategy set an ambition to deploy up to 24GW of civil nuclear power by 2050, meeting around 25% of the UK's anticipated electricity demand. The Civil Nuclear Roadmap, published in January 2024, set out further detail on the actions government will take to reach this ambition in collaboration with industry.⁷

Since November 2022, government has been a shareholder in the Sizewell C project with EDF and made available a total of £2.5bn of investment to support the project's development. In September 2023, government and the Sizewell C Company began a process to bring private equity investment into the project.

Government has committed to a programmatic approach to the delivery of new nuclear projects beyond Sizewell C, giving industry and investors the confidence necessary to deliver projects at pace, reducing costs through learning and replication. To deliver this, we have launched Great British Nuclear (GBN) an arm's-length body responsible for helping deliver new nuclear projects. This approach will not only give the supply chain the long-term certainty it needs to invest in homegrown capability and skills, but in time it will offset plant retirements and strengthen UK energy independence.

In 2023 GBN launched a Technology Selection Process TSP for Small Modular Reactors (SMRs), with the aim of identifying those technologies best able to reach a project Final Investment Decision (FID) by the end of 2029 and deliver projects in the mid-2030s, potentially releasing billions of pounds of private and public investment. In October 2023 six technology vendors were down-selected. The ambition is to announce in 2024 which of the six companies the Government will support.

In addition to this, government is consulting on alternative routes to market for new nuclear projects. The consultation aims to explore what steps government can take to enable different routes to market for Advanced Nuclear Technologies, the potential wider roles of nuclear energy beyond electricity generation and understand how government can support the private sector to bring forward new nuclear projects⁸. Government is also consulting on a new approach to siting new nuclear power generation beyond 2025, the first step in developing a new nuclear National Policy Statement⁹.

⁷ <https://www.gov.uk/government/publications/civil-nuclear-roadmap-to-2050>

⁸ <https://www.gov.uk/government/consultations/alternative-routes-to-market-for-new-nuclear-projects>

⁹ <https://www.gov.uk/government/consultations/approach-to-siting-new-nuclear-power-stations-beyond-2025>

Government has also developed its approach to the financing of new nuclear projects, and to making the UK one of the best places worldwide to invest in new nuclear. In March 2022, the Nuclear Energy (Financing) Act 2022 received Royal Assent. This legislation establishes use of the Regulated Asset Base (RAB) model as a means of financing new nuclear projects. The Sizewell C project became the first new project to be designated for a RAB in November 2022.

A key function of the RAB model is to allow electricity generation companies to receive a regulated revenue stream in exchange for the design, construction, commissioning, and operation of the nuclear project, funded by a mixture of wholesale market revenue and, if required, levies on all licensed electricity suppliers in Great Britain. A project's allowed revenue will be determined by Ofgem in accordance with the conditions of an economic licence. Ofgem will also act as the economic regulator and is required to act in accordance with its existing statutory duties, including its principal objective to protect the interests of both current and future consumers. Ofgem is also a statutory consultee throughout the process set out in the Nuclear Energy (Financing) Act 2022, to designate projects to benefit from the RAB model, to modify company licences with RAB conditions, and when making revenue regulations.

Section Two: Ensuring Energy Security and Protecting Consumers

Government's Strategic Priorities are:

- An energy system which is fair, safe, secure and resilient, including from supply shocks, changes in the international environment and the impacts of climate change.
- Energy wholesale markets that are competitive, transparent, and liquid.
- An energy system that provides protection for both domestic and non-domestic consumers, including a strong focus on protecting vulnerable domestic consumers, and delivers against the statutory fuel poverty target for England¹⁰.
- A retail market that works better for consumers, is more resilient and investable, and supports the electrification and wider transformation of the energy system in the most cost-effective way.

