



Department for  
Energy Security  
& Net Zero

# Future System Operator- Second Policy Consultation and Update

Joint DESNZ/Ofgem

Closing date: 20 October 2023

August 2023



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Any enquiries regarding this publication should be sent to us at: [futuresystemoperator@beis.gov.uk](mailto:futuresystemoperator@beis.gov.uk).

# Foreword / Introduction

## Foreword SoS

In March 2023, the Government published Powering Up Britain. It set out the blueprint for the future of energy in this country. In [Powering up Britain: Energy Security Plan](#), and [Powering up Britain: Net Zero Growth Plan](#), we provided more detail on how we will diversify, decarbonise and domesticate our energy system – and reaffirmed our commitment to establishing the Future System Operator (FSO) to help drive this transition.

The energy system faces momentous challenges in the coming years. Powering Britain's future means securing reliable, affordable energy, as well as moving decisively away from carbon-based sources of energy that are destroying our planet. And we must make sure that families and business can never again be held hostage by someone like Putin using energy as a weapon to further his illegal war in Ukraine.

The FSO is a key part of meeting each of these challenges, and one of the crucial steps we are taking to ensure the UK is more energy independent, secure and resilient. With roles across the energy system, the FSO will be uniquely placed to help deliver the integrated system needed to secure our energy security, net zero and affordability goals. And with operational independence from government, the FSO will have the necessary perspective to use its expertise to advise government and Ofgem on the critical decisions ahead.

The Government is working alongside Ofgem, National Grid plc (NG plc), the National Grid Electricity System Operator (ESO) and National Gas Transmission (NGT) to deliver on these ambitions, as well as seeking powers to establish the FSO through the Energy Bill, which is now scheduled for report stage in the House of Commons. The Energy Bill will set the overarching legislative framework for the FSO, allowing Ofgem to regulate it through its licences, and placing duties upon it to promote net zero, security of supply and efficiency and economy. The Energy Bill will also provide government with the powers needed to establish the FSO with the existing capabilities and functions of the ESO, and, where appropriate, NGT.

In this document, we are consulting on further measures regarding the FSO's important functions supporting our energy security and resilience, as well as providing an update on our progress to deliver this vital organisation.

## Foreword Ofgem

Meeting the UK's ambitious climate change goals requires a transformation across the energy system, including dramatic change to how we generate electricity, how we heat our homes, power our vehicles, and how our electricity and gas networks are built and operated.

Alongside the challenge to deliver our ongoing commitments to net zero and of a low-carbon future, the war in Ukraine continues to drive extremely high prices and volatility in the international gas market. As Britain's energy regulator, Ofgem has adapted to the energy crisis to meet the scale of the challenges posed, taking on major new areas of work, and new powers and responsibilities. This means driving system reforms and governance arrangements so that the energy system is optimised for a more flexible future.

We and the Government set out a commitment to create a system operator which is genuinely independent, capable of taking on a wider remit as the energy system becomes ever more complex and will operate in the interests of consumers. This vital role is required to deliver a resilient and secure energy system, provide expert and impartial advice to government and Ofgem, a whole systems approach to network planning across fuels and technologies, and further drive competition across the energy sector.

We are now working closely together with the Department for Energy Security and Net Zero (DESNZ), NG plc, ESO and NGT to plan, prepare for and implement the changes that are needed to create the FSO. We will also be working with wider industry to do so.

This second joint policy document builds on our previous work and includes further detail on policy that we have already decided and consults on some new policy not previously consulted upon. Following this consultation, Ofgem will be separately consulting on drafts of the FSO's new electricity system operator and gas system planner licences. These will set out its activities and functions for Day 1 in further detail and enable it to fulfil its role in meeting the challenges and ambitions set out above.

As we move forwards, cooperation from industry stakeholders and consumer groups will be crucial for success, and we need all stakeholders to play their part in this transition. We welcome your responses and look forward to working with the energy sector to ensure that the proposals support the implementation of an FSO needed for a secure and low-carbon energy system.

# Contents

|   |    |
|---|----|
| Foreword / Introduction   | 3  |
| Foreword SoS  | 3  |
| Foreword Ofgem  | 4  |
| General information   | 6  |
| Why we are consulting   | 6  |
| Consultation details  | 6  |
| How to respond  | 8  |
| Confidentiality and data protection   | 9  |
| Quality assurance   | 9  |
| Chapter 1: Strategic context  | 10 |
| 1.1 Executive summary   | 10 |
| 1.2 FSO project status and implementation   | 10 |
| 1.2.1 Project Status  | 10 |
| 1.2.2 Implementation  | 11 |
| 1.2.3 Industry engagement   | 12 |
| 1.3 Legislative and regulatory framework  | 12 |
| Chapter 2: Consultation   | 14 |
| 2.1 Security and resilience roles   | 14 |
| 2.2 Secretary of State directions in connection with risks related to national security | 16 |
| Chapter 3: FSO roles update   | 17 |
| 3.1 Confirmed FSO roles in Day 1 licence  | 17 |
| 3.1.1 Advisory role   | 18 |
| 3.1.2 Gas roles   | 18 |
| 3.2 Further network planning and competition roles                                      | 21 |
| 3.3 Future new and enhanced roles   | 23 |
| 3.3.1 System planning and markets   | 23 |
| 3.3.2 Resilience, infrastructure security and security of supply                        | 24 |
| 3.3.3 Cross-cutting/other   | 25 |
| Next Steps  | 27 |
| Annex 1 - List of consultation questions  | 28 |
| Annex 2 - Analytical annex – FSO consultation   | 28 |
| Glossary  | 30 |

# General information

## Why we are consulting

In this document we are consulting on two new elements of our FSO policy, and the rest of the document is for update only, building upon the decisions published in April 2022, following our first [consultation](#) in summer 2021.

The two elements for consultation are new security and resilience roles, and a power allowing the Secretary of State to direct the FSO in certain limited circumstances related to national security. We are consulting on these two elements at this time because we intend for them to be set out in the FSO's Day 1 licences and, unlike other Day 1<sup>1</sup> FSO roles and obligations, they were not considered in our previous consultation.

We also provide an update on the overall implementation of the reform, the Day 1 roles and other potential future roles of the FSO. Where these are Day 1 roles, they are either existing ESO roles or have already been consulted on and are being set out here to provide stakeholders with a summary of the roles we intend to include in the Day 1 licences. We also set out potential future roles for the FSO, to provide stakeholders with a summary of where further roles for the FSO are being considered, subject to further policy development. Some of these future roles may be subject to their own separate consultations as appropriate.

In the coming months Ofgem will be publishing its initial licence consultation on the draft electricity system operation and gas system planner licences that the FSO will hold from Day 1. We will finalise and develop, for a further statutory consultation, the terms of the licence conditions after both consultations have concluded.

