Guidance

# ~~NESO Licence Expectations document 2025 to 26~~

# NESO Licence Expectations Document

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National Energy System Operator (NESO) has key responsibilities across both electricity and gas systems. It has objectives related to driving progress towards net zero while maintaining energy security and minimising costs for consumers. It performs a number of important functions from the real time operation of the electricity system, through to energy market development, managing electricity system connections and leading on strategic energy network planning. We regulate NESO to help ensure that the actions it takes align with the interests of consumers.

NESO's licences set the minimum requirements and standards that NESO must comply with. This NESO Licence Expectations ~~document~~Document provides further explanation of the behaviours we expect from NESO in relation to some of these licence obligations. The purpose is to help to align expectations between NESO, Ofgem and stakeholders, and support the enforceability of NESO's obligations.

~~**This is a draft version of this expectations document for consultation. We aim to make a decision on the final version in March 2025.**~~

This document is issued by Direction pursuant to Part F of Condition C1 (General obligations on ISOP's activities) of the Electricity System Operator Licence and Part E of Condition C1 (General obligations on ISOP's activities) of the Gas System Planner Licence.

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## Contents

## Version history

~~The table below summarises the changes made to NESO Licence Expectations document (and predecessor documents established under the Electricity System Operator's (ESO) regulatory framework).~~

### Versions applicable to NESO[1]

| Version | Date published | Summary of document |
|---|---|---|
| ~~1.0~~ | ~~11 July 2017~~ | ~~Expanding Role 1 to better reflect the ESO's system operability role.~~ |
| ~~2.0~~ | ~~23 February 2018~~ | ~~Clarifications on the status and purpose of the roles and principles.~~<br>~~Clarifications on how the roles and principles will be updated going forward.~~<br>~~Clarification to Principle 4 to include European Network Codes.~~ |
| ~~3.0~~ | ~~25 March 2019~~ | ~~Clarifications and updates to introductory text.~~<br>~~Rewording the title of Principle 2.~~<br>~~Clarifications to supporting principal guidance for Principles 2, 3, 5, 6 and 7.~~ |
| ~~4.0~~ | ~~6 March 2020~~ | ~~Streamlining the roles framework by moving from 4 to 3 roles.~~<br>~~New text on competition and FES.~~ |
| ~~5.0~~ | ~~17 March 2020~~ | ~~Updated guidance to align with start of RIIO-2 price control.~~ |
| ~~6.0~~ | ~~28 March 2023~~ | ~~Updated guidance to align with the ESO's second business plan cycle during the RIIO-2 price control.~~ |
| ~~7.0~~ | ~~1 November 2023~~ | ~~Updated guidance to better align our expectations with the ESO's current role in industry.~~ |

[1] For the previous NESO Roles Guidance document and previous document version history, see: NESO Roles Guidance 2023-2025

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|---|---|---|
| ~~8~~1.0 | 12 September 2024 | Changes to reflect the introduction of NESO.<br>(Published as NESO Roles Guidance) |
| ~~9.0~~2.1 | ~~04 February~~1 April 2025 | Updated to align with NESO's third business plan cycle (BP3) during the RIIO-2 price control. |

# 1. Introduction

1.1 The NESO Licence Expectations ~~document~~Document provides guidance on the behaviours and actions we expect to see from NESO for it to meet its licence conditions for a number of its key activities. This document is also designed to provide transparency to stakeholders around the key activities NESO is required to undertake with the aim of aligning expectations.

1.2 This ~~guidance~~document is divided into thematic chapters based on different areas of NESO's responsibilities. However, throughout all these expectations are the cross-cutting themes of ensuring NESO's actions align with consumers' interests. For example, protecting consumers from undue costs, enabling a secure and cost-effective transition to a Net Zero energy system, being a trusted source of information and insight, providing transparency on actions and decision making, and carrying out effective engagement with stakeholders.

1.3 Many of the expectations in this ~~guidance~~document relate to behaviours and actions we expect to see from NESO as part of its ongoing compliance with its licence conditions. However, where specified, the expectations also include what we consider NESO should seek to achieve by the end of the RIIO-2 price control.[2] ~~.~~ This is because NESO's ongoing compliance with its core obligations in many cases requires a continual evolution of existing practices and processes. We have also aimed to be clear at the start of each section whether the expectations apply to NESO's activities relating to electricity, gas or both.

1.4 NESO's ~~licence~~licences and these regulatory expectations are intended to be complementary to NESO's statutory duties.[3] ~~.~~ We ultimately expect NESO to carry out all its activities in a manner that it considers is best calculated to promote its objectives under Section 163 of the Energy Act 2023, whilst also having regard to the matters specified in Section 164 of the Energy Act 2023, and in line with its duty to have regard to the ~~Strategy and Policy Statement~~Strategy and Policy Statement[4].

[2] For the avoidance of doubt, this refers to NESO's price control period which ends on 31 March 2026.
[3] Please see: Energy Act 2023 ~~(legislation.gov.uk)~~
[4] Strategy and Policy Statement for Energy Policy in Great Britain

## Status and purpose of the NESO Licence Expectations ~~document~~Document

1.5 This guidance should be considered as a non-exhaustive list of examples of how we currently ~~envisage~~expect NESO should fulfil its obligations when undertaking certain functions. The expectations are underpinned by NESO's binding Electricity System Operator and Gas System Planner licences obligations – particularly Condition C1 (General obligations on NESO activities).

1.6 In the event that NESO does not meet its licence obligations, it may be found to be non-compliant. This ~~Licence Expectations~~ document (in all its versions) will inform any future decisions taken by the Authority when considering possible investigation and enforcement issues arising out of non-compliance with the relevant licence obligations.

1.7 This document is guidance issued pursuant to Part F of Condition C1 of the Electricity System Operator licence and Part E of Condition C1 of the Gas System Planner licence. Any changes to this document will follow the process outlined in Part F of Condition C1 of the Electricity System Operator licence and Part E of Condition C1 of the Gas System Planner licence. However, where relevant, this document also provides guidance on our expectations related to other licence conditions outside of Condition C1.

# 2. Electricity system operation

## Background

2.1 Operating the National Electricity Transmission System (NETS) in a safe, reliable and efficient way is a core function of NESO. The Electricity National Control Centre (ENCC) performs the day-to-day, short-term (within day and day-ahead) operational activities for the NETS.

2.2 The ENCC carries out real-time system balancing by contracting and trading with energy market participants (~~e.g.~~for example generators, storage providers and third-party providers of aggregated flexibility). This is achieved primarily via the Balancing Mechanism (BM) and the utilisation of contracted balancing services. The ENCC also requests that transmission network owners (TOs) optimise physical network configurations using network assets, ~~e.g.~~for example flexing voltage tolerances or amending specific circuit ratings or planned outages and maintenance.

2.3 Alongside the real-time operation of the NETS, other key electricity control centre functions include coordinating with other network operators on operational decisions and outage changes, and network planning out to one-year.

2.4 NESO's approach to its electricity system operation role has a material impact on security of supply, consumer costs and Net Zero. NESO therefore must plan ahead and invest in the skills, IT systems and processes needed for a secure and cost-effective transition to decarbonised energy system.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.2; C1.3; C1.4(b); C1.5(a); C1.5 (c); C1.5(d); C1.6; C3; C7; C9.2; C9.3; E3.5(b); E3.2(a); and E4.4(b)

### Gas System Planner licence conditions:

n/a

## Guidance on our expectations

These expectations apply to electricity activities only.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Balancing efficiently

- ~~•~~ Balancing the NETS economically and efficiently without discrimination in ~~its~~the procurement or use of Balancing Services~~.~~
- ~~Including~~, including by:
    - taking actions that minimise consumer costs irrespective of provider type or size~~.~~;
    - planning ahead to accurately forecast reserve, foot room requirements, and system constraints~~.~~;
    - using the full range of available balancing services and options (~~e.g.~~for example from both market parties and network companies).

### Maintaining system frequency and voltage

- Maintain system frequency and voltage within statutory limits (including the Security and Quality of Supply Standard (SQSS)).
- Demonstrably minimise any increases in the number of instances where the system frequency is outside operational limits but within statutory limits (for example, excursions beyond 0.3Hz) or transparently demonstrate why tolerating increases in these excursions strikes an appropriate between security and cost-efficiency.
- Respond swiftly to any event (expected or unexpected), on the NETS or otherwise, to secure stable frequency across the NETS.
- Assess existing, emerging, and potential risks (including risks materialising from distribution networks) to the maintenance of stable frequency and security of supply across the NETS. Managing those risks appropriately to minimise associated costs and occurrence of unexpected events.