Government's Policy Outcomes are:

- Safety, security and resilience of the gas and electricity systems against the full range of threats and hazards facing the sector now and in the future.
- Energy market participants are financially robust.
- Regulators ensure the compliance of regulated entities with their obligations and take enforcement action or use other levers as appropriate.
- Existing investment market mechanisms, including the Capacity Market and Contracts for Difference, are improved, with the aim of facilitating decarbonisation and maintaining security of supply, whilst minimising overall costs to consumers.
- Restored consumer confidence in the energy retail market and high standards of customer service in the interactions that consumers have with retail energy market participants.
- The costs of the transition to net zero are distributed fairly amongst consumers and kept as low as possible, taking account of wider economic considerations such as the promotion of growth, innovation and competition, whilst considering that some consumers will be more impacted by costs than others and therefore considering support where appropriate.

¹⁰ The fuel poverty target for England is to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum energy efficiency rating of Band C, by 2030.

Retail Markets

The energy retail sector has experienced significant challenges in the past few years, with multiple market exits and wholesale price volatility. Government and Ofgem have reacted quickly throughout to protect energy consumers, maintain continuity of supply, and stabilise the market. Looking ahead, the clearest lessons from this market volatility are that the market must work better for consumers and be more resilient. However, many of the challenges facing the retail market predate the recent wholesale price issues and wider reforms are needed to protect consumers and drive the move to a net zero energy system. That is why government has set out a new vision for a retail market that works better for consumers, is more resilient and investable, and that supports the transformation of the wider energy system.

Government recognises that there remains much to do to deliver on our vision for the retail market. That is why we are pursuing targeted reforms that will set us on a path towards:

- Unlocking competition, investment, and innovation – empowering consumers by opening up more choice, while enabling suppliers to succeed and usher in new business models that take advantage of new technology.
- Helping the energy market become a positive force in achieving net zero – rewarding those who make the switch to low carbon technology, reducing system costs for all, while protecting those who need it.
- Protecting the most vulnerable and helping tackle fuel poverty – with targeted support with bills that will help those who need it most. Universal approaches were appropriate to respond to soaring energy prices, but it is also appropriate to return to a more targeted approach as prices fall.
- Ensuring we have the right consumer protection framework for a more dynamic future market, particularly on issues beyond price protections, such as customer service.

Ofgem has an important role to play in delivering all these objectives. Ofgem will have a key role in ensuring that households pay a fair price for energy, taking into account the impact on all customers. This may include introducing new or re-applying previous price protections if the default tariff cap is terminated and they are appropriate.

Sustainable competition in the energy retail market must be the primary driver of good outcomes for the majority of consumers. Where possible, regulatory barriers to competition that are not in the interest of consumers should be removed. However, given the nature of energy as an essential service, there will always be a role for regulation and the enforcement of minimum standards in the market, beyond that seen in most sectors. Ofgem's role is to use appropriate and proportionate regulation to uphold consumer standards and ensure vulnerable consumers are protected, using its full range of powers to address any exploitative practices. In the non-domestic market specifically, following on from the publication of Ofgem's non-domestic market review findings, Ofgem's role will be to consider whether there are particular types of businesses which would benefit from further protections or if existing protections for microbusiness customers should be extended to more businesses.

Ofgem has introduced a range of measures intended to improve the resilience of energy suppliers and reduce the cost to consumers where supplier failures do occur. Ofgem should monitor the effect that current and proposed changes have had on the resilience of suppliers, what more may need to be done to ensure that consumers are protected from any excessive costs in the event of future failures and that the interventions remain proportionate as the market develops. Whilst we hope that the risk of supplier failures has receded, Ofgem should also keep their tools to respond to supplier failures under review, so that they remain effective as the retail market evolves.

Suppliers will need to be financially resilient if they are to make the long-term investments in innovative technologies and offerings needed in the retail market of the future. Ofgem's steps to weed out unsustainable business models from the market should help with this, by giving well-run suppliers the confidence to make such investments without the risk of being undermined by unsustainable competitors offering irresponsibly priced tariffs. Ofgem should continue to review the impact of financial resilience measures to ensure that they remain proportionate and effective.

Ofgem also has a role to promote competition and innovation wherever appropriate and must ensure that increased resilience supports, rather than hinders, effective competition. When suppliers do fail, Ofgem will continue to have an important role in ensuring that this happens in an orderly way, through their well-established Supplier of Last Resort (SoLR) process. Ofgem will need to ensure that the SoLR process remains fit for purpose, including taking account of the lessons from recent supplier failures, and collaborating closely with government to ensure that the Energy Supply Company Administration Regime is utilised as intended, if needed.