## Consultation details

**Issued:** 4 August 2023

**Respond by:** 20 October 2023

**Enquiries to:**

Electricity Systems Team  
Department for Energy Security and Net Zero  
Abbey 1, 3rd Floor  
1 Victoria Street  
London  
SW1H 0ET

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<sup>1</sup> 'Day 1' means the day of FSO establishment as a government owned entity when the first FSO licences come into force.

And

Future System Operation  
Office of Gas and Electricity Markets  
10 South Colonnade  
Canary Wharf  
London  
E14 4PU

Email: [futuresystemoperator@beis.gov.uk](mailto:futuresystemoperator@beis.gov.uk) and [FSO@ofgem.gov.uk](mailto:FSO@ofgem.gov.uk)

**Consultation reference:** Second FSO Consultation

**Audiences:**

Energy suppliers, generators, transmission owners, distribution networks, engineering standards bodies, energy sector research groups, consumer groups and any other organisations with a direct interest.

**Territorial extent:**

Great Britain

## How to respond

**We would prefer you to respond via this online consultation page if possible:**

[beisgovuk.citizenspace.com/energy-security/future-system-operator-policy-update](https://beisgovuk.citizenspace.com/energy-security/future-system-operator-policy-update)

Your response will be most useful if you use the online form provided. This is the easiest way to make sure that your response is framed in direct response to the questions posed, although we also welcome further comments and evidence.

If you would prefer to respond via email, please ensure you respond to both email addresses below.

**Email to:** [futuresystemoperator@beis.gov.uk](mailto:futuresystemoperator@beis.gov.uk) and [FSO@ofgem.gov.uk](mailto:FSO@ofgem.gov.uk)

If you would like to send a hard copy, please send copies to the following addresses. As this is a joint consultation, please ensure you send copies to both addresses below.

**Write to:**

Electricity Systems Team  
Department for Energy Security and Net Zero  
Abbey 1, 3rd Floor  
1 Victoria Street London  
SW1H 0ET

And

Future System Operation  
Office of Gas and Electricity Markets  
10 South Colonnade  
Canary Wharf  
London  
E14 4PU

When responding, please state whether you are responding as an individual or representing the views of an organisation.

DESNZ and Ofgem will share all responses received with each other.



## Confidentiality and data protection

Information you provide in response to this consultation, including personal information, may be disclosed in accordance with UK legislation (the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004).

If you want the information that you provide to be treated as confidential please tell us, but be aware that we cannot guarantee confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not be regarded by us as a confidentiality request.

We will process your personal data in accordance with all applicable data protection laws. See our [privacy policy](#).

We will summarise all responses and publish this summary on [GOV.UK](#). The summary will include a list of names or organisations that responded, but not people's personal names, addresses or other contact details.

## Quality assurance

This consultation has been carried out in accordance with the government's [consultation principles](#).

If you have any complaints about the way this consultation has been conducted, please email: [bru@energysecurity.gov.uk](mailto:bru@energysecurity.gov.uk).

# Chapter 1: Strategic context

## 1.1 Executive summary

The FSO will be an expert, impartial body with responsibilities across both the electricity and gas systems, driving progress towards net zero while maintaining energy security and minimising costs for consumers. It will take on key roles in electricity and gas and take a whole energy system approach when operating, planning and developing the network. The FSO will be independent – not only of other commercial energy interests, but also from the day-to-day operational control of government.

Since our first FSO [consultation and response](#), considerable progress has been made. The Energy Bill has been laid and is advancing through parliament; DESNZ and Ofgem have been engaging with ESO and NGT to further define the FSO's Day 1 roles and consider potential future roles; and the FSO's Day 1 licences are being drafted with an initial consultation by Ofgem in the coming months.

In this document we are consulting on two new elements of our FSO reform. These are the policy detail of new Day 1 security and resilience roles for the FSO, and a new power for the Secretary of State to direct the FSO in certain limited circumstances related to national security. We are consulting on these two roles at this time because we intend for them to be set out in the FSO's Day 1 licences and, unlike other Day 1 FSO roles and obligations, they were not considered in our previous consultation.

We also provide an update, for information only, on the overall implementation of the reform, and on the wider Day 1 and potential future roles of the FSO. Where these are Day 1 roles, they are either existing ESO roles or have already been consulted on and are being set out here to provide stakeholders with a summary of the roles we intend to include in the Day 1 licences. Where these are potential future roles for the FSO, they are being set out here to provide stakeholders with a summary of where further roles for the FSO are being considered following further policy development. Some of these future roles may be subject to their own separate consultations, as appropriate.

## 1.2 FSO project status and implementation

### 1.2.1 Project Status

In the first [FSO consultation](#) in 2021, we sought views on our proposal for an expert, impartial body with responsibilities across both the electricity and gas systems, to drive progress towards net zero while maintaining energy security and minimising costs for consumers. We also sought views on the potential new and enhanced roles the FSO could take on, two potential organisational models (public or private) that might be adopted, and options and preferred approach for implementation.

We received 75 responses of which the majority endorsed our proposals and approach to creating an expert, independent FSO with gas and electricity expertise, with many citing the clear need for more coordinated, strategic and whole systems planning.

We therefore decided, as set out in our [consultation response](#) published in April 2022, to proceed with the creation of the FSO by building on the capabilities and functions of the ESO and adding strategic, longer-term gas forecasting, market and planning roles. The FSO will be established in public ownership, in a way which ensures its independence – not only of asset ownership and other commercial energy interests, but also from day-to-day operational control of government. As a trusted and expert body at the centre of the gas and electricity systems, the FSO should ultimately be able to weigh up and advise on the impacts and trade-offs across energy vectors and plan our energy system from a more strategic, whole system perspective.

Following our previous consultation response, Ofgem and DESNZ have been working closely together, alongside ESO, NG plc, and NGT, to implement our proposals. This has included:

1. developing the detail of the FSO's licences, which will codify its roles and obligations (this will be set out in Ofgem's forthcoming FSO licence consultation);
2. taking forward legislation as part of the Energy Bill that was introduced into Parliament in July 2022;
3. Ofgem setting out proposals for funding all three companies to deliver the work needed to enable an FSO, as set out in their [consultation](#) launched on 21st June;
4. NG plc, ESO, and NGT undertaking detailed planning work for the separation of the ESO business from NG plc; and
5. DESNZ assessing NG plc and ESO's plans for FSO implementation submitted to date to assure that they are directionally aligned with the government and Ofgem's policy objectives for the FSO, balance delivery of an independent FSO in a timely manner, whilst minimising risk to disruption to the GB energy system during the transition.