### Making trade-offs across time horizons

- Consider the appropriate trade-offs between short-term costs and longer-term market developments in the interests of consumers now and in the future.

### Ensuring future operability

- ~~Development of~~Develop plans to ensure known/expected future operability challenges can be managed once the challenges materialise (for example through the

continued production of the System Operability Framework and Operability Strategy reports[5]).

- Produce and transparently share an assessment of the most material risks to system operability.

### Coordinating with other network operators

- Coordinate with other network/system operators to optimise the use of balancing resources~~.~~, including by:
- ~~Including by:~~
    - identifying and progressing changes to outage plans in order to minimise constraint costs (~~e.g.~~for example through the effective use of System Operator Transmission Owner Code (STC) processes), ensuring the costs put forward by TOs for short-term network outage changes through the STC processes are reasonable~~.~~;
    - exchanging information and data with distribution network operators (DNOs) to ensure efficient dispatch of distributed energy resources (DER).
- Ensure NESO ~~ensures its~~ processes and systems facilitate close operational coordination between different electricity network operators.
- To underpin this, by April 2026:
    - NESO exchanges all necessary real-time operational information with other network operators.
    - NESO has regularly engaged with DNOs to inform DNOs' operability plans and process development and, where appropriate, has adapted its own plans and processes in light of DNO insights.

### Minimising outage changes caused by error

- ~~A~~Ensures a small proportion of short notice changes to planned outages are caused by a NESO ~~error~~process failure.

### Oversight of balancing services markets

- ~~Effective~~Maintains effective systems for the proactive surveillance of balancing market activity and monitoring the quality / accuracy of information received from market participants. Effective engagement with Ofgem on any concerns that come to light.

[5] More information about the Operability Strategy reports can be found ~~at the following address:~~on ~~https://www.neso.energy/news/operability-strategy-report-2023~~NESO's website ~~.~~: https://www.neso.energy/news/operability-strategy-report-2023

- Ensures balancing actions, and related processes and communications, do not create significant inefficiencies and distortions in the balancing or wholesale markets or create perverse incentives with respect to market participants' behaviour or decision making.

### Maintaining effective and reliable IT systems

- Continual and responsive development of IT systems.
- High IT system availability and reliability compared to historical averages, with reduced unplanned outages from RIIO-1.
- Timely completion of ongoing and incremental upgrades to IT systems delayed from RIIO-1.
- Regular engagement with industry on the design of NESO IT systems.

### Operating the network carbon free

- In a majority of settlement periods where the electricity markets deliver a carbon free solution, NESO has the ability to efficiently and economically operate the system carbon free (i.e. all NESO actions are also carbon-free).
- To underpin this:
    - NESO has replaced legacy IT systems with systems that are fit for purpose in the future energy system, shaped through good engagement with industry.
    - NESO's control centre engineers have fit for purpose training and simulation tools that enable them to efficiently operate a zero carbon network in most situations.

# 3. Energy system resilience and emergency preparedness

## Background

3.1 NESO has an important role in ensuring whole energy system resilience. This includes key responsibilities in relation to understanding and communicating risks to security of supply, and planning and preparing for emergency situations.

3.2 NESO is responsible for restoring the electricity system in the unlikely event that there is a system-wide power failure. To plan for this situation, NESO procures restoration services, so it can meet the Electricity System Restoration Standard.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.2(a), C1.2(b), C1.2(c), C1.2(d); C1.3; C1.4(a); C1.4(b); C1.5(a), C1.5(b), C1.5(c), C1.5(d); and C4.

### Gas System Planner licence conditions:

~~n/a~~

C1.3 (c). C1.5.

## Guidance on our expectations

These expectations apply to electricity activities only, apart from the last sub section on 'whole energy system resilience'.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Restoration plans and tools

- Maintain fully-tested plans and processes to support incident management and system restoration in line with Electricity System Restoration Standard.

### Restoration policy

- Publish an assurance framework for the system restoration standard in line with Condition C4 (Electricity System Restoration Standard) of NESO's Electricity System Operator licence.
- Timely implementation of the system restoration standard in line with obligations set by Government.
- Publish an ex-post annual report detailing the total costs that NESO has incurred whilst procuring system restoration services during the year as part of the C9 process.
- Build consensus with Government, regulators and industry to drive improvements to the system restoration strategy for the future.
- Determine an appropriate implementation framework to enable a system restoration standard to be met in a fair and non-discriminatory way.
- Demonstrable awareness and understanding of risks to restoration processes outside of its current modelling capabilities. Risks are raised with relevant stakeholders rapidly and transparently.

### Restoration services procurement

- Provide accessible information to market participants on system restoration service requirements, costs and current and future needs.
- Ensure that the procurement of system restoration services and proposals of modifications to the Grid Code and other Industry Codes are completed in a timely manner so that the Electricity System Restoration Standard is fully complied with.
- Establish a pathway to enabling the full participation of DER in system restoration services, with evidence of findings being included in business as usual (BAU) processes.
- Competitively procure the majority of system restoration services.
- ~~Ensures~~Ensure that procurement is fair and accessible to all market participants and technologies at transmission and distribution voltage levels if they can meet the technical criteria.

### Facilitating electricity security of supply

- Support Ofgem, Government, and industry as a technical expert by:
- Proactively identifying, assessing and communicating existing, emerging, and potential future risks to electricity security of supply through continuous assessment, horizon scanning and industry engagement. For example, by developing adequate methodologies and relevant scenarios informed by energy market developments and intelligence.

- Managing those risks appropriately and transparently to minimise associated costs and maintain safe operation, including (but not limited to) by:
    - Improving forecasting of and situational awareness to those risks in terms of scope, accuracy and timeliness~~.~~;
    - Improving existing and developing new solutions that maintain, in so far as reasonably practicable, electricity security of supply whilst being cost-effective, and enhancing industry participation in these tools.
- Establishing and maintaining strategic working-level relationships with all interconnected TSOs.

## Whole energy system resilience

- Supporting Government and Ofgem in delivering relevant legislative or regulatory changes by providing expert advice.
- Provides comprehensive and timely briefings to the Authority on any extraordinary issues that may lead to energy system security concerns.
- ~~Making~~Make demonstrable progress on new whole energy system security and resilience activities, including by carrying out the necessary preparation for (or where applicable delivery of) reports, assessments or requests required under the licence or upon request from Secretary of State.

# 4. Sector Digitalisation, forecasting and information sharing

## Background

4.1 NESO's central position in the energy sector means it has an important responsibility in relation to data information sharing, and digitalisation. NESO holds and manages a significant amount of information which is of potential value to the sector, including operational data such as short-term energy forecasts.

4.2 NESO should develop to be a data-led organisation, with a strong digital and IT systems capability. NESO has a responsibility to lead by example in improving sectoral energy data practices that are integral to the well-coordinated and cost-effective delivery of net zero.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.3; C1.4; C1.6(c); and C3.

### Gas System Planner licence conditions:

C1.2; and C3.

## Guidance on our expectations

These expectations apply to both electricity and gas activities, unless otherwise specified.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Provision of market information

- ~~NESO ensures~~Ensures that published information ~~it publishes~~ is well-organised, accessible and shared proactively.
- ~~Provide~~Provides user-friendly, comprehensive and accurate information, including transparency on electricity control room decision making.

- Develop processes to identify and meet stakeholder needs.
- Consistent messaging across documentation and stakeholder engagement such that there are no contradictions or omissions that lead to misunderstanding.
- Engage market data participants/data users to establish needs and data value and publish outcomes.

### Driving the energy sector digitalisation

- Make available a Digitalisation Strategy and Action Plan (DSAP), with the Digitalisation Strategy and Action Plan[6] updated at least once every two years, and the Action Plan updated at least once every six months. Demonstrate progress against that plan and how it is driven by the needs of stakeholders and market expectations, such as the recommendations made by the Energy Data Task Force.[7]
- Collate and publish feedback on NESO DSAP.
- Identify and progress code modifications to enable digitisation.
- Develop and publish a digital dashboard showing progress against digital actions.