As the main interface between consumers and the energy system, the retail energy market has a significant role in supporting the transition to net-zero and ensuring that consumers see the benefits. In the future, consumers should have access to a greater range of products and services, better tailored to their individual needs and in turn they are more likely to benefit from engaging with the choices they face in the market. We expect to see new approaches to energy supply which empower consumers to shift their consumption, reduce overall demand, and support widespread adoption of low carbon technologies. In a well-designed future market, there will be opportunities for all consumers to benefit from these changes, regardless of their level of engagement, energy needs, or income. To this end, government and Ofgem will collaborate to identify and, where appropriate, remove regulatory barriers to innovation in the current market framework, and to empower consumers to engage with the choices they face in the market.

Consumer Protection and Enforcement

Ofgem's principal objective is to protect the interests of existing and future consumers when carrying out its regulatory functions. Ofgem should make decisions in a way which balances the short and long-term interests of consumers, which incentivise the most cost-effective decarbonisation (where within its remit), and which considers the impact on all consumers, especially those who are vulnerable.

Consumers must have confidence that the regulator is looking after their interests and that the market provides good value outcomes. Where poor practice by licensed bodies is found, it is critical that Ofgem use its compliance and enforcement powers to take timely action where appropriate. Government has urged Ofgem to ensure that it understands the experiences of consumers in response to suppliers' behaviour, for instance regarding prepayment meters. Ofgem should make use of the full range of levers at its disposal, including by monitoring the market and developing and maintaining processes that allow the direct examination of consumer experiences, and utilising the data it has access to from regulated companies.

Ofgem should seek to uphold and increase consumers' confidence and trust in the energy market, including by challenging suppliers to provide high-quality services to their customers that meet their needs. Adequate and proportionate consumer protection should be a key aim as new products and services, delivered by a range of business models, are taken up. Ofgem shall be responsible for facilitating improvements to the consumer experience in the energy sector and assessing the impact of regulatory changes on different consumer groups. Vulnerable consumers may need extra support and Ofgem's role will be to continue to challenge the energy sector to go further, to identify and meet the needs of consumers who are struggling to afford their energy bills. For business consumers, Ofgem shall be responsible for promoting an enhanced focus among suppliers on the needs of those businesses that may struggle to access the best deals and explore whether to give them further protection in the face of unfair market practices, for example to protect them from mis-selling and misrepresentation or uncompetitive practices.

Low Income, Vulnerable and Fuel Poor Households

Different households will require different levels and types of support and methods of engagement. Some households will benefit from being on their energy company's Priority Services Register, others may benefit from engagement on debt advice and payback support.

Support with home improvements including energy efficiency measures and low carbon heating is also crucial, including through the Energy Company Obligation which Ofgem administers on behalf of DESNZ. The fuel poverty target for England is to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum energy efficiency rating of Band C, by 2030. Government sees energy efficiency as the best way to tackle fuel poverty in the long term, contributing to reducing energy bills and carbon emissions in line with net zero. Ensuring low income and fuel poor households are among the first to benefit from the transition to net zero is key in delivery.

Security of Supply

Energy security is a top priority for government. Though the UK has historically enjoyed very high levels of security of supply, even under extreme weather events, Russia's invasion of Ukraine and the subsequent disruption to global gas markets has reinforced the importance of a secure energy system. Government will work with Ofgem and the ESO/NESO to further the

aims of the [British Energy Security Strategy](#) (2022) and the [Energy Security Plan](#) (2023), to improve the UK's energy security and move the UK towards greater energy independence. In accordance with existing statutory requirements set out in the Gas Act 1986 and Electricity Act 1989, Ofgem is required to carry out its functions in the manner which it considers is best calculated, amongst other aims, to secure a diverse and viable long-term energy supply. Ensuring a reliable energy supply is also strongly in the interests of consumers, in line with Ofgem's principal objective.