### 1.2.2 Implementation

Our aim for the implementation of the FSO remains to work with NG plc, ESO, NGT, and other industry stakeholders, to implement an efficient transition, while maintaining the safety and stability of operation of the electricity and gas system. For Day 1 of the FSO, our shared ambition is for the FSO to be a standalone entity that is owned by government and independent from NG plc. It will carry out all existing ESO functions and start to deliver some new/enhanced cross-cutting functions, which are set out in Chapters 2 and 3 of this document. DESNZ will oversee the overarching governance of the implementation of the FSO and assure successful delivery and the mitigation of risk to existing operations from the transition to the FSO.

Depending on a number of factors, including timings of the Energy Bill and discussing timelines with key parties, our aim is for the FSO to be operational in 2024. As outlined in Chapter 3 of this document, FSO's roles will continue to evolve from Day 1, and we intend for any new roles to be implemented via a phased approach. This phased approach is to ensure that additional roles when considered in the aggregate, do not impact on the transition to the FSO, or on its ability to discharge other vital functions once established.

We are committed to taking employees' interests into account throughout the transition process and consider it vital that ongoing employment with the FSO is and remains an attractive proposition for employees. We are therefore working closely together with NG plc, ESO and NGT to help them provide as much clarity as possible to their employees at each stage about the transition process to the FSO.

We are also working closely with Elexon, ESO, and other industry stakeholders, to implement Elexon's new ownership structure. The next steps of this work are set out below:

- Ofgem will undertake an initial consultation on the licence modifications to supply and generation licences this summer.
- Elexon is leading on preparation of an appropriate BSC code text and an informal consultation to implement the new shareholder arrangement.
- DESNZ is working with the future shareholders to support them in seeking their internal approvals to acquire the shares.
- Later in 2023, DESNZ and Ofgem will formally consult, in accordance with the Energy Bill, on multiple areas relating to ownership change implementation.

We are grateful to all involved for their support and commitment to successful project delivery. These steps will ensure that the establishment of Elexon's new ownership structure does not become a barrier to the timing of the FSO designation.

### 1.2.3 Industry engagement

There will be organisations across the wider energy industry that will be affected by the transition to an FSO. To support the implementation process and facilitate cooperation, DESNZ and Ofgem intend to make temporary modifications to industry licences and codes. Using either existing powers or the powers in the Energy Bill, the modifications will provide a mechanism for industry to have greater clarity on the process, what adjustments may need to be made and when these need to be completed. The temporary modifications could include obligations to progress measures needed to implement the FSO reforms, such as progressing necessary updates to codes, contracts and systems.

Depending on the powers used, the timing of the temporary modifications commencing may vary. If using the powers in the Energy Bill, they may come into effect shortly after the Energy Bill comes into force. If using existing powers, they may come into effect before Royal Assent. In both cases, the temporary modifications will remain in place until either industry have completed the actions needed for implementation or until a specified date after the designation of the FSO. Further information will be available in the notice of implementation and accompanying guidance.

To further support the implementation process, we will also establish an Industry Readiness Group (IRG) to provide a view of wider industry readiness for the transition to the FSO. Where suitable, the IRG will engage with industry representatives to track and assess preparations and inform our wider implementation approach. The IRG's role will be to specifically track industry readiness and not to seek input from industry on the roles and design of the FSO; this is being accomplished via appropriate consultations, including this document.

## 1.3 Legislative and regulatory framework

The Energy Bill seeks to provide the legislative framework to enable the establishment of the FSO (described in the Energy Bill as the Independent System Operator and Planner or ISOP). It makes amendments to the Electricity Act 1989 (EA89) and Gas Act 1986 (GA86) to create the two new FSO licences (the 'electricity system operator' and the 'gas system planner' licences).

We intend to use the powers in the Energy Bill to create a licensing scheme for the Secretary of State to direct that the transmission licence held by the ESO is converted, from FSO Day 1, to have effect as an ‘electricity system operator’ licence held by the FSO.<sup>2</sup> The Secretary of State will also use powers in the Energy Bill to grant the FSO the first ‘gas system planner’ licence.

These new licences will sit within the existing licensing framework, which will give Ofgem similar levels of oversight compared to existing licensees. Ofgem will also monitor and regulate the FSO through these licences. The FSO will have statutory duties in a similar manner to how the ESO and Gas System Operator (GSO) are regulated today.

As part of the Energy Bill, we are also amending existing legislation to extend the Strategy and Policy Statement (SPS) framework to the FSO and keep developments relating to the sector under review. The FSO will act independently but it will still operate in the context of wider energy sector policy and the government’s strategic objectives in this area to ensure broad policy alignment and long-term strategic context.

We are now [consulting on an SPS](#), to which the FSO (in addition to the existing duties on Ofgem) will have a duty to have regard. We welcome stakeholders’ responses to this consultation.

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<sup>2</sup> The Energy Bill also includes provision for an alternative approach which we do not intend to use, whereby the transmission licence held by the ESO would come to an end, and the ‘electricity system operator’ licence would be granted to the FSO as a new licence.

## Chapter 2: Consultation

This section of the publication sets out the two new elements of our FSO policy that we are consulting on, which are intended to be set out in the FSO's Day 1 licence. These are the policy detail of new Day 1 security and resilience roles for the FSO, and a new power for the Secretary of State to direct the FSO in certain limited circumstances related to national security. We are consulting on these two roles at this time because, unlike other Day 1 FSO roles and obligations, they were not considered in our previous consultation.

**This is the only chapter in this document that we are consulting on.**

### 2.1 Security and resilience roles

As set out in the [Energy Security Plan](#), we intend for the FSO to take on a whole energy system role to understand and plan system security and resilience across electricity and gas and the interactions between them. The key purpose of this is ultimately to provide whole system coordination and analysis, allowing independent, expert advice, analysis and information to government and Ofgem, alongside strategic coordination and preparation for emergencies across energy vectors. Responsibility for delivering this role is intended to be scaled up over time with the initial responsibilities being put in place on Day 1 and further whole system obligations coming later (see section 3.3 'Future new and enhanced roles'), subject to further policy development and, in some cases, primary legislation. This is in line with our overall phased approach to introducing new roles for the FSO.

We are consulting in this document on the detail of the Day 1 obligations and roles only. We have been working, and will continue to work with, the ESO, on these roles. The obligations underpinning these roles will be set out in the FSO's Day 1 licences, which Ofgem will consult on as part of its initial licence consultation in the coming months.

