

Public

Ref: FOI/25/274

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31 March 2026

Dear requester

Request for Information

Thank you for your request for information which we received on 2 February 2026.

Your request has been considered under the Environmental Information Regulations 2004 (EIR) as we believe that information relating to energy demand falls within the definition of environmental information as set out in Regulation 2(1) of the EIR.

Request

For ease of reference, we have numbered all parts of your request.

You asked us:

Please could you provide me with copies of any projections or assessments NESO has made of:

- (1) Future electricity demand from data centres in the UK.*
- (2) Whether the UK will be able to meet that projected future demand through renewable energy generation.*
- (3) I am aware that NESO has previously published the document 'Clean Power 2030' (<https://www.neso.energy/document/346651/download>) which includes an estimate of "a fourfold growth in data centre electricity demand from today out to 2030".*

I would be grateful if you could confirm whether this is the only such estimate NESO has made of future data centre demand.

(4) I would also like you to provide copies of any documents setting out the evidence on which the estimate of a fourfold increase in data centres is based; and any further details NESO holds on (a) the electricity demand and (b) the carbon emissions which will result from this increase.

Our response

We wrote to you on 12 February 2026 confirming that we held information in scope of your request. We also informed you that we were extending the time for a response under Regulation 7(1) of the EIR to 31 March 2026. Additional time was required in this case to determine which information/data fell within the scope of your specific request, consult with subject matter experts, and consider the application of EIR exceptions and the public interest test. Thank you for your patience whilst we completed this work.

Please could you provide me with copies of any projections or assessments NESO has made of:

- (1) Future electricity demand from data centres in the UK*
- (2) Whether the UK will be able to meet that projected future demand through renewable energy generation*

Description of information held	Disclosed Yes/No	Applicable EIR exception(s) where info withheld – see explanations below
<p><u>Future Energy Scenarios (FES) 2025</u> As set out in our interim response, we publicly give our range of data centre forecasts as part of our FES25 publication.</p> <ul style="list-style-type: none"> • Tab ED1 of the <u>Data Workbook</u> gives a full numerical range of the different data centre growth projections we give under FES25 for all pathways. • Page 110-111 of the full <u>FES report</u> also goes into some depth on why these vary and the uncertainties we deal with. • Finally, the <u>FES: Pathway Assumptions 2025 (workbook)</u> document goes into a very detailed breakdown of the source assumptions. 	Yes – publicly available	

<p>We provide generation breakdowns at a GB level as part of the FES workbook (tab ES1) with varying levels of penetration of renewables per pathway. FES does not specifically look at the growth of data centres contribution to the generation mix but instead the system as a whole, where we see other increases in demand from electrification of existing fossil fuel demands. This is the same for carbon emissions where this is captured and reported within the FES workbook (Tab WS2) but only at a system level. We do not break this down specifically for data centres which are predominately reliant on grid supply of electricity.</p>		
<p><u>Data centres in the Strategic Spatial Energy Plan (SSEP)</u> A key difference between FES and SSEP is the demand data against which the electricity supply modelling is optimised. FES is based on NESO demand analysis built up by sector, while SSEP is commissioned to use DESNZ demand data. SSEP does, however, incorporate the locational demand splits produced by FES.</p> <p>As set out in section 3.3.7 of our published <u>SSEP methodology</u>, the SSEP will spatially optimise a small volume of demand associated with flexible data centres (1-2 GW) to accrue system benefits of those data centres that are locationally flexible. The attached spreadsheet calculates the projected annual electricity demand associated with these data centres.</p> <p>Demand from data centres which are not considered to be locationally flexible is accounted for in the input demand projections supplied by the Department for Energy Security and Net Zero (DESNZ).</p>	<p>Yes</p> <p>DESNZ demand data - not in scope</p>	
<p><u>Security of supply advice</u> NESO provided advice under Section 171 of the Energy Act in January 2026 on the security of supply implications of</p>	<p>No</p>	<p>EIR Regulation 12(4)(d) EIR Regulation 12(5)(a) EIR Regulation 12(5)(d)</p>

<p>increasing the capacity of data centres connected to the GB electricity network.</p>		
<p><u>Data centre growth in GB</u> NESO commissioned research between November 2024 and January 2025 to get a better understanding of the current data centre landscape and understand the high-level impacts of different scenarios for data centre growth.</p> <p>The outcomes of the project were:</p> <ul style="list-style-type: none"> • The resulting demand scenarios have provided useful insight which have fed into FES 2025. It has also been used in consultation with DESNZ and DSIT to inform the recommendations in the AI Opportunities Action Plan. • The report and findings were considered when the decision on the SSEP's approach to modelling data centres was being made. Specifically, it was used to understand the 2030 vision and projected capacities, as well as expected latency requirements of data centres (percentage of capacity that is locationally flexible). This information supported us during our engagement with government, as well as industry stakeholders. • The outputs of this report are being used, alongside input from elsewhere, to consider implications for future connections processes. <p>Further information about this research is available here: ‘Options for optimising GB Data Centres National Energy System Operator’.</p>	<p>Not in scope</p>	<p>The report draws on multiple sources, including market analysis from McKinsey & Company.</p> <p>NESO are responsible for the conclusions and recommendations of the research.</p> <p>The research is not an assessment or projection NESO has made of future electricity demand from data centres or whether the UK will be able to meet that projected future demand through renewable energy generation.</p> <p>The scenarios and high-level analysis are McKinsey's and were commissioned to help NESO understand the potential impacts of data centre growth. The data has been superseded by FES 2025 in terms of any NESO planning or reporting.</p>