### Using and exchanging data

- NESO ensures that its data is well-organised, accessible and shared proactively (where data collected by one team can benefit and inform the work of another team) by its teams within the organisation.
- Use of data by NESO complies with the expectations of Energy Data Best Practice, such as making available robust and reliable processes for exchanging operational information with DNOs.
- Treating energy system data as open for all to use by default,[8] only restricting access in accordance with a published data triage policy where there is evidence of a good reason to do so (~~e.g.~~for example if the data contains ringfenced or sensitive information). The rationale for withholding information is made clear to the industry stakeholders.
- Creates a data portal user group and publishes material associated with groups.

### Electricity Forecasting

- Provide accurate forecasts with continuous incremental improvements to electricity forecasting accuracy, including demand, Grid Supply Point, solar power generation and wind generation forecasting.
- ~~Full implementation of Energy Forecasting Project Roadmap commitments for 2018-21.[9]~~

[6] More information about the Digitalisation Strategy and Action Plan can be found ~~at the following address:~~on ~~https://www.ofgem.gov.uk/sites/default/files/2021-11/Digitalisation_Strategy_Action_Plan_Guidance_v1.pdf~~our website

[7] More information about the Energy Data Taskforce can be found ~~at the following address:~~on ~~https://www.gov.uk/government/groups/energy-data-taskforce~~the UK Government website

[9] ~~The NESO's Energy Forecasting Project Roadmap is available at the following address:~~

- Electricity forecasts are accurate at both national and regional level and methodologies used are regularly updated to reflect changes at each Grid Supply Point (GSP).
- Model and understand developments on the electricity distribution system which impact electricity transmission-level demand.

### Data use and exchange

- By April 2026, NESO has implemented a data and analytics platform (and an associated data portal) which broadly achieves ~~most of~~ the outcomes ~~in its RIIO-2 Business Plan[10] but~~of providing a clear, consolidated and accessible interface for internal and external stakeholder to access NESO data, but which may still require some additional functionality to achieve all ~~planned~~intended outcomes.

~~https://www.nationalgrideso.com/document/145941/download~~
~~[9] The NESO's Energy Forecasting Project Roadmap is available at the following address:~~
~~https://www.nationalgrideso.com/document/145941/download~~
~~[10] The RIIO-2 Business Plan is available at the following address:~~
~~https://www.neso.energy/about/strategic-priorities/our-riio-2-business-plan~~

# 5. Markets for electricity system services

## Background

5.1 NESO operates the electricity balancing mechanism and procures a number of additional balancing services to balance and operate the electricity system in a safe, reliable and efficient way. NESO's regulatory framework for procuring balancing services provides NESO with significant scope and flexibility in the design of these services. The design of these services and approach to procurement are important as these can have significant impacts on the revenues available to different providers of these services and the ability for new entrants to compete with existing providers. This can also have a further impact upon short-term price signals and revenues in the wholesale electricity markets.

5.2 NESO also has responsibilities related to cross-border electricity arrangements and associated legislation.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.3; C1.4(b); C1.5(a), C1.5(b), C1.5(c), C1.5(d); C1.6(c); and C9.3

### Gas System Planner licence conditions:

n/a

## Guidance on our expectations

These expectations apply to electricity activities only.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Competitive, market-based procurement

- Procurement of balancing services through market-based competitive approaches, consistent with the obligation to be transparent and non-discriminatory to all market participants.

- By April 2026, NESO has introduced market-based, competitive procurement in most balancing services, with few, and only minor if any, examples of non-competitive procurement remaining.

### Close to real time procurement

- Procurement of balancing services in timeframes compliant with relevant GB policy and UK regulations – the proportion of balancing services procured in these timeframes does not drop below that seen in BP1.[11]
- Close to real time procurement displaces volumes procured at earlier than day-ahead timeframes.
- By April 2026, there has been a significant phase out of earlier than day-ahead procurement of balancing services.

### Delivering accessible markets

- Simplified suite of balancing services with participation requirements that provide opportunities for revenue stacking~~,~~[12]~~,~~ ensure a level playing field, and maximise participation regardless of provider type or size~~.~~, including by:

~~Including by:~~
  - Transparent completion of all balancing market reform commitments[13] with justification of any necessary changes to priorities or plans~~.~~;
  - Ensuring fit for purpose, reliable procurement, communications and settlement systems that do not present any material barriers to participation, with NESO clearly demonstrating how it has responded, or is responding to previous issues raised.
- Markets introduced have a 'compliant first' design approach, following the principles set out in retained EU legislation. In doing so, allow market participants to prepare for NESO markets more easily, with knowledge of the design principles, and receive the correct procurement signals.

[11] The proportion of balancing services procured in these timeframes should not drop below 30%, in line with NESO's legal obligation following our approval of a derogation for certain products from this requirement. Our derogation letter can be accessed ~~here:~~on ~~https://www.ofgem.gov.uk/publications/decision-grant-eso-derogation-requirements-article-69-electricity-regulation-and-exemption-requirements-article-323-ebgl-mandatory-and-firm-frequency-response~~our website ~~.~~

[12] Revenue-stacking is the ability to derive revenue from the provision of multiple services.

[13] Including those contained in the Product Roadmaps for Response, Reserve, Reactive, and Wider Access to the BM (~~https://www.nationalgrideso.com/research-publications/future-balancing-services~~NESO - Future reserve services)

  - Where derogations from these principles and rules are required, it is by exception and only where NESO sees significant consumer and market value from doing so, and / or system security requires it.
- Using lessons learned from Network Services Procurement (previously known as pathfinders) and related projects, create a detailed plan for implementing enduring markets as solutions to stability, voltage and thermal constraints.
- Development of market-based, competitive balancing services that allows appropriate time for design (or co-design), regulatory consideration, and market parties to prepare for delivery.
- By April 2026, NESO has delivered its key original RIIO-2 aims, including:
  - NESO has incorporated procurement of most services within a user-friendly single markets platform.
  - Few and only minor issues with market access, with NESO acting quickly to improve functionally and address any issues as they arise.
  - Introduction of enduring markets for solutions to stability, voltage and thermal constraints.
  - Markets introduced or developed such that they provide for efficient system operation at best value to consumer, while maintaining investment signals and revenue streams for providers.
  - NESO has established routine process for market introduction and development that allows market participants to engage more easily and relieves pressure on market parties and NESO itself.

### Signalling procurement needs

- Transparent and clear communication to market participants on current and future system challenges and NESO balancing service needs, in line with the objectives of the Operability Strategy Report.
- Procuring services from market participants based on clear and transparent needs which, wherever possible, the market understands ahead of procurement activity.

### Coordinated procurement across the total electricity system

- Collaborates with other network operators and the market facilitator to ensure that balancing services procurement is coordinated and where beneficial for consumers (~~e.g.~~for example contract terms, service requirements and frequency of procurement) standardised across networks.
- Active participation in projects and forums that drive improved coordination in procurement, including relevant data sharing (such as Open Networks and work with the market facilitator).

- ~~By April 2026,~~By April 2026, NESO- has worked effectively with the market facilitator to enable it to make demonstrable progress in ensuring NESO-run markets are coordinated with distribution-level flexibility markets, providing minimal complexity for providers looking to maximise the value from their services.

**Developing technical procedures specified in the ~~GB-EU Trade and Cooperation Agreement (TCA)~~[14]TCA**

- Fulfilment of obligations in line with the GB-EU Trade and Cooperation Agreement (TCA)[15] and / or as instructed by the Specialised Committee on Energy (SCE).[16]
- Review of the barriers and opportunities for interconnectors (ICs) in all NESO balancing markets and develop plan to remove / take advantage of these.
- Facilitate cross-border trade over ICs.
- NESO is proactive in setting GB rules for ICs that maximise flows and works in the interests of all stakeholders, while ensuring system security / operability.

**Develop cross~~-~~ border markets**

- Demonstrable progress made toward removing barriers to interconnectors entering balancing markets compared to the start of RIIO-2.