Our proposals for the FSO's role in relation to resilience and security on Day 1 are:

- **Understand and plan system resilience:** The FSO should analyse and understand electricity system resilience by performing horizon scans, analysing customer behaviour, and formulating a short, medium and long-term view of risks that could impact the safety, security or resilience of the system. This should draw on information gathered through industry engagement. The FSO will use this understanding to provide information, analysis and strategic advice on risks and mitigations to DESNZ, Ofgem and industry, and then work with them to support the development of rules and obligations for security and resilience. The role will also include supporting governmental reviews of Critical National Infrastructure (CNI), formalising a function the ESO already performs. The FSO will be responsible for carrying out these roles for the electricity sector, which includes generation, transmission, and distribution, as well as interdependencies between electricity and gas sectors, from Day 1, with an expectation to develop over time towards whole system planning that includes electricity, gas, hydrogen and the interactions between those systems.
- **Prepare for emergency:** The FSO should provide yearly reviews of emergency readiness processes, alongside season ahead reviews outlining industry readiness for winter and summer, recommending best practice and improvements for emergency

preparedness to DESNZ and Ofgem. This role will cover the electricity sector, which includes generation, transmission and distribution, from Day 1, and the FSO should consult with and draw on information from relevant industry participants.

- **Learn from emergencies:** The FSO should provide analysis to DESNZ and Ofgem, as requested, following emergencies and events that have impacted multiple parties to inform continuous improvement to system resilience, including prevention and emergency readiness. The Day 1 post-event and post-emergency role will focus on electricity transmission, with an expectation that the FSO will provide whole energy system analysis as that capability is developed post-Day 1.

The Government will work closely with ESO, NGT, Ofgem and other relevant stakeholders to ensure this role is taken on in such a way that ensures that gas and electricity supply security needs continue to be met, as well as ensuring this does not impact on the transition to the FSO, or on its ability to discharge other vital functions once established.

**1. Consultation question: Do you have any views on the new FSO security and resilience roles?**

## 2.2 Secretary of State directions in connection with risks related to national security

We are consulting on a power for the Secretary of State to direct the FSO to take, or not take, certain actions where there is a risk relating to national security that may detrimentally impact the resilience, safety or security of the energy system, or the continuity of essential services. The Secretary of State could only exercise this power and issue a direction where it is in the interests of national security to do so. For example, this might include directing the FSO not to grant commercial contracts with external parties for goods or services, where these represent a risk relating to national security. The FSO will be required to comply with any such direction issued by the Secretary of State, and take any action specified in that direction, where it is within its power and control. This power, and the associated duties on the FSO, would be set out in the FSO's Day 1 licence conditions and, if necessary, the industry codes.

The Government, supported by intelligence agencies, leads on national security policy and is best placed to identify risks relating to the security and geopolitical landscape, in the context of wider UK security objectives. However, government currently has limited ability to provide direction on national security issues in the energy system, with existing legislation focussing on emergency powers where there is imminent severe risk to life. These powers cannot necessarily be used pre-emptively before an emergency has taken place, whereas national security concerns may not necessarily be urgent, but rather arise out of a long-term risk that government is managing. We are therefore proposing to have a power to allow the Secretary of State to direct the FSO at any stage, including at an early stage to mitigate potential vulnerabilities before risks can materialise.

The FSO's licences are being used to implement this, and Ofgem would be responsible for enforcing non-compliance with a national security direction from the Secretary of State by the FSO, where appropriate. The licence would also make provision for a direction by the Secretary of State related to national security to relieve the FSO of any obligation under its licences where the obligation conflicts with the direction.

**2. Consultation question: Do you have any views on this proposed national security power, and duty on the FSO?**



## Chapter 3: FSO roles update

In our previous [FSO consultation response](#) we set out a summary of our position on the different areas where new or enhanced roles and functions are being developed for the FSO or could be developed for the FSO in future. We are providing an update to stakeholders on these roles and signpost to other documents where relevant.

**This section is for information only and does not form part of the consultation.**

We are setting out the following:

- **Roles in the FSO's Day 1 licences:** An overview of new roles that we intend for the FSO to take on from Day 1 and will form part of Ofgem's forthcoming consultation on Day 1 licence conditions. Note, we also intend for the FSO's Day 1 licence to include the security and resilience roles and the national security power, covered in Chapter 2 above.
- **Further network planning and competition roles:** Roles that could form part of FSO's Day 1 licences, if timings align, or come into place shortly afterwards. These will not be included in Ofgem's forthcoming consultation on the FSO's Day 1 licences but will be subject to their own Ofgem consultation process.
- **Future roles:** An update on potential future whole system roles which the FSO could take on. These roles are being developed separately by the relevant policy areas.

Whilst in this chapter we have set out these as separate and distinct roles, the value of the FSO will be in how it organises itself to ensure that the roles are coordinated and operate together efficiently.

The Electricity Networks Commissioner has also now delivered his advice to Government on how to reduce the timeline for electricity transmission network delivery by half. The [report's](#) recommendations include new roles for the FSO. We welcome these recommendations and will publish an Action Plan in 2023 in response. Where recommendations have significant resource and delivery implications for the FSO, further engagement will be needed with the ESO and wider industry before making final decisions.

### 3.1 Confirmed FSO roles in Day 1 licence

We have set out below, for information only, an overview of the new or enhanced roles that were previously [consulted](#) and that we intend to set out within the FSO's Day 1 licences. Note, we also intend for the FSO's Day 1 licence to include the security and resilience roles and the national security power (covered in Chapter 2 above). We have been working closely with the ESO, and NGT where appropriate, to further work through the details and practicalities of these roles. Ofgem intend to include these roles in its forthcoming licence consultation(s) on the FSO's Day 1 licence (see next steps in Chapter 4).

Note that these roles only cover what will be set out as obligations in the FSO's licence and therefore may not be an exhaustive list of what the FSO will be doing from Day 1. As a dynamic, independent organisation driving our ambitions at the heart of the energy system, we expect the FSO to go beyond these obligations where it believes it can best fulfil its objectives

set out in legislation and the Strategy and Policy Statement, and where this does not impact on the transition to the FSO, or on its ability to discharge other vital functions once established.

The FSO will take on all the main existing roles and responsibilities of the ESO. We set out below the main new roles in addition to these: the FSO's advisory role, and its roles in the gas system. We expect all these roles to become increasingly whole system as the FSO's capability develops and the gas and electricity roles become more fully integrated (including with any roles in other vectors).

### 3.1.1 Advisory role

We intend for the FSO's Day 1 licences to refer to the FSO's statutory duty to respond to requests for advice, analysis, or information from Ministers of the Crown and Ofgem, in matters in connection with the FSO's functions or statutory objectives. As previously consulted on, the government and Ofgem will have to make important policy and regulatory decisions across many areas of the energy system over the coming decades to enable progress towards net zero. Many of these decisions would benefit from drawing on specific areas of whole system expertise of the FSO, such as the impacts of potential government or Ofgem decisions on future system operability or network investment. Being able to request and draw on specific, targeted advice from the FSO will be hugely valuable to help ensure any decisions made are robust and based on full available evidence. Whilst this duty is set out within the Energy Bill, Ofgem intend to regulate the FSO's advisory duty further through its licence, which Ofgem will consult on in their forthcoming licence consultation.