Liquid, well-functioning energy markets play a central role in ensuring Great Britain's continued security of supply. Significant volatility has been seen in wholesale energy markets internationally, with gas trades reaching record highs at Great Britain's National Balancing Point (NBP). Ofgem is continuing, in its role as energy market regulator, to engage with and monitor the wholesale gas market, including in relation to trading activity and the resilience of market participants, to provide government with clear visibility of any emerging concerns or risks. Ofgem will continue to monitor wholesale energy markets, including in relation to the Balancing Mechanism which is used by the ESO to residually balance and manage the electricity system close to real time. Costs of balancing the electricity system have increased significantly in recent years, with [ESO pursuing a review of its balancing services](#). Ofgem's role will be to participate in this review, as well as ensuring that current wholesale market arrangements are working efficiently, and market participants are actively mitigating risks. Ofgem should continue to work with NESO on this once it is established.

The Capacity Market is government's main mechanism for ensuring electricity security of supply in Great Britain. Ofgem's role includes progressing with changes to the Capacity Market Rules, working in partnership with government, and establishing the Capacity Market Advisory Group under the Capacity Market. Ofgem also has a dispute resolution role where an application for a Capacity Market agreement by an industry party has been rejected by the ESO.

The Demand Flexibility Service, launched by the ESO, has enabled consumers and businesses across the country to benefit from shifting their electricity use whilst helping ESO manage the electricity system. Government will work with the ESO/NESO, Ofgem and industry to learn from this new service and support innovative approaches to demand flexibility.

Downstream Gas and Electricity Infrastructure Security and Resilience

Great Britain has highly resilient gas and electricity systems. Government is committed to continuing to work with Ofgem, National Gas Transmission (NGT), ESO/NESO and wider industry to understand potential risks impacting gas and electricity customers and ensure the continued security and resilience of these systems against the full range of threats and hazards facing the sector now and in the future.

The downstream gas and electricity risk profile has changed significantly over the past decade. Given the challenges of achieving net zero, ongoing climate change and shifting geopolitics,

this change is likely to continue and accelerate over the coming years. Government, Ofgem, ESO/NESO and wider industry will continue to play a critical role in ensuring existing strategies keep pace with shifts in the risk landscape and consider gas and electricity interactions to support the resilience and security of downstream gas and electricity systems.

Government is responsible for setting the policy direction for security and resilience posture across the energy sector. To fulfil this role and make effective decisions, government requires robust evidence and advice provided by industry partners. Ofgem will be responsible for furthering the delivery of the policy outcomes in downstream gas and electricity security resilience, which will include setting the required licence conditions and implementing any modifications to licences, including NESO's.

The Secretary of State for the Department for Energy Security and Net Zero will be the joint Competent Authority with Ofgem¹¹ for the electricity and gas subsectors under the Network and Information Systems (NIS) Regulations 2018. Under the NIS Regulations the Competent Authorities are required to provide guidance¹² to the sector and assess Operators of Essential Services for compliance with the security duties in the NIS Regulations. The Department for Energy Security and Net Zero is the lead government department for energy supply emergencies as set out in the UK Government arrangements for responding to an emergency (CONOPS - the central government's concept of operations) but government will work together with NESO in emergency incidents, ensuring there is collaboration where required.

¹¹ The Secretary of State for the Department for Energy Security and Net Zero will be a joint competent authority when a Transfer of Functions Order comes into force.

¹² Regulation 3 of the NIS Regulations.

Section Three: Ensuring the Energy System is Fit for the Future

Government's Strategic Priorities are:

- Electricity market arrangements that meet our objectives for a decarbonised and secure electricity system by 2035 at least possible cost to consumers. Efficient, competitive and transparent energy markets that optimise investment and operation and work for the full range of market participants.
- Ensuring flexibility in the energy system at the national and local level, and the requisite growth in flexibility markets and consumer adoption of energy smart appliances to achieve this.
- An economic and efficient digital infrastructure which enables an inclusive, smart, digital, safe and secure energy system, based on principles of open data, security, interoperability and a whole systems approach to data sharing.
- Effective governance during the transition to net zero of the codes and technical rules that govern the energy system, system operation and planning, and local governance.