~~[14] The Trade and Cooperation Agreement between GB and the EU sets out (under Title VIII) requirements for TSOs to establish technical procedures for the exchange of energy over interconnectors at the day-ahead, intra-day and balancing timeframes.~~

[15] The Trade and Cooperation Agreement between GB and the EU sets out (under Title VIII) requirements for TSOs to establish technical procedures for the exchange of energy over interconnectors at the day-ahead, intra-day and balancing timeframes

[16] The Specialised Committee on Energy is a joint forum between the UK and the EU. This Committee oversees the majority of the provisions agreed between the UK and EU in the energy title (Title VIII) of the Trade and Cooperation Agreement and sets out further detail (including timelines) for how TSOs should establish their technical procedures. Details on the SCE, including minutes of their meetings, can be accessed at: ~~https://www.gov.uk/government/groups/specialised-committee-on-energy~~Specialised Committee on Energy - GOV.UK

# 6. Electricity Market Reform

## Background

6.1 NESO is the Electricity Market Reform (EMR) delivery body~~,~~ and ~~it~~ has ~~responsibilities related to cross-border electricity~~a key role ensuring that the arrangements for the Capacity Market (CM) and ~~associated legislation~~Contracts for Difference (CfD) operate effectively.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.4; C1.5(e); and C8

### Gas System Planner licence conditions:

n/a

## Guidance of our expectations

These expectations apply to electricity activities only.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### User experience with the EMR portal

- ~~An evident improvement in the user experience (e.g. for example existing issues are resolved, resulting in lower barriers to entry for providers).~~
- ~~Underpinned)~~, underpinned by:
    - Timely completion of the refreshed EMR IT portal with positive user feedback, which ensures that NESO through the IT portal has the ability to respond to changes quickly and cost efficiently.
    - By April 2026, the full integration of the EMR portal with the Digital Engagement Platform.

### Implementation of policy and rule changes

- Policy changes, or system workarounds, should be implemented continuously in a timely and cost-efficient way to ensure compliance with legal obligations, and no later than 12 months following identification of the relevant Rules or Regulations, unless otherwise stated by Ofgem or DESNZ.

### Providing support to EMR parties

- Supports industry parties through the CfD & CM prequalification and auction processes through provision of accurate & timely guidance to parties on relevant rules and changes to those rules.
- Ensure fair provision of guidance and support. This may require a targeted strategy depending on the type of Capacity Provider and eligible generator to ensure a level playing field. For example, smaller parties should not lose out due to lack of resource, with a variety of communication channels allowing for this.

### Making accurate prequalification decisions

- Accurate CM prequalification and agreement management decision making, based on compliance with the Capacity Market Rules and The Electricity Capacity Regulations 2014.
- Accurate CfD qualification decision making, based on compliance with the Rules and Regulations.
- Very few errors made, or decisions overturned by Ofgem in the Tier 2 process following CM and CfD qualification.

### Improving EMR processes

- Readily, regularly and accurately present information demonstrating the ongoing effective operation of the Capacity Market processes with Delivery Partners.
- Ensure that auction recommendations assessments are accurate and responsive to recommendations for improvements.

### Monitoring compliance with rules

- Proactive engagement with delivery partners when issues are identified and alerts Ofgem of any potential instances of non-compliance with their licence within a working day from discovery of the issue. Other issues are communicated in a timely fashion.

**Capacity Adequacy modelling**

- Endorsement from the Panel of Technical Experts (PTE) on annual modelling approach.
- Proactively engages with connected TSOs, as well as pan-European bodies such as ENTSO-E where appropriate and effectively consults GB TSOs with respect to medium- and long-term security of supply modelling.
- Engages with stakeholders on how to improve new longer term capacity adequacy studies and enhance modelling from this engagement.

# 7. Wholesale markets, industry codes and charging

## Background

7.1 NESO has a number of additional responsibilities related to market rules and wider energy market design. NESO administers the Connection and Use of System Code (CUSC), the Grid Code, the SO-TO Code (STC), and the ~~Security and Quality of Supply Standard (SQSS).~~SQSS . It is also a party to the Balancing and Settlement Code (BSC), the Distribution Code and the Uniform Network Code (UNC). NESO is able to propose changes to these codes, provide its expertise and analysis to aid industry discussions, and influence the final recommendations that go to the Authority. NESO also manages the process for administering electricity transmission charges and is responsible for maintaining several charging methodologies.

7.2 NESO also supports government and Ofgem on wider reforms to the market and charging arrangements and has a responsibility for gas market strategy coordination.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.3; C1.4(b); C1.5(b); C1.6(d); C1.6(e); E1; E2; E3; E4; E5; E7; and E9.

### Gas System Planner licence conditions:

C1.2(b); C1.3; C7; and E1.

## Guidance on our expectations

These expectations apply to both electricity and gas activities, unless otherwise specified.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Managing codes changes

- ~~Quality~~Provide a quality code administration service in line with other industry codes.
- Provide a code change process that supports widest participation of industry participants as possible and integrates effectively with changes to other codes.
- Provides unbiased, detailed analysis or modelling to support code modifications.
- By April 2026, NESO has successfully introduced a single digitalised grid code, with positive user experience. Some discrepancies between transmission and distribution code change processes may remain.

### Improving GB rules and standards

- Proactive identification of the most necessary changes to GB frameworks to remove distortions and to ensure a level playing field.
- Propose and support code modifications that promote the relevant code objectives, in the interests of GB consumers.
- Contributes views and analysis to aid the development of electricity distribution-level rules and frameworks.
- Be as open and transparent as possible, sharing insights, comparisons of alternative proposals and robust analysis that can inform workgroup deliberations.
- Provide assessment of areas of GB legislation that might be improved under arrangements following GB's exit from the European Union and engage relevant parties where improvements for the better can be achieved.
- Coordinating discussions on gas strategic network planning, leading the ~~Future of~~ Gas ~~Steering Group~~Advisory Council (GAC) or equivalent, and actively inputting to the relevant Gas reports or documents and relevant UNC code changes.
- By April 2026, NESO has progressed a number of key changes to technical standards to facilitate a zero carbon energy system, in line with government recommendations.
- NESO has ensured compliance with relevant GB legislation.

### Coordinating and Influencing Cross-Border rules

- Remain aware of changes to rules in connected regions, and assess impacts with a view to maximising positives and minimising negatives for GB consumers.

### Promoting efficient electricity charging and access arrangements

- Competent and responsive development, management and maintenance of the electricity charging process.
- Provides insight, clarity and transparency through role as Charging Futures lead secretariat.
- Chair relevant workgroups through Charging Futures.

- Take a leading role in TNUoS Task Force, Transmission Charging Methodologies Forum Sub-groups and code modification Working Groups.[17] This should include providing modelling of transmission-level tariff options, analysis of the merits of different transmission options, comment on interactions with distribution-level changes and developing plans for option implementation.
- Ensures forecasts of industry charges are as accurate as possible by maintaining fit for purpose forecasting models and processes, consistent with the methodologies set out in the various Codes (~~e.g.~~for example the CUSC).
- Shares the information needed by other parties (where these are onshore TOs, this information should be in accordance with the STC) to enable them to understand and manage their financial exposure to changes in expected charges.

[17] More information about the Access SCR Delivery Group can be found ~~at the following address:~~on ~~http://www.chargingfutures.com/charging-reforms/access-forward-looking-charges/resources-2/scr-delivery-group/~~NESO's website.

# 8. Managing electricity connections and implementing connections reform

## Background

8.1 NESO is responsible for the process for parties to connect to the electricity transmission system and for managing the impacts on the NETS from new connections of offshore and distributed generation, through liaison with developers and DNOs to ensure that offshore/onshore networks are planned holistically.

8.2 The rules, requirements and processes for electricity connections need to evolve as the system transitions to Net Zero and larger volumes of electricity supply seek access to the system. NESO has a key role in this connections reform.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.2(e); C1.3; C1.4(b); C1.6(a), C1.6(b), C1.6(c); C1.6(f); C1.6(g); C10; C11; C13.18; and E4.4 (b)(v).

### Gas System Planner licence conditions:

n/a

## Guidance on our expectations

These expectations apply to electricity activities only.