### 3.1.2 Gas roles

#### **Gas strategic planning**

Our decision remains that the FSO should undertake gas strategic network planning and we describe below further detail on how we intend for this to work from Day 1. We set out in our previous consultation response that the FSO's role would include undertaking long-term network capability assessments; needs case production; optioneering; economic options assessment; and publication of the Annual Network Capability Assessment Report (ANCAR) and the Gas Ten Year Statement (GTYS).

Following extensive engagement with ESO and NGT, we are working to establish a strategic planning gas options assessment process for the FSO to coordinate for Day 1. However, the expectation is that the FSO's role will evolve and change over time in line with the development of whole system planning (see 'Future new and enhanced roles' section) in licences.

We intend for the Day 1 gas options assessment process to comprise the steps and publications that are outlined below:

1. FSO will publish an independent view of gas network capability and its statement of needs (needs case production for the gas system) for industry and NGT. FSO will identify its own specific triggers and drivers for change, underpinned by its legislative duties (including its net zero duty), that will support the development of its proposed network needs. The FSO's network capability analysis will be informed by supply and

demand assumptions, which will be discharged through the Future Energy Scenarios (FES)<sup>3</sup>.

2. NGT (and potentially other parties in the future)<sup>4</sup> will produce its responses to the needs set out by the FSO under step (1), which may include asset-based investment or reinforcement, and options proposals to fulfil the needs identified by FSO.
3. FSO produces a Gas Options Assessment document which includes analysis on the options proposed and recommends solutions to Ofgem. This may include assessment of the options proposed by NGT, whether these need to be revised and potential identification of non-asset-based options (e.g., rules/tools) that may facilitate the needs cases.
4. Proposals are submitted to Ofgem for decisions on funding with the FSO's independent assessment of options, view of gas network capability, needs cases and planning assumptions.

In respect of the specific consultation documents that were referenced in our consultation decision in April 2022 (ANCAR and GTYS), the expectation is for the obligation to produce an annual network capability report to be transferred to the FSO and be discharged under step (1) above.

We still expect NGT to continue to produce a form of Long-Term Development Statement/GTYS, as will the Gas Distribution Networks (GDNs), and for the FSO to produce its Gas Options Assessment document whilst incorporating elements of the current GTYS publications.

### **Gas market strategy**

Our decision remains that the FSO should lead market participants in developing gas market strategy. As we've stated previously, the cross-vector remit of the FSO would enable it to lead the industry in considering how market frameworks can change and accommodate whole system solutions and developing technologies, which would build on the gas market strategy role we are enabling for Day 1. We expect it to coordinate and lead Future of Gas (FoG) forums and participate in the development of gas market projects that are currently delivered through the Gas Markets Plan (GmaP). We are currently working with ESO to consider, in further detail, how these current routes for developing gas market strategy (e.g., FoG, GmaP) can evolve under an FSO into the coordination of whole system market strategy.

For the FSO to fulfil its gas functions, we are considering whether the FSO should become a new class of user under the Uniform Network Code (UNC) from Day 1. This would reflect a whole system organisation that establishes a presence across industry codes in electricity and gas and is able to provide strategic input across both fuels. We believe this would enable benefits such as allowing the FSO to propose modifications to market arrangements, enable future FSO roles and functions (e.g., in hydrogen, future charging routes) and enable direct contractual and data sharing arrangements between the FSO and gas industry participants. Ofgem intends to carry out further engagement with relevant parties as part of implementation

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<sup>3</sup> Or any future long-term forecasting process that could replace FES – see Ofgem's consultation on this [Consultation on Future System Operator supply and demand modelling | Ofgem](#)

<sup>4</sup> For Day 1 of the FSO, we intend for NGT – as the System Operator-Transmission Owner of the National Transmission System (NTS) – to propose asset-based investment options for development of the NTS. In the future, we expect the whole system strategic planning landscape to expand, and for more parties to have the opportunity to devise, develop and recommend options at both Transmission and Distribution level.

of cross-code changes and recognise that the FSO would have a unique position and implementation compared to gas shippers and transporters.

These considerations focus specifically on the FSO's relationship with the energy system and are separate to our [Code Governance Reform](#).

### **Gas forecasting**

As set out in our previous FSO consultation response, we have decided that the FSO should produce medium to long-term gas supply and demand forecasting, as an output of the FES. This medium-long-term forecasting is undertaken by the ESO currently on behalf of NGT, with inputs into various wider gas functions and publications across industry.

We are engaging and conducting further work with the ESO and NGT to explore the specific requirements, obligations, and interactions between the FSO's supply and demand forecasting and the gas strategic planning process. Earlier this year, Ofgem [consulted on the future of supply and demand modelling](#) delivered by the FSO including reviewing the purpose and methodology of the FES (see '3.2. Further network planning and competition roles' below). Whilst we are enabling the FSO to begin delivering this gas forecasting function on day 1, we expect that the specific design detail of its supply and demand modelling will be linked to Ofgem's work following its consultation on the FES and supply and demand scenarios. Further consultations by Ofgem may be required to consult on the specific detail of these licence obligations under this function.

### **Medium range gas supply security risk assessment and Gas Future Operability Planning**

As set out in the [Government's Powering Up Britain: Energy Security Plan](#), to complement existing security of supply standards focussed on supply infrastructure capacity, the FSO will deliver a new medium range Gas Supply Security Assessment on an annual basis. This assessment will consider gas supplies according to availability, reliability and deliverability, which we intend to be across a five and ten-year time horizon. This will be against a peak demand scenario during a period of least resilience e.g., lower UK storage levels or constrained delivery through gas infrastructure.

We expect this new assessment to be published and form the basis of advice from the FSO to government and Ofgem, and information to wider industry. This assessment will inform actions that are needed by NGT, FSO, and wider industry to maintain security of energy supply across the GB system, including investment where needed.

The methodology to complete the Gas Supply Security Assessment annually is being developed with input from industry, and government will look to publish the methodology as an output later this year (2023).