Government's Policy Outcomes are:

- Energy market design that supports government's ambition to minimise costs to consumers, driving economic growth in the longer term while strengthening the UK's energy security and independence.
- Competitive, coordinated, and effective flexibility markets which are open to all technologies of all sizes, including energy efficiency and demand-side solutions, and which unlock the full benefits of flexibility to best serve our net zero targets.
- By 2024, an appropriate policy to enable investment in large-scale long-duration electricity storage consistent with cost-effective decarbonisation.
- Energy code governance is reformed to support the move to net zero, using the framework provided by the Energy Act 2023, including the licensing of one or more code managers, as soon as practicable after the legislation is in place.
- Local governance arrangements that are fit for purpose to deliver effective, consistent, and coordinated flexibility markets and regional planning.
- Implementation of measures from the joint [Government-Ofgem Smart Systems and Flexibility Plan](#) (2021), [Energy Digitalisation Strategy](#) (2021) and commitments from the published [joint response](#) to the Energy Digitalisation Taskforce.
- Establishment of NESO, as soon as practicable, including ensuring relevant licences and codes are created and amended for NESO to perform its roles in the energy system effectively.

- Ensure NESO is appropriately resourced with the right capabilities to deliver its existing and future roles, and the regulatory flexibility to enable it to evolve and respond effectively to the evolving energy landscape and act in accordance with its statutory duties.
- Mitigation of cyber security, grid stability and consumer protection risks related to the widespread uptake of demand side response (DSR).
- Ensure sufficient data and digital capabilities across the energy sector to deliver a digitalised energy system and optimised strategic planning.
- Effective cooperation with the EU at a regulatory and technical level to support the aims and obligations of the EU-UK Trade and Cooperation Agreement.

Electricity Markets Fit for the Future

In 2022, government launched a [Review of Electricity Market Arrangements](#) (REMA) to consider potential reforms to electricity markets to meet our decarbonisation targets whilst maintaining security of supply and deliver the most cost-effective system for consumers.

Reforms to the wholesale market and investment and adequacy mechanisms (including Contracts for Difference and the Capacity Market) as well as to wider electricity market arrangements may be needed to drive greater investment in a range of technologies to enable low carbon generation and reliable system operation that safeguards energy security at lowest cost to consumers. Changes may be required as the electricity system further decarbonises, to ensure continued security of supply.

Ofgem's role will be to participate in this review, support policy development and, depending on the outcomes, help implement a new suite of market arrangements. Ofgem will also be responsible for implementing any changes to codes and licences, ensuring the ESO/NESO makes necessary changes in its role as Electricity Market Reform delivery body, and aligning long-term changes to network charging with wider market reform.

Depending on the nature of the reforms, REMA will likely have implications for institutional and governance frameworks, including potentially for the duties and functions of Ofgem and ESO/NESO. This will be considered further as part of the REMA Programme.

Flexible and Responsive Markets

The joint government and Ofgem [Smart Systems and Flexibility Plan](#) (2021) outlined how we will deliver the flexibility and innovation needed for a net zero system. This included actions to facilitate flexibility from consumers, remove barriers to flexibility on the grid and reform markets to reward flexibility, and government, Ofgem and industry are responsible for implementing relevant measures. Flexibility from different technologies, operating over a range of durations, such as electricity storage, smart charging of electric vehicles, flexible heating systems and interconnection could reduce the amount of generation and network needed to decarbonise,

saving up to £10 billion per year by 2050 by and creating 24,000 jobs. Government will work with Ofgem to deliver competitive, coordinated, and effective flexibility markets which are open to all technologies of all sizes, and which unlock the full benefits of flexibility to best meet our net zero targets. This includes working with ESO to ensure balancing services are fully transparent and competitively procured. Ofgem shall be responsible for working with government to scrutinise ESO/NESO's delivery of its net zero operability objective by 2025.

In certain instances, flexibility may best be achieved at the local level. Ofgem, government, ESO/NESO and distribution network operators, and all market participants, will need to work closely to ensure local and national actions work in tandem and to coordinate national and local electricity markets to meet the full suite of system requirements. Ofgem will have a role in working towards ensuring national and local electricity markets are fully coordinated and encouraging local flexibility solutions into the market to facilitate greater competition.