To note: some of the proposed changes to the expectations set out below, especially related to the TMO4+ Connection Reforms will only take place if the proposed reforms are approved and the associated licence changes are implemented. For the avoidance of doubt, in making these proposed changes to the expectations related to the TM04+ Connection Reforms, we have made no decision on these reforms and nothing in this document in any way fetters our discretion in respect of the reforms. With this being the case, we therefore may need to revisit this ~~NESO Licence Expectations~~ document depending on the decisions made in respect of the TM04+ Connection Reforms. We expect to make our first decision(s) on the TM04+ Connection Reforms in March 2025.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Managing connections

- Competent, effective and proactive development, management, maintenance and improvement of the total electricity network connections process, in order to facilitate a timely and efficient transition to a Net Zero electricity system through the reformed connections process that aligns with the Clean Power 2030 Action Plan and broader strategic energy plans~~.~~, including by:

~~Including by:~~

    - Supporting throughout the reformed connections process all parties fairly, providing visibility, transparency and understanding of connection processes along with continuous improvement of applicable pre-application information and processes, building on the Connections Portal and Connections 360 application.
- Provide appropriately targeted support, guidance and information with dedicated account functions for customer groups such as DER where required.
- Manage transparent and efficient connection application and offer windows.~~-~~
- Coordinate with TOs in line with CNDM to develop connection offers that reflect holistic enabling network design.
- Ensure economic and efficient connection offers, through implementation of the CNDM, that meet Users reasonable expectations as far as possible. Provide transparency and certainty over connection offer dates. This should display marked improvements supported by Regularly Reported Evidence. Scrutinise connection offers put forward by TOs in each design window to ensure system designs consider the wider impacts on the NETS, and strategic spatial and network plans, and are in the interests of consumers.
- Undertaking proactive horizon scanning, identifying potential future challenges and planning ahead for longer-term responses to ensure integration and resilience to developments in the system and market, including considering changes in regulation and government policy, such as wider network charging reforms, network investment and planning developments and connections reforms, ~~e.g.~~and other strategic planning processes such as Accelerated Strategic Transmission Investment (ASTI), Strategic Energy Plans and the Centralised Strategic Network Plan (CSNP).

- Ensure that connections processes, in particular the CNDM, cohere with wider transmission network designs ensuring a balance between the need for optimal designs and firm and reliable connection dates.
- Ensure that the updated Connect and Manage guidance is published ahead of the "Gate 2 to Whole Queue process", to drive consistency in the categorisation of works between enabling and wider works.
- Ensure the updated Connect and Manage guidance is implemented by network companies to drive a consistent approach for the categorisation of network reinforcement works into enabling and wider works, with the aim of striking an optimum balance between earlier connection dates for customers and the risk of increased constraint costs.
- Implement queue management milestones at the transmission level and provide data as needed to the Authority on the progress and impact of the enhanced queue management opportunity provided by CMP376.
- Have processes in place to allow efficient and timely support for connections, taking into account the need to respond quickly and efficiently to anticipated changes, for example increase in application volumes in the new gated connections process, which may impact on workload or process requirements identified through the horizon scanning activities above.
- Connections Reform (TM04+) has been implemented so that offers for the reformed connections queue are delivered by the end of 2025.
- NESO has helped to deliver a high degree of coordination between connections and network access processes across transmission and distribution networks.
- Reforms are integrated with system planning and operational approaches (including outage planning), as evidenced through reporting on improvements in the scale of the queue, and demonstrating significant reductions in connection dates offered.

### Outage and medium- and long-term access planning

- Coordinate with all TOs and significant sources of generation to implement efficient outage plans that minimise costs to consumers.
- Provide visibility on the costs and / or benefits associated with changing network outages, through system analysis and cost assessments.
- Transmission access programmes planned on a total electricity system basis using open data where appropriate.
- Work with DNOs to coordinate and collectively optimise network access and planning through exchanging all relevant data in consistent formats, including but not limited to the sharing of detailed transmission asset level data, including operational status,

details of projects with connection agreements, their associated enabling work and available headroom at GSPs.

**Connections Reform**

- Implement (contingent on approval) TMO4+ code changes and linked methodologies to govern a reformed queue (Q2 2025) to deliver:
    - ~~a~~A material improvement to connections for users (measured against pre-TMO4+ connection times and CAP criteria) terminating projects that are not progressing in line with CMP376 in the enduring process; stopping further speculative applications from entering the queue; and moving to a first-ready and needed, first-connected process that aligns with the Government's Clean Power 2030 Action Plan.
    - ~~a~~A coordinated network design that facilitates more efficient connections in line with Government's Clean Power 2030 Action Plan and future strategic energy system plans.
- Development and maintenance of the three Connections Methodologies (contingent on approval).
- Ensure that connection offers are made to projects that meet Connections Criteria (if approved) and that relevant offers are produced in alignment with the CNDM within the timescales agreed set out in the proposed licence conditions if and when approved.
- Ensuring Interconnector connection applicants are provided with adequate information surrounding ideal point of connection, through a clear, transparent and established process. This ought to include an economic assessment as to the connection point (and should include several connection location options in its assessment, with costs and benefits of each), with calculation of capital costs (developer assets and TO works), and calculation of the constraint costs associated with each of the proposed locations.~~–~~
- Maintain efficient process of handling applications to connect to the transmission system and any disputes arising from the application of rules and criteria set out within the three Methodologies.
- Share and regularly update a transparent timetable for Users on the gated process giving appropriate notice of future application windows~~—~~.
- Leading the implementation and monitoring of the Connections Reform programme (TMO4+) in close collaboration with other network operators, industry, developers

and stakeholders including Ofgem and Government.[18] This should have a total electricity system approach, to support efficient outcomes for all customers interacting with the transmission system and processes.

- Monitor delivery of TMO4+, including, but not limited to: delivery against objectives outlined in the Clean Power 2030 Action Plan, continuous assessment of impact on Users against expected impact, feedback on User experience and assessment against success criteria in the CAP and as agreed through the Connections Delivery Board (CDB).
- Monitor TO and DNO engagement with and performance within the new connections process (TMO4+ once implemented) identifying necessary improvements and opportunities for the Authority to support effective delivery against objectives in the CAP and Clean Power 2030 Action plan.
- Continue to identify, develop and implement further changes as necessary based on feedback, assessment and engagement with stakeholders, considering implications for regulatory, codes and contract frameworks required to implement any new proposals.
- Continue to proactively identify opportunities to improve the connections model beyond the 2025 reforms, including considering options to ensure a competitive balance alongside alignment to the first Strategic Spatial Energy Plan. Engage with stakeholders to develop further options to improve delivery of the connections process and coherence between the process and wider strategic plans.
- Reform projects should identify the opportunity to enable delivery of, as early as possible,[19] rapid improvements in connection timescales to allow long lead time activities which contribute to 2035 zero carbon operations.
- Connection offers are made to applicants that align with Connections Criteria, resulting in faster connection dates (on average and measured against pre-TMO4+ outcomes) which better meet customers' needs and enable a Clean Power system by 2030 and a transition to net zero by 2050. Customers are provided with efficient processes, improved experience, timely and accurate connection offers, through a transparent and auditable process, supported by accessible and standardised data.
- Reforms account for the diversity and complexity of connections within an evolving whole energy system, learnings and improvements carried out under the tactical

[18] While we understand there are dependencies, we anticipate this can be completed by no later than the end of 2025. NESO performance will be graded against this expectation, accounting for delays due to reasons outside of their control.
[19] We anticipate that we should see a reformed connections process in place in 2025, and connection offer for projects needed to achieve Clean Power by 2030 delivered by the end of 2025, alongside adoption of new processes by other network organisations and subject to delays for reasons outside of NESO's control. Where possible, aspects of the Reform should be delivered earlier, particularly if materially value-adding.

initiatives and are resilient and adaptable as needed to wider reforms (for example to system planning and market arrangements) and avoiding recurrence of any issues or delays in future.

- Reforms should be well integrated with system planning arrangements and enable improved outcomes and processes across system and organisational boundaries to deliver improve and more consistent total electricity system outcomes, improving coordination and alignment of processes where this can deliver benefits and accelerate progress towards net zero.

**Monitoring, evaluations and continuous improvement of the reformed connection process**

- Assess and bring forward proposals to raise entry requirements, improve queue management or improve the impact of the Connections Methodologies as may be necessary in response to monitoring and evaluation of connections reform and User behaviour.
- Ensure iterative feedback and learnings from the implementation of TMO4+ Connections Reform can inform continuous improvement of both connections processes and network (including outage) planning and investment processes, demonstrating marked improvements for timelines to issue connection offers through Regularly Reported Evidence, with clear forecast benefits and associated reporting on projected and actual improvements. Improved data and monitoring on the status of connections arrangements for customers across GB, the expected impacts of identified near term improvements and longer-term reforms, demonstrating substantial improvements and a clear view of where further action is needed.

**Connections Portal & Connections 360 Application**

- Facilitate efficient connection and access to the system through improved data and access to the Connections Portal and Connections 360 Application.
- Seek feedback on the Connections Portal and 360 tool and demonstrably act on that feedback to improve the tool on an iterative basis. This includes but is not limited to: Increasing the volume of data within the Connections Portal and 360 tool.
- Improving transparency of the data and access to the Connections Portal and 360 tool.
- Testing and improving the user experience within the Connections Portal and 360 tool.
- Ensuring that insights from the Connections Portal and 360 tool are collected and acted on to improve the Connections Process.