DESNZ previously made the decision for the FSO to undertake what is termed Gas Future Operability Planning (GFOP). GFOP aims to shape the debate on developing the NTS to meet the needs of the changing energy landscape, linked to FES outputs. Through further engagement with NGT and ESO, we understand NGT may still publish elements of GFOP where it relates to their own operational purposes. We are therefore still exploring what documentation, whether it be a version of GFOP or something new, where the FSO can best add value. As such, we have not added any obligations in the licence in relation to the GFOP<sup>5</sup>

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<sup>5</sup> GFOP is not currently obligated in NGT's license.

but we consider the Gas Supply Security Assessment is an aspect where the FSO can specifically add value in this area, particularly considering how the planning of the NTS is shaped against an assessment of gas supply across the energy landscape. As such we intend to include the Gas Supply Security Assessment as an obligation in FSO's Day 1 licences.

### **Data and digitalisation**

We intend for the FSO to be a data-led organisation, with a strong digital and IT systems capability. The FSO should, alongside ensuring compliance with the ESO's current special licence condition 2.11 (Digitalisation), lead by example in improving sectoral energy data practices that are integral to the well-coordinated and cost-effective delivery of net zero. This includes upholding the principle of presumed data openness, where the FSO should aim to improve safe data access, with due consideration of data privacy and compliance requirements.

As part of its RIIO-BP2 Final Determinations decision, Ofgem has set out how it expects the ESO to meet and exceed expectations regarding data and digitalisation from 2023-25, and the FSO should be able to build on and continue developments made in these areas from Day 1.

## **3.2 Further network planning and competition roles**

This section provides an update, for information only, on roles for the FSO that could form part of FSO's Day 1 licences, if timings align, or come into place shortly after Day 1. These roles will be subject to their own Ofgem consultation process where more information, including on the timings of these roles, will be set out.

If timings align for Day 1, they will be included in the statutory consultation for FSO's licences, ahead of the Secretary of State granting these licences to the FSO as it is established (see Chapter 4: Next Steps).

### **Central Strategic Network Planning (CSNP)**

In November 2022, Ofgem set out [its decision](#) that the FSO will be responsible for creating the new CSNP for electricity transmission. The aim of the CSNP is to provide an independent and coordinated approach to network planning in GB focussed, at first, on the electricity transmission network - onshore, offshore and interconnectors<sup>6</sup>.

The CSNP will help network investment decisions to be made quicker in order to support the continued growth in the connection of new renewables and low carbon demand to meet the government's net zero ambitions. It will also help keep costs of this investment as low as possible.

Over 2023 and 2024, Ofgem will work with industry to: implement the CSNP regulatory framework in the FSO's electricity system operator licence and any consequential amendments required to transmission licences; provide guidance to the FSO on its associated responsibilities; and to consider how the CSNP can evolve into a whole system strategic network planning framework over time (for example, accommodating investment in hydrogen

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<sup>6</sup> The CSNP will replace the Holistic Network Design (HND) and Network Options Assessment (NOA) which the ESO produced covering offshore and onshore electricity transmission respectively.

networks, subject to the DESNZ decision on hydrogen strategic network planner, set out below).

Ofgem has recently published a [consultation](#) on the framework for identifying future system needs and the associated options to develop the CSNP. Following responses, Ofgem intend to publish their decision and an informal consultation on the draft text of the licence conditions needed to implement the CSNP in Autumn 2023. It is possible that some of these new responsibilities will be established as part of the FSO's Day 1 licences or, if not, shortly afterwards. Ofgem is working with the ESO to understand the timings of the CSNP publications and gas planning will be incorporated into these as soon as is practical.

The Electricity Network Commissioner's [report](#) also sets out a recommendation for a Strategic Spatial Energy Plan (SSEP), to be delivered by the FSO and supported by the CSNP. We recognise that there are significant benefits to taking a more coordinated approach to planning the energy system and we will consider the extent to which it would be beneficial to widen the scope of the FSO's role to include the SSEP. Given it could have resource and delivery implications for the FSO, further engagement will be needed with ESO before making any decisions.

### **Updated Future Energy Scenarios (FES)**

As part of the development of the CSNP, Ofgem is working with the ESO to review the purpose and methodology of the FES. The updated FES will be the means by which the FSO models future supply and demand to inform network investment needs within the CSNP. Ofgem's [consultation on the future of supply and demand modelling](#) under the FSO closed on 24 June 2024, and Ofgem is currently reviewing responses as part of the ongoing work to implement the CSNP regulatory framework.

We expect these new responsibilities to be included in the FSO's Day 1 licences, or shortly after the establishment of the FSO.

### **Onshore electricity network competition tender body (subject to SoS discretion)**

As part of the Energy Bill, DESNZ is legislating to open up onshore electricity network ownership and operation to third parties through competition, allowing for new, innovative parties, with access to different sources of capital, to invest in network infrastructure and be licensed as part of that. As set out in the [DESNZ network competition consultation response](#), we expect that the Secretary of State will appoint the ESO to the role of the Designated Body, with the expectation of this then being undertaken by the FSO when established.

The ESO is continuing to finalise the commercial arrangements that underpin their [2021 Early Competition Plan](#). Ofgem is working alongside the ESO to understand the broader policy implications that introducing competition will have.

Ofgem intends to consult, in the coming year, on further aspects of the regulatory framework that supports the early competition model the ESO is developing. This includes considering the implications for the development of the CSNP. Ofgem expects that any associated licence changes required for the FSO will be consulted on separately from any FSO draft licence consultations. However, licence changes are expected to be put in place as part of the FSO's Day 1 licence or shortly after.

## 3.3 Future new and enhanced roles

This section seeks to provide an update on potential future whole system roles for the FSO. The detail and governance of these roles are still subject to further policy development, which are being led by the relevant policy area. They may require further consultation in future, where appropriate.

FSO's role and remit will continue to evolve over time, therefore this is not intended to be an exhaustive list of FSO's potential future roles in the energy sector. We are adopting a phased approach to new FSO roles to ensure that additional roles, when considered in the aggregate, do not impact on the transition to the FSO, or on its ability to discharge other vital functions once established. It is also important that any expansion of the FSO's remit doesn't come at the expense of its ability to develop its own culture and that it has the time it needs to build up necessary resource and expertise. To mitigate this the Government is, together with Ofgem and the ESO, establishing a robust process to consider potential new roles for the FSO and ensure it is not overburdened at any point in time.

### 3.3.1 System planning and markets

#### **Evolution to a 'whole systems' CSNP**

We expect the FSO's CSNP role to evolve over time, including to consider the development of emerging technologies and cross energy vector options. Further consideration of the evolving role of the CSNP will be a key feature of Ofgem's and the FSO's work over the coming years to help ensure that timely and efficient network investment decisions are planned and made.

#### **Hydrogen strategic planning**

In autumn 2022, DESNZ [consulted](#) on the need and potential approaches for strategic planning for Hydrogen Transport and Storage infrastructure. This consultation included the FSO potentially undertaking a Central Strategic Network Planning role for hydrogen, which would be consistent with the FSO's duties and powers set out in the Energy Bill.