Government and Ofgem will work together to ensure that local governance arrangements are fit for purpose to deliver effective, consistent, and coordinated flexibility markets, by setting out clear rules and responsibilities for institutions that will ensure effective delivery of energy system planning and market facilitation. Following Ofgem's decision on potential changes to local governance arrangements, we expect that Ofgem will set out a road to implementation and proceed to implement the proposed reform package.

Distribution system operators are required to tender for flexibility services as an alternative to network reinforcement where it is cost-effective to do so. They must also promote the uptake of energy efficiency measures, including through procuring energy efficiency services where it is economic and efficient to do so. Ofgem should continue to support system operators to deliver these outcomes. This includes the development and use of methods to economically value energy efficiency against other network interventions, and methods to procure and deploy energy efficiency measures.

Government is seeking to maximise the participation of consumers of all sizes in demand side response (DSR). The mass uptake of EVs will create significant new demand network-wide for electricity and increase electricity consumption by households. Smart charging technology allows battery re-charging to be managed flexibly in response to electricity market signals, along with consumer needs, and will be a major step for increasing domestic consumer participation in DSR. Ensuring the timely roll-out of "energy smart" technology, such as smart meters, smart EV charge-points and heat pumps is a vital means for ensuring consumer engagement, offering choice, and reducing costs.

Government launched a consultation in July 2022 and in a government response publication in March 2023 confirmed proposals to enable the transition to a smart and secure electricity system, with interoperability and cyber security as key principles. In July 2023, government set energy suppliers minimum smart meter installation targets for 2024 and 2025. Market-Wide Half Hourly Settlement (MHHS) is critical to delivering the most cost-effective decarbonised energy system, and a fundamental element for retail market reform. Ofgem shall be responsible for working towards the timely implementation of MHHS as soon as possible to reward flexibility and benefit consumers. Ofgem will also have a role in ensuring that

consumers are treated fairly by providers of DSR services and are protected in their participation in a smart energy system. Finally, government will work with Ofgem, the ESO/NESO and others to ensure cyber security risks to grid stability and to consumers from DSR are understood and mitigated.

The digitalisation of the energy system through the rollout of smart meters provides benefits to consumers by offering near-real time information on energy use, as well as supporting the development of innovative products and services, such as time of use tariffs and applications based on granular energy data. This step-change in the availability and granularity of data relating to energy consumption, alongside the advantages of remote communication, is a key enabler for the energy system of the future. For smart metering, Ofgem's role is to rigorously monitor and ensure compliance with the full range of smart metering licence conditions. This includes, but is not limited to, those relating to installation requirements, the operation of smart meters by energy suppliers, and the New and Replacement Obligation. Ofgem's role is to ensure that enforcement or compliance action is timely, especially in the context of obligations which must be met on an annual basis, and that fines are commensurate with the cost of compliance. Ofgem will also be responsible for ensuring that the Data Communications Company remains fit for purpose into the future, by progressing the review of its regulatory framework and implementing any required changes in a timely manner, including closely managing any transition period.

In the [British Energy Security Strategy](#) (2022), government committed to enabling the deployment of sufficient large-scale long-duration electricity storage to balance the overall system most cost-effectively. To do this, government will work with Ofgem to develop an appropriate policy to de-risk investment by 2024. Government will also work with Ofgem to ensure a best-in-class regulatory framework for storage at all scales, to provide regulatory clarity within key regulations, licences and codes as well as removing policy and regulatory barriers to market entry and encouraging investment in novel technologies such as hydrogen.

Digital Infrastructure

The [Energy Digitalisation Strategy](#) (2021), developed by government, Ofgem and Innovate UK in coordination with the energy sector, set out a vision and suite of policies to digitalise the energy system. Government and Ofgem have committed to working with relevant parties to facilitate the implementation of economic and efficient digital infrastructure, and a principle of presumed data openness across industry, to contribute towards an inclusive, smart, digital and secure energy system and enable these changes at the least cost. Government, Ofgem and Innovate UK [responded](#) to the recommendations of the Energy Digitalisation Taskforce setting out our progress and next steps on delivering digitalisation within the energy sector.