- Improve the use and provision of data beyond the Connections Portal and 360 tool to increase the level and quality of information available to Users at all stages of the end-to-end process from pre-application to energisation.
- Ensure users have the ability to track and monitor all the applications, provide direct feedback, easy access to self-service tools, access to information which includes consistent data and quality insights, within the Connections Portal.
- Drive a consistent, increasingly digitised, application process, including a more consistent data and user experience across the Transmission and Distribution interface. Embed iterative improvements at the earliest opportunity.~~–~~
- Provide customers with easy access to signed agreements, charges, operational notifications and tracks the progress of their connection applications.

# 9. Energy system strategy and future pathways

## Background

9.1 To support the coordinated development of the energy system, NESO publishes, or will publish, a variety of key insight documents. This includes the Future Energy Pathways (FEP), that develop different, credible long-term pathways for the energy sector, informed by modelling on future energy demand and supply.

9.2 The FEP and expectations in this chapter interact closely with NESO's work on the Strategic Spatial Energy Plan (SSEP) and actions to support government's Clean Power 2030 plan. We are reviewing NESO's licences and this guidance as part the development of an enduring regulatory framework for NESO from April 2026. We therefore expect to update this document to reflect developments on newer activities in the future.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.3; C1.4(b); C1.4(c); C1.6(a); C1.6(c); and C15.

### Gas System Planner licence conditions:

C1.2; C1.4(b); and C10.

## Guidance on our expectations

These expectations apply to both electricity and gas activities, unless otherwise specified.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Providing energy insights

- Informs the future development of the electricity and gas systems through the production of clear, accessible and timely insight documents, which are informed by robust stakeholder engagement.

- Ensure due consideration is given in any long-term forecast to cross-border infrastructure and a coordinated European energy system, and to work holistically with European neighbours to support the development of holistic and robust scenarios.
- Where requested, providing clear NESO Advice in line with the timings in the request, its statutory duty and the process in NESO Advice Process Document.

### Producing analytically robust long-term pathways

- Competent and responsive development, management and maintenance of the Future Energy Pathways (FEP) process~~,~~[20]~~,~~ with evidence for assumptions and decisions through a record of data inputs and the cross section of ~~stakeholders~~stakeholders' views gathered, in line with the FEP Guidance.
- Provide justifiable and credible long-term scenarios covering a sufficiently wide range of outcomes, both in terms of future energy system development and the associated costs of operating the electricity system in those scenarios.
- Stress-testing of scenarios, analysis and assumptions and consideration of whether scenarios and forecasts remain fit for purpose at least on an annual basis.
- Invites and proactively facilitates collaboration from all interested stakeholders to drive forward the improvement of industry data to achieve more reliable energy forecasting capabilities.
- High degree of engagement, transparency and justification of decision making to stakeholders throughout the development process.
- Actively utilise data from industry to inform energy modelling.
- Work collaboratively with other parties to improve industry data (where possible and relevant) to support the development of scenarios.
- Undertake a review of the purpose of the FEP and develop a new FEP Methodology
- Ensure FEP analysis and modelling ~~takes account of~~aligns with SSEP analysis and modelling, and Clean Power 2030.

### Ensuring coordinated Pathway development

- Engages and coordinates with stakeholders (~~e.g.~~for example Ofgem, national and devolved government, Committee for Climate Change, industry, other licensees (~~e.g.~~such as Gas System Operator, GDNs, DNOs)) to ensure regional and cross-sectoral interactions are clearly taken into account in the pathway development processes.

[20] The FEP was previously known as the Future Energy Scenarios (FES)

- Provides inputs and produces outputs which consolidate network planning, including across-borders,[21] where appropriate.
- Continues supporting DNOs with Distribution FEP ("DFEP") processes, for example through timely sharing of data, to provide a coherent set of whole-system scenarios.

[21] Including with future connections

# 10. Strategic energy system planning

## Background

10.1 NESO has several functions relating to strategic energy system planning and network development. It is the role of NESO to produce the following strategic planning frameworks and outputs:

~~10.2 It is the role of NESO to manage and deliver the following network planning frameworks that are critical for investment in GB's energy networks[22]:~~

- Electricity transmission strategic network planning activities, including the transitional Centralised Strategic Energy Plan (CSNP) (which includes Network Options Assessment (NOA))[23] and the CSNP[24]
- Gas strategic network planning activities~~.~~, including the Gas Network Capability Needs Report (GNCNR), the Gas Options Advice Document (GOAD) [25] and the CSNPe[26]~~.~~
- Strategic Spatial Energy Plan (SSEP)[27]~~.~~
- ~~**Centralised Strategic Network Plan (CSNP)** – NESO is developing capabilities and processes to provide an independent, coordinated, and longer-term approach to wider strategic network planning in GB to help meet the government's net zero ambitions.[28] The first iteration will focus on the electricity transmission network – onshore, offshore and interconnectors, as well as gas transmission and may evolve to include a proposed hydrogen network at the national level. Leading up to the enduring CSNP, NESO will also deliver transitional versions of the CSNP (tCNSP[29]) that informs investment decisions from specified Network Options Assessment (NOA) outputs, and the Holistic Network Design Follow Up Exercise (HNDFUE).[30]~~

~~[22] The development of the guidance for NESO with respect to the expectations of each respective framework is currently being developed by Ofgem. It is the duty of NESO to develop the methodology by which each respective framework will operate.~~
[23] See Electricity System Operator licence condition C13 for the NOA
[24] See our Decision on the framework for the Future System Operator's Centralised Strategic Network Plan
[25] See Gas System Planner licence condition C8 for the GNCNR and GOAD.
[26] See our Decision on future of local energy institutions and governance ~~| Ofgem~~
[27] See Electricity System Operator licence condition C16 and Gas System Planner licence condition C11 for the SSEP.
~~[28] Decision on the framework for the Future System Operator's Centralised Strategic Network Plan (ofgem.gov.uk)~~
~~[29] This guidance covers versions of the tCSNP developed during the April 2023 to March 2025 period.~~
~~[30] https://www.nationalgrideso.com/future-energy/beyond-2030~~

- ~~**NOA** – NESO will continue to undertake activities relating to the NOA and the tCSNP until it is superseded by the enduring CSNP process. The NOA process assesses and recommends solutions to electricity onshore and offshore transmission system needs and provides an analysis of optimal interconnector capacity growth. The wider NOA methodologies also provide a foundation for NESO to contract for long-term operability solutions (e.g. to solve network constraints and stability issues) via its NOA pathfinding projects.~~

10.2 The licence expectations in this section focus on more established network planning activities such as the NOA, including Network Services (NS) (previously called Pathfinders), and the CSNP. We are reviewing NESO's licences and this guidance as part the development of an enduring regulatory framework for NESO from April 2026. We therefore expect to update this document to reflect developments on newer activities in the future.

## Relevant licence conditions

### Electricity System Operator licence conditions:

C1.3; C1.4(b); C1.6(a), C1.6(b), C1.6(c); C1.6(f); C1.6 (g); C1.7; C6; C7; C13.2; ~~C17~~C16; and ~~C16~~C17.

### Gas System Planner licence conditions:

C1.2(b); C1.3; C1.4; C1.5; C4; C5; C6; C8; C11; and C12.

## Guidance on our expectations

~~These expectations apply to electricity activities, unless gas is specified.~~

To note: ~~As per condition C17 in the Electricity System Operator licence, NESO is required to submit the CSNP Methodology to Ofgem by 30 September 2025. Prior to that,~~ Ofgem will publish ~~its~~a bespoke CSNP ~~Methodology~~ Guidance after NESO led stakeholder workshops and discussions on the detailed approach are concluded. Once published, the Guidance should be considered together with the information included in the table below. In case of any conflict, the CSNP Methodology Guidance will take precedence.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Identifying network needs and **recommending** solutions

- Make recommendations ~~to other parties and take NESO procurement decisions for the electrical transmission network (including onshore, connections for offshore wind~~on networks[31], and ~~interconnection) the gas transmission network and proposed hydrogen network[32]~~ undertake Network Services activities, that ~~manage the design principles of being~~successfully meet government's objectives on decarbonisation, deliver economic ~~and~~, efficient, ~~deliverable~~ and operable networks, and ~~appropriately~~ consider ~~environment~~wider environmental and community impacts.
- ~~Conducting~~Conduct fit-for-purpose analytical assessments, including by (but not limited to):
    - ~~Identifying and recommending solutions to material network issues before they incur significant additional costs.~~
    - economical solutions to future network needs and potential issues so that the network remains compliant with relevant standards such as the SQSS for electricity and the Statutory Network Security Standard for gas. Identifying and recommending in the relevant network plan, the number and types of solutions available.
- ~~Take into consideration the system needs associated with~~ meeting government's decarbonisation objectives such as Net Zero.
- Where appropriate, ~~identifying~~identify additional solutions not proposed by other parties, including optimised combinations of solutions to target a known issue, or identifying a solution that may address multiple issues.
- Identify onshore electricity transmission options which are eligible for competition.
- Assess all options based on a high quality, robust and transparent cost benefit analysis that provides a high degree of confidence that NESO has recommended the optimal solution(s). Consider the risks and trade-offs of recommendations, articulate these in publications and clearly demonstrate why the choices made are justified.