Stakeholder responses indicated majority support for strategic planning and a role for the FSO in network planning for hydrogen. Government has now published its [response](#) to this consultation, in which government sets out its minded to position that some form of strategic planning, potentially combined with elements of market-led development, is necessary to enable the efficient, cost-effective and timely roll-out of transport and storage infrastructure, and that in the future the majority of that planning could be done by the FSO.

The form and detail of the FSO's strategic planning role will be subject to further consultation, following an update on the strategic direction of transport and storage development in December 2023.

#### **Future System Network Regulation (FSNR)**

The existing RII0-2 price controls for electricity and gas transmission and gas distribution networks will run until March 2026, with the new price control for electricity distribution running for 5 years until March 2028. Ofgem's [consultation](#) on frameworks set out the process for deciding the overarching framework design for the network price controls that will replace these.

As part of the consultation, Ofgem outlined potential areas of price control decision making which could move to the FSO. This includes:

- Determining the need for certain types of investment, informed by its strategic gas and electricity network planning capability or as a potential future regional system planner.
- Considering its future capability for investment delivery (e.g. running onshore competition for electricity transmission network infrastructure).

The approach is being considered as part of the FSNR project and a framework decision is expected in autumn 2023. The decision will inform some of our views on the detailed specifications of the FSO future roles.

### **Distribution market facilitation and Regional System Planner(s)**

Ofgem's [Future of local energy institutions and governance consultation](#) set out a proposed package of reform to governance arrangements for key energy system functions at a distribution level. This includes the creation of Regional System Planner(s) and a single market facilitator for flexibility services. The FSO is proposed as a potential candidate for delivering both roles, to be agreed between government and Ofgem. Ofgem will work to develop these proposals further and intends to publish a decision on this consultation later in 2023.

### **3.3.2 Resilience, infrastructure security and security of supply**

#### **Whole energy system security and resilience**

We intend for the FSO's Day 1 roles in security and resilience, set out in section 2.1, to evolve to include the whole system, with potential additional new roles in future. These potential additional roles, building on the FSO's Day 1 roles, are set out below and are all subject to further policy development and engagement.

- *National Security Vetting Sponsoring Authority:* The FSO could become the National Security Vetting Sponsoring Authority for the electricity and gas sectors. Further engagement with relevant stakeholders, and consideration of FSO's statutory remit, is needed to develop this policy and role further.
- *Monitor emerging situations:* We intend for the FSO to proactively analyse and review real-time data and information, monitoring the external environment, different energy markets, demand, trends and other influential factors, to identify and monitor emerging situations across the electricity and gas sectors. This analysis across the whole energy system will enable a proactive approach to system management and provide a basis for better risk analysis and an ability to gain foresight of and mitigate against emerging situations, before they become an emergency. Further engagement will be required to develop this role including the specific standards and thresholds for monitoring.
- *Whole system emergency preparedness:* Post Day 1, the emergency preparedness role could expand and evolve to include the whole energy system, providing a central view of industry readiness and system resilience, as well as creating a mechanism for the sharing of best practice across sectors. This view would be used to inform consistent and efficient emergency preparation and preparedness for events across the whole energy system.



- *Coordinate emergency response:* The FSO could be an independent operational coordinator during emergencies and incidents that will impact both electricity and gas systems. This will include making decisions across the whole energy system that will balance the needs of electricity and gas sectors to provide a net benefit for customers overall and then directing relevant parties to action those decisions. This role is subject to further policy development and will require further engagement, including with the existing Network Emergency Coordinator (NEC) for gas<sup>7</sup>. An assessment will also be needed as to whether new or amended primary legislation would be required for this.
- *Provide post-season analysis:* The FSO could provide post-season analysis for winter and summer, covering the whole energy system, assessing performance, and identifying lessons that can be incorporated into future whole system planning.

### 3.3.3 Cross-cutting/other

#### Data and digitalisation

The [Energy Digitalisation Strategy](#) makes it clear that to safeguard Britain's energy security and meet our 2050 net zero target, new digital energy infrastructure will be necessary to manage the complexities of the evolving system. System-wide data sharing will be commonplace, planning decisions will be reliant on analysis of high-quality data, and core system operations will be made more efficient through actions built on dynamic datasets. We consider that the FSO, as a central, whole system body, could be well-placed to provide leadership on core principles so that digital energy infrastructure supports whole-system coordination, maintains energy security and delivers efficiencies in decarbonising the energy system.

We will continue to monitor relevant innovation and industry programmes and gather evidence on system-wide data sharing, digital energy infrastructure, and the governance arrangements needed to deliver a digital net-zero energy system.

Alongside this, we will continue to assess the suitability of existing ESO licence conditions and the role of the FSO to provide leadership on core digitalisation principles.

#### Hydrogen production business model – allocation body

The British Energy Security Strategy set out the Government's ambition to move to price competitive allocation of the Hydrogen Production Business Model for electrolytic projects by 2025, as soon as legislation and market conditions allow.

To inform the design of price-competitive allocation, the Government is currently gathering evidence from industry in a [Call for Evidence on the future policy framework for allocation of the Low Carbon Hydrogen Production Business Model](#) published earlier this year. Part of that Call for Evidence includes seeking views on the factors that the Secretary of State may take into account when considering appointing a hydrogen production allocation body, responsible for administering price-based competitive allocation rounds. It is the Government's intention for price-based competitive allocation rounds to be delivered on a UK-wide basis, therefore the hydrogen production allocation body may be required to operate UK-wide.

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<sup>7</sup> We decided in our previous FSO consultation response that the Gas NEC would remain with NGT.

The FSO may be considered as a potential candidate for such an allocation body, because the FSO will be taking on the ESO's existing Electricity Market Reform delivery roles. The Energy Bill contains clauses that are intended to enable the FSO to fulfil a hydrogen production allocation body role should any decision be made to appoint the FSO to the role.

The Government welcomes stakeholder views on the transition to and design of price-based competitive allocation in response to the Call for Evidence.

## Chapter 4: Next Steps

We are seeking comments to our consultation questions on resilience and national security power by 20<sup>th</sup> October 2023. We will review the responses to this consultation to inform our policy decisions for Day 1 and will publish a response in due course.

We will also take forward a number of other consultations:

- Ofgem will consult on the FSO's Day 1 licences in two parts, with the first being launched in the coming months, and a second consultation later this year on the FSO's funding arrangements.
- Ofgem will separately consult on the licence draft for CSNP in Autumn this year.
- Ofgem will consult on code modifications necessary to implement the FSO.
- Ofgem and DESNZ will undertake a statutory consultation of the FSO's Day 1 licences ahead of the Secretary of State using the powers provided under the Energy Bill to grant these licences to the FSO as it is established.
- DESNZ and Ofgem will consult on further potential roles (such as those set out in Chapter 3 above) for the FSO as appropriate.