Ofgem shall be responsible for using its tools or new and enhanced measures to support the development of an agile regulatory environment for a digital energy system. As part of the RII0-2 price controls, Ofgem implemented a Special Licence Condition that obliges licenced companies to act in accordance with the Energy Data Best Practice guidance, to support better use of data and greater interoperability across the energy sector. Ofgem recently [published a](#)

[decision](#) on updates to the guidance and is modernising the process by which networks will share data with the regulator, allowing Ofgem to take regulatory decisions quicker and more effectively. Ofgem will be responsible for ensuring that the methods Ofgem and energy networks use to exchange data between each other are modernised so that there is effective ongoing regulatory decision-making and oversight.

Government regards competition as a key driver in ensuring the digital transformation of the energy system and is committed to promoting competition in the operation of energy markets to help drive lower costs, promote innovative new services and products, and incentivise private sector investment in digitising the energy system. As this is an emerging sector of the energy market, government wants to avoid a situation where unregulated monopoly providers become dominant in it, and go on to abuse their position by overpricing, leading to under-investing in some forms of innovation and otherwise behaving inefficiently to the detriment of consumers. Ofgem's role will be to work with industry to monitor issues in this area as the digital infrastructure develops.

The principle of presumed data openness is key to driving efficiency and innovation in the energy sector. As referenced in the [Energy Digitalisation Strategy](#) (2021), opening up access to our digitalised energy system and its data in a secure way has multiple benefits, from helping us discover cheaper and more flexible ways of delivering clean energy and informing network planning, to empowering consumers to make informed choices around their bills and become active participants in decarbonisation. The ultimate goal for all parties, therefore, should be to get data safely into the open and make sure it is easy to find, while balancing security, data subject privacy and ensuring compliance where relevant with the Smart Metering Data Access and Privacy Framework. Linking energy data with other sectors, such as telecommunications, transport, heat and real estate, will also help ensure that data is harnessed to its full value and that investment decisions and planning can be made with a whole-system approach.

New technology and data should be used in a way which offers appropriate and proportionate protection to consumers. Ofgem's role in this should be to work towards ensuring that new technologies are introduced to the energy sector in a way that always protects consumer privacy, and that cyber security plays a key role in any actions taken to facilitate an inclusive, smart, digital and secure energy system. Ofgem will be responsible for fully leveraging its role as Competent Authority under the Network and Information System (NIS) Regulations, jointly with the Secretary of State for Energy Security and Net Zero¹³, to continue to implement cyber security requirements across the sector including through industry engagement, guidance development and inspections. Ofgem shall be responsible for monitoring Operators of Essential Services (OES), assessing whether OES are taking appropriate and proportionate action to meet their security duties under the NIS Regulations and taking enforcement actions where necessary. As technologies develop, Ofgem should be agile to mitigate against new risks and be agile to tackle new challenges from increased digitalisation.

¹³ The Secretary of State for the Department for Energy Security and Net Zero will be a joint competent authority when a Transfer of Functions Order comes into force.

Governance

Effective institutional and governance arrangements are crucial to supporting the delivery of net zero: this covers Code Governance Reform (CGR) designed to enable appropriate innovative changes in energy system, the establishment of NESO, and reform to local governance arrangements.

The governance framework for the energy codes, which are the detailed technical and commercial rules of the energy system, needs to be fit for purpose and facilitate net zero by enabling innovative change at a pace required to meet targets. The Department and Ofgem will jointly support the code governance reform framework ambitions with the Department setting the high-level code reform policy. Ofgem, as the independent energy regulator, will sit at the heart of CGR and assume responsibility for implementing the reforms to the framework. The regulator will grant licences for and regulate new code managers, issue a Strategic Direction Statement (SDS) to set out its strategic direction for codes and direct central systems bodies where necessary to facilitate the delivery of strategic change. The Department and Ofgem are working closely together to deliver the licensing framework for code managers in a coordinated project without unnecessary overlaps between roles.