[31] This includes electricity transmission and gas networks, offshore wind, and potentially hydrogen transport and storage.
~~[32] Subject to DESNZ's pending decision on NESO's role in planning of hydrogen transport and storage.~~

**Guidance** – NESO Licence Expectations ~~document 2025 to 26~~Document

- ~~Assessing all options fairly, based on robust and transparent cost benefit analysis, including by ensuring~~Ensure that ~~TO~~costs and delivery dates provided by network owners and or third-party developers are robustly challenged and sufficiently understood to allow for a fair ~~CBA~~ comparison of ~~both TO and non-TO~~all options and ensure a robust recommendation.
- ~~Producing~~Produce clear, accessible and timely NOA and CSNP publications~~.~~, ensuring:
    - Regular engagement with Ofgem, industry and interested stakeholders on the development of the NOA and the CSNP methodologies to ensure that the system planning process is fit for purpose~~.~~
    - Approaches to stakeholder engagement and outcomes ~~will be~~are transparent and published on the NESO website.
- ~~Building~~Build upon past learning to continually improve the models, methodologies and analytical tools underpinning the assessment process of the NOA~~, CSNP, Network Services (previously called Pathfinders), GNCNR (Gas Network Capability Needs Report) and GOAD (Gas Options Advice Document).~~ and NS, and CSNP.
- Widen ~~Network Services Procurement~~NS participation by making requirements more transparent to stakeholders (~~e.g.~~for example Ofgem and industry).
    - Using medium-term ~~market~~ solutions including TO delivered and those procured via the NS as a cost-effective approach to keep network investment options open against uncertainty and to provide medium term mitigation of system needs whilst longer term solutions are built.
    - Ensure wide participation in assessments and tenders, including by:
        - Inviting all types of providers (network and non-network, transmission and distribution connected) to provide solutions to network issues.
        - Seeking and inviting potential commercial alternative solutions to compete against traditional network reinforcement-based solutions.
- Improve data systems to ensure that the NOA~~, (~~ and ~~transitional and enduring~~ CSNP~~)~~ considers current and future connections to ~~support system planning and proactively~~ prevent network constraints~~.~~, where economical.
- ~~Making~~Make demonstrable progress embedding gas forecasting and strategic planning capabilities within NESO ~~(inclusive of strategic planning for hydrogen transport and storage infrastructure),~~ including by coordinating and progressing the new Gas ~~Options Advice Document and the Gas~~ Network Capability Needs Report, ~~so it is on track to meet the required timelines~~the Gas Options Advice Document and the CSNP.

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### Coordination between network assessments

- ~~Ensuring~~Ensure proactive coordination between the different assessments of solutions to ~~transmission~~ network needs (~~e.g.~~for example ensuring coherence between the NOA and CSNP CBA assessments, assessments for Network Services ~~Procurement~~ and offshore wind connections~~).~~
- ~~Including~~), including by:
    - Setting out and meeting a clear and coherent timetable ~~/ calendar~~ for when the different assessments are to take place. Ensuring that it is easily accessible to all that wish to engage with the NOA, CSNP, Network Services ~~Procurement~~ and ~~any new~~other assessment / tender processes.
    - Identifying barriers to achieving greater coordination (both technical, process, and regulatory), making these barriers clear to all parties, and proposing solutions to overcome these barriers.
    - Implementing solutions for addressing any barriers ~~when~~where these are within NESO's control.
    - Developing a clear future vision and strategy for an optimal network assessment process (or suite of integrated processes with harmonised timings) capable of addressing Net-Zero system needs.

### Procurement of network solutions

- Communicate clearly and timely system needs specifications for all tenders, which provide technology agnostic performance specifications based on system needs and requirements that do not limit the participation of any viable technologies or potential commercial solutions (or transparently demonstrate why requirements that limit participation are in consumers' interests).
- ~~Continual~~Make continual improvements ~~made~~ to the procurement process informed by stakeholder feedback.
- Work with Ofgem and undertake stakeholder engagement to finalise implementation of the Early Competition model and commence delivery by:
    - Developing tender package for Early Competition model in line with Ofgem policy and establish NESO as the procurement body.
    - Progressing tender activity for initial identified suitable project(s) in agreement with Ofgem.
    - Continue to assess future projects against the criteria for competition to support a pipeline of projects for delivery through early competition.

**Guidance** – NESO Licence Expectations ~~document 2025 to 26~~Document

- ~~Consider~~Considering interactivity with CSNP, feeding into CSNP Methodology design to ensure ~~a~~ consistency of process across NESO planning and procurement outputs.

- ~~Development of a new Cost Benefit Analysis tool~~Develop capabilities which ensure network procurement exercises fairly ~~compares~~compete licensee options against third party alternatives, through a robust comparison of their respective costs and benefits.

- ~~Delivering the requirements (relevant to this assessment period) set out in the Secretary of State's Commission for a SSEP methodology, whilst ensuring coordination with wider strategic planning activities and developments such as the FEP, CSNP, the Gas Network Capability Needs Report, The Gas Options Advice Document, and RESPs.~~

- ~~Collaborate effectively with Ofgem and relevant stakeholders to further define the processes and methodologies associated with delivery of the RESPs activities.~~

**~~Transitional CSNP 2 Refresh~~**

- ~~Publish a transitional CSNP2 Refresh (tCSNP2 Refresh) by January 2026. The refresh should:~~
  - ~~Be based on transparent, plausible future energy demand and supply scenarios.~~
  - ~~Refresh the tCSNP2 analysis with updated TO submissions to ensure that there is a strongly justified needs case so that Ofgem has the information it needs to make appropriate funding and incentivisation decisions.~~
  - ~~Be based on NESO scrutinising and challenging inputs from other, parties and coordinating network needs and developments.~~
  - ~~Take on feedback from Ofgem about the tCSNP2 methodology and outputs and ensure this is reflected in the updated tCSNP2 refresh methodology and outputs, particularly in relation to issues raised around project maturity, sensitivity analysis and economic assessment.~~
- ~~Readiness to ensure fit for purpose assessments in future, including by:~~
- ~~Develop processes for the performance of future whole system activities and establish internal framework that enables those activities.~~

## ~~Development of the CSNP~~

### ~~Timely development of a~~NOA expectations

- The next update of the NOA is expected on 31st January 2026 (also referred to as the transitional CSNP 2 Refresh). In respect to the requirements set out in the Electricity System Operator licence condition C13, we expect that the next update will include additional requirements set out in Ofgem's decision on tCSNP2 projects[33] to ensure a robust output that considers maturity of options in forming recommendations and adequately tests uncertainties such as those posed by the Review of Electricity Market Arrangements (REMA) through appropriate sensitivity analysis.