DESNZ and Ofgem will continue to work closely with NG Plc, ESO, and NGT on developing and delivering detailed plans for implementation. Depending on a number of factors, including timings of the Energy Bill and discussing timelines with key parties, our aim continues to be for the FSO to be operational in 2024.

DESNZ and Ofgem will engage wider industry stakeholders on FSO implementation plans as appropriate. We will establish an Industry Readiness Group (IRG) to provide a view of wider industry readiness for the transition to the FSO. Where appropriate, the IRG will engage with industry representatives to track and assess preparations and inform our wider implementation approach.

## Annex 1 - List of consultation questions

We are consulting on two new elements of our FSO policy which are intended to be set out in the FSO's Day 1 licence. These are the policy detail of new Day 1 security and resilience roles for the FSO, and a new power for the Secretary of State to direct the FSO in certain limited circumstances related to national security. We are consulting on these two roles at this time because unlike other Day 1 FSO roles and obligations, they were not considered in our previous consultation. The questions are:

1. Do you have any views on the proposed new security and resilience roles?
2. Do you have any views on the proposed new National Security power, and duty on the FSO?

## Annex 2 - Analytical annex – FSO consultation

### Background

- This annex is intended to provide an overview of the factors influencing the impacts of the consultation proposals. It is not intended as a formal impact assessment and as part of the consultation we will seek to gain further evidence.
- The annex follows on from the final impact assessment published as part of the previous consultation in April 2022 - [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1066721/future-system-operator-consultation-impact-assessment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066721/future-system-operator-consultation-impact-assessment.pdf).
- Two new elements of Future Systems Operator (FSO) policy are being considered as part of this consultation and for which the analytical annex covers. These are:
  1. Security and Resilience roles
  2. National Security Power
- A qualitative description of the costs, risks and benefits has been chosen to assess these new areas of policy due to their unquantifiable nature.

### Security and Resilience roles

- We intend for the FSO to ultimately take on a whole energy system role to understand and plan system security and resilience across electricity and gas and the interactions between them. Responsibility for delivering this role is intended to be scaled up over time with the initial responsibilities being put in place as Day 1 responsibilities and further whole system obligations coming later. In this document we are consulting on the detail of the Day 1 obligations and roles only.
- A proposal to undertake additional resilience roles, and the associated costs, was included within the ESO's RIIO-2 business plan (<https://www.nationalgrideso.com/what->

we-do/our-strategy/our-riio-2-business-plan) under the establishment of an Office of Energy Resilience and Emergency Management. This consultation is on the detail of the Day 1 obligations and roles only, and as such no additional cost is expected compared to the ESO's RIIO-2 business plan proposal.

- Improving the security and resilience of gas and electricity systems, and the interactions between them are expected to materialise benefits through increased preparedness to new emergencies, readiness for winter and summer, and improved systems resilience. It is not possible to quantify these benefits given the unpredictable nature of emergencies, however the potential impact of increased resilience is large though uncertain.

### **National Security Power**

- We are also consulting on including, in the FSO's day 1 licence conditions, a power for the Secretary of State to direct the FSO to take, or not take, certain actions where a risk relating to national security has been identified that may detrimentally impact the resilience, safety or security of the energy system, or the continuity of essential services. The FSO will be required to comply with any such direction issued by the Secretary of State, and take any action specified in that direction, where it is within its power and control.
- Costs from creating this power would only occur if the power was used, this is only expected in extreme circumstances and where existing pathways aren't sufficient. Potential costs from the use of the power could include:
  1. Legal risk of action being taken against its use and costs being incurred through a successful legal challenge or through a judicial review.
  2. Increased costs passed to consumers through a more expensive contract being taken forward by the FSO due to direction from the power.
  3. Cost to businesses through the loss of a contract because of direction from the power.
- The expected benefits from using the power are also unquantifiable but include an improvement to the resilience and security of supply of our energy system through the ability to intervene early and at any stage of a national security concern and the ability to act on long-term risks posed to the system.
- Potential risks from the use of the power, including operational risks, are expected to be mitigated through the design, pre-engagement, and proportional use of the power.
- Overall, it is expected that the impact of the new power will be low given the low probability of its use. We expect the benefits to outweigh the costs of the measure, however both the size and expected outcome are uncertain given the unpredictable nature in which events would occur for the power to be used. The scale of impact of the measure also depends on the scope, with a wider scope leading to larger impacts.

# Glossary

|                          |  |
|--------------------------|--|
| ANCAR                    | Annual Network Capability Assessment Report  |
| DESNZ                    | Department of Energy Security and Net Zero   |
| CBA                      | Cost Benefit Analysis  |
| CNI                      | Critical National Infrastructure   |
| CSNP                     | Central Strategic Network Planning   |
| Day 1                    | The first day of the FSO (i.e. the point of establishment as government owned entity when the first FSO licenses come into force)  |
| Electricity distribution | Electricity distribution networks carry electricity from the high voltage transmission grid to industrial, commercial and residential buildings                                      |
| Energy Bill              | Energy Bill 2022 – The Energy Bill introduced to parliament July 2022, and will set the overarching legislative framework for the FSO.   |
| ESO                      | Electricity System Operator  |
| FES                      | Future Energy Scenarios  |
| FoG                      | Future of Gas  |
| FSNR                     | Future System Network Regulation   |
| FSO                      | Future System Operator   |
| GDN                      | Gas Distribution Network   |
| GFOP                     | Gas Future Operability Planning  |
| GMaP                     | Gas Market Action Plan   |
| GSO                      | Gas System Operator  |
| GTYS                     | Gas Ten Year Statement   |
| IA                       | Impact Assessment  |
| ISOP                     | Independent System Operator Planner (FSO described in the Energy Bill)   |
| NEC                      | Network Emergency Coordinator  |
| Net zero                 | Refers to the balance between the amount of greenhouse gas produced and the amount removed from the atmosphere. The UK is required by law to reach net zero carbon emissions by 2050 |
| NG Plc                   | National Grid Plc  |
| NGT                      | National Gas Transmission  |
| NOA                      | Network Options Assessment   |
| RIIO                     | Revenue = Incentives + Innovation + Outputs  |
| SoS                      | Secretary of State   |
| SPS                      | Strategy and Policy Statement  |
| SSEP                     | Strategic Spatial Energy Plan  |

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This consultation is available from: [www.gov.uk/government/consultations/future-system-operator-second-policy-consultation-and-project-update](https://www.gov.uk/government/consultations/future-system-operator-second-policy-consultation-and-project-update)

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