Code managers will be licensed and regulated by Ofgem, and a suite of licence conditions will be consulted on in due course. Ofgem is considering the potential benefits of code consolidation, to reduce complexity and ensure an optimum code framework. The Energy Act provides powers that support this, if Ofgem decides that it would be beneficial. We intend for the processes for appointing code managers to be designed to ensure that licensed code managers are sufficiently equipped for the role, including appropriate access to technical expertise and knowledge. We also expect there will be a strong role for industry in advising, informing, and supporting code managers (including through Stakeholder Advisory Forums).

Government wants code reform to be completed as quickly as possible, whilst also ensuring that Ofgem can implement the reforms in a way that minimises the risks to industry, energy security and affordability. This is why the Energy Act 2023 gives Ofgem transitional powers for seven years to complete the reform process for every code, which will give it the flexibility that it needs to make appropriate decisions for industry and consumers. These reforms will be considered and implemented on a code-by-code basis, so there is a possibility that these reforms will be completed for some codes sooner than others.

Ofgem will have a key role and responsibility, alongside the Secretary of State, for putting in place the arrangements needed for NESO to perform its roles in the energy system effectively. Ofgem's regulation of system operation functions will continue to drive high performance in relation to system operation activities, support the timely and effective delivery of NESO transition activities where appropriate, and ensure through ongoing regulation of NESO that it takes full advantage of its new, broader remit. In the period of transition to the NESO, Ofgem and relevant licensed industry parties will work closely together to plan and prepare for these new arrangements. Ofgem will work with the government to assess the most efficient and value for money approach and facilitate the transition to the NESO. This will include modifying and administering existing licences and codes, and supporting the implementation of the

NESO, including separation of the ESO. As part of its ongoing regulation of NESO, we expect Ofgem to recognise NESO's potential need for regulatory flexibility to enable it to respond effectively to the evolving energy landscape and act in accordance with its statutory duties. The regulator must carefully consider NESO's capacity and resourcing, and any operational impacts on existing core functions when making decisions on giving it additional new roles.

Following Ofgem's decision on changes to local governance arrangements, Ofgem will proceed to implement the proposed reform package for market facilitation and Regional Energy System Planner(s). As part of this, Ofgem have confirmed plans for NESO to take on responsibility for implementing a number of Regional Energy System Planners (RESPs) across Great Britain, tasked with strategic planning at a distribution level. Government will work with Ofgem to ensure the proposed reform package is fit for purpose to facilitate a low-cost transition to a more flexible, coordinated, and digitally enabled local energy system, and are aligned with wider strategic and spatial planning arrangements, including the SSEP.

EU-UK Trade and Cooperation Agreement

Efficient cross-border markets can reduce the cost of energy whilst supporting our energy resilience and net zero targets. Following the UK's withdrawal from the European Union (EU), the UK and the EU have entered into the EU-UK Trade and Cooperation Agreement (TCA) which includes a framework for cooperation and trade in energy. The agreement's provisions in the Energy Title cover a number of shared interests, including developing new electricity trading arrangements and enhanced cooperation in North Seas offshore grid development and decarbonisation projects as well as security of supply and the use of interconnectors. The TCA commits both Parties to develop arrangements for efficient electricity trade over interconnectors. These arrangements will make electricity more affordable, support security of supply, and help integrate low carbon technologies onto the UK grid.

Ofgem will have a role in establishing and facilitating these cooperation structures with the European Agency for the Cooperation of Energy Regulators and other neighbouring National Regulator Authorities. Ofgem's role will be to provide regulatory and other support as required to implement the TCA, as well as developing the administrative relationships required for EU-UK regulatory cooperation in the energy related matters set out in the TCA.

In December 2022, the UK signed a Memorandum of Understanding (MoU) with North Seas Energy Cooperation (NSEC), giving effect to the cooperative framework agreed in Article 321 of the TCA. UK-NSEC cooperation has since resumed, and government will have a role in partaking in NSEC meetings, and regularly engaging with our European partners on a bilateral basis under MoUs and other cooperative agreements.

This publication is available from: www.gov.uk/government/publications/strategy-and-policy-statement-for-energy-policy-in-great-britain

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