### CSNP expectations

- Develop the methodology (with Ofgem, the Secretary of State, and stakeholders) for producing the CSNP, as per the timing set out in the licence, based on the latest CSNP policy requirements or guidance as developed by Ofgem.[34]
- ~~Aid Ofgem in stakeholder engagement to ensure fair and appropriate roles and responsibilities for licensees in network planning e.g. to prevent bias in future competitive tenders.~~
- ~~Leads on developing the methodology for Future Energy Estimates (or the outputs under stage 1 of CSNP as described within Ofgem's "Consultation on the initial findings of our Electricity Transmission Network Planning Review") that are anticipated to meet the future objectives of the CSNP (as they may develop), in conjunction with stakeholder engagement to inform electricity and gas transmission network planning.[35]~~
- ~~Supporting the development of all stages of CSNP. For example, by leading workshops with stakeholders and developing potential alternative approaches to various aspects and stages of CSNP, providing recommendations on a preferred approach.~~
- ~~Leads on developing the methodology for the identification of system needs stage of CSNP. This should include assessing the needs of the system against all electricity~~

[33] https://www.ofgem.gov.uk/decision/funding-and-approval-framework-onshore-transitional-centralised-strategic-network-plan-2-projects-decision

[34] At a minimum we expect NESO to ~~consider~~base the methodology on the criterion, proposals, potential approaches and decisions relating to ~~CSNP~~all aspects and stages~~,~~ of the CSNP framework that are set out in ~~all~~ the publications (consultations and decisions, including appendices) relating to the Electricity Transmission Network Planning Review (ETNPR). The latest policy decision on the CSNP is accessible here: https://www.ofgem.gov.uk/decision/decision-framework-future-system-operators-centralised-strategic-network-plan

~~[35] At a minimum we expect NESO to have considered the criterion set out in pages 64-66 of Consultation on the initial findings of our Electricity Transmission Network Planning Review | Ofgem~~

~~system constraints, including capacity and operational constraints, that might occur because of the modelled future supply and demand. It should also include identification of strategic system needs, such as those which enable meeting government policy and targets.~~

- ~~Leads on developing the methodology (working with stakeholders) for the identification of options to address system needs. This should consider all the possible economic and efficient solutions to address system needs, including innovative, non-network or commercial solutions as well as enduring capital-intensive solutions. It should include identification of strategic investments.~~
    - ~~It should include a methodology for developing a clear role for NESO to identify or originate network solutions for meeting network needs identified in stage 2 of CSNP, such that these solutions are developed sufficiently through the stage 4 assessment for CSNP.~~
    - ~~It should include a methodology for a minimum standard of option development by transmission owners and third parties such that options put forward for consideration in CSNP are consistently developed to a minimum level of detail so as to ensure a robust analysis of investments and a clear role for NESO in identifying solutions.~~
    - ~~It should include a methodology for change control that is consistent with minimum design requirements.~~
    - ~~It should clearly set out the scope of any annual update to CSNP and how it will interact with the 3-year cycle of the CSNP and, if relevant, how it will interact with change control.~~
    - ~~It should include a methodology for identifying projects that meet the competition criteria, with NESO making recommendations to Ofgem on projects it thinks should be tendered.~~
- ~~Leads on developing the methodology for stage 4 of CSNP such that NESO can perform robust analysis and decision-making appraisals to form a strategic plan that resolves future network needs to meet net zero. Work with Ofgem and other stakeholders in developing a cost-benefit analysis tool and methodology which enables efficient assessment of the costs and benefits of different types of solutions. This should consider technical and economic aspects, as well as community and environmental impacts.~~
- Assist Ofgem or lead (as applicable) in the development of code modifications to enable new roles and functions ~~within~~as required to develop the CSNP.
- Assist Ofgem or lead (as directed) in determining appropriate timing and style of CSNP publications and outputs within it.

- ~~Leads on developing a methodology, together with Ofgem and stakeholders on integrating planning of offshore networks within CSNP. This should include the methodology for enduring arrangements for designing coordinated connection solutions for offshore connections (including to multipurpose interconnectors where applicable) and any associated onshore and offshore network reinforcements.~~
- ~~Leads on developing a methodology, together with Ofgem and stakeholders on how CSNP will include a strategic advisory output for future interconnectors.~~
- ~~Regular engagement~~Engage with Ofgem, industry and interested stakeholders on future changes to CSNP methodology to ensure that the ~~system~~network planning process is fit for purpose. Approaches to stakeholder engagement and outcomes should be transparent and published on the NESO website.
- Throughout the above, NESO should clearly set out expectations from stakeholders, and especially from regulated network companies ~~(ET, GT, ED~~such as electricity and ~~GD~~gas network owners where appropriate~~),~~ with regards to the information it will need and when, to ensure NESO can carry out its obligations to a high standard and on time. This should be part of any specific methodology, and where relevant be reflected in amendments to existing and/or new codes and code procedures.
- NESO ~~should also work closely with Ofgem to~~ identify ~~gaps in~~ data ~~sharing~~that it requires from network owners and
    - Develop and implement data and digital infrastructure which will enable data transfer between NESO and network owners.
    - Ensure industry codes and the CSNP methodology sets out clear requirements on data sharing
    - flag any risks to Ofgem and network owners on the delivery of ~~any of~~ the ~~above~~CSNP due to inadequate or delays in ~~time~~data sharing.
    - Work with stakeholders to develop data sharing procedures which ensure third parties can easily provide network investment options.
- ~~Development and implementation of interoperable data and digital infrastructure which enable data transfer between NESO and TOs/DNOs.~~
- ~~Leads on developing a methodology together with stakeholders, to enable the development of whole energy system modelling and recommended solutions, that span beyond electricity transmission network, e.g. electricity distribution, gas transmission and gas distribution network, or the wider energy system such as optimising the development of existing or new loads and/or generation, to solve needs identified for the whole system.~~
- Develop capabilities in options development and identification ~~of~~including non-network solutions to electricity system needs such as batteries, demand side response, dynamic ratings and electrolysis to produce Hydrogen to co-optimise the

network and wider energy system. ~~When developing capabilities, utilise stakeholder engagement and consider~~Whilst some of these will be set out in the SSEP, the CSNP and SSEP will together need to ensure overall efficient and economical energy system and network solutions are recommended. Ensure third ~~party solutions at option identification stage~~parties can also provide their options.

## Strategic Energy Planning

- Deliver the requirements (relevant to this assessment period) set out in the Secretary of State's Commission for a SSEP methodology, whilst ensuring coordination with wider strategic planning activities and developments such as the FEP, CSNP, the Gas Network Capability Needs Report, The Gas Options Advice Document, and RESPs.
- Collaborate effectively with Ofgem and relevant stakeholders to further define the processes and methodologies associated with delivery of the RESPs activities.

# 11. Establishing a fully independent NESO

## Background

11.1 NESO became operational as an independent, public corporation in October 2024. To ensure NESO is viewed by industry as a trusted, impartial expert, it may need to evolve its approaches to decision-making, engagement and transparency.

11.2 NESO currently still receives some services from National Grid plc (such as some IT services) as it develops its own standalone capabilities. It is required to exit from these services in a secure, timely and cost-effective manner.

## Relevant licence conditions

### Electricity System Operator licence conditions:

B1.21; B1.22; C1.6(g); C1.7; D1; and F1.4, F4.12.

### Gas System Planner licence conditions:

B1.21; B1.22; C1.4; C1.5; D1; and F1.4, F4.12.

## Guidance on our expectations

~~Our~~These expectations ~~on NESO until 31 March 2026 are below:~~apply to both gas and electricity activities.

## Output and Licence expectations

The sections below describe the behaviours and actions we expect to see from NESO in relation to the relevant licence conditions above.

### Separation from NG services

- Develop a clear strategy for exiting Transitional Service Agreements with National Grid plc and developing standalone enabling services and capabilities and make demonstrable progress against that strategy.

### Transparency, decision making and stakeholder engagement

- Demonstrably build and embed a culture that puts NESO's statutory duties at the centre of its decision-making.
- Ensure transparency is a key principle underpinning NESO's activities and engagement with the sector~~, by proactively understanding stakeholder needs. .~~
- Ensure NESO conducts robust engagement with a diverse range of stakeholders in order to proactively understand stakeholder needs.
- Use reasonable endeavours to ensure there is transparency ~~on~~in NESO's decision-making processes, including by being clear with stakeholders on the reasons underpinning any decisions or recommendations that materially impact them. For example, NESO should use reasonable endeavours to share or publish relevant information, data, justifications, and evidence that supports these decisions.
- Carry out robust engagement, consultation and collaboration with a broad and diverse range of energy industry stakeholders, and which is reflective on NESO's expanded responsibilities compared to the ESO.
- Make a clear shift (evidenced through positive feedback) towards being viewed widely by industry as a trusted, impartial, and expert organisation.
- ~~Demonstrably understand the impact of moving from a private to public entity, including by proactively ensuring all~~Keep internal processes under review and build controls (including on expenditure, expenses, remuneration, financial transactions etc) ~~are~~to ensure that NESO decision-making is in line with relevant Ofgem and Government requirements and~~/or~~ guidelines.