		<p>FES is NESO’s assessment of future energy supply and demand. FES is produced under the licences held by NESO as issued by Ofgem in accordance with Ofgem’s Future Energy Pathways Guidance document.</p>
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(3) I am aware that NESO has previously published the document ‘Clean Power 2030’ (<https://www.neso.energy/document/346651/download>) which includes an estimate of “a fourfold growth in data centre electricity demand from today out to 2030”.

I would be grateful if you could confirm whether this is the only such estimate NESO has made of future data centre demand.

(4) I would also like you to provide copies of any documents setting out the evidence on which the estimate of a fourfold increase in data centres is based; and any further details NESO holds on (a) the electricity demand and (b) the carbon emissions which will result from this increase.

Description	Disclosed Yes/No	Applicable EIR exception(s) where info withheld/redacted – see explanations below
<p>As set out in our interim response, the data centre forecast in our Clean Power 2030 (CP30) advice was based on FES24 data i.e. the same set of data as FES25 referenced above, but a year older. We have provided links below to the relevant information which can all be found in the archive on our website: FES Documents National Energy System Operator.</p> <ul style="list-style-type: none"> • FES24 Data workbook (tab EC.P) • FES24 Report (page 77/101) • FES24 Assumptions (page 17) 	<p>Yes – publicly available</p>	

We can confirm that the only estimates NESO has made of future data centre energy demand are for FES, SSEP (a small volume of flexible data centre demand (1-2 GW)) and CP30.

EIR Exceptions

Exception at Regulation 12(4)(d)

Regulation 12(4)(d) allows a public authority to refuse to disclose information to the extent that the request relates to material which is still in the course of completion, to unfinished documents or to incomplete data.

The ICO's guidance on this exception confirms that: *"Finished or complete information that 'relates to' material in the course of completion may be covered by this limb of the exception."*

We have applied this exception to sections of NESO's security of supply advice that relate to our Future Energy Scenarios (FES) provisional 2026 10-Year Forecast (10YF) for energy demand. This work is still in development. This data is expected to be finalised in Q2 2026. Our FES26 10YF and updated range of data centre forecasts in FES26 will be published in July 2026.

Exception at Regulation 12(5)(a)

The transmission network, electricity generation units and data centres are critical national infrastructure. NESO provided advice to Government in our capacity as the Independent System Operator and Planner as designated in the Energy Act 2023.

We are withholding this advice on the basis that disclosure would adversely affect national security. The document provides NESO's formal assessment and recommendations in line with S171 of the Energy Act 2023 concerning the impact on security of supply of increasing the capacity of data centres connected to the GB electricity network. We are unable to set out the national security arguments in more detail in this response without revealing the content of the information which we are withholding.

The Information Commissioner's guidance points out that *"national security has many different aspects, but....relatively mundane environmental information about civil infrastructure could also be of use to terrorists and therefore could attract the exception provided by regulation 12(5)(a)."*

NESO is mindful that the Government is engaged in ongoing discussions, planning, and negotiations relating to data centres to ensure security of supply for Great Britain's energy security and critical national infrastructure.

We have reviewed the information and considered whether we could disclose any extracts. As set out above, we have published our data centres forecasts in Future Energy Scenarios ([Future](#)

[Energy Scenarios \(FES\) | National Energy System Operator](#)) and Clean Power 2030 advice ([Clean Power 2030 | National Energy System Operator](#)) and our FES26 10YF will be published in July.

The ICO's guidance is clear that the threat to national security does not have to be immediate which is an important factor in relation to the longer-term security of energy supply and critical national infrastructure.

We are mindful of the potential for the 'mosaic' effect when information is disclosed and that malicious actors may be able to piece together information gathered from various sources. Whilst we are in no way suggesting that you intend to use information from NESO for malicious purposes, any disclosure under the EIR or FOIA is to the world at large, including terrorists and bad actors. In the current geopolitical and security environment, there is a need for NESO to take a very careful approach with regard to the disclosure of information relating to energy security and resilience of critical national infrastructure.

Exception at Regulation 12(5)(d)

Regulation 12(5)(d) allows a public authority to withhold information to the extent that its disclosure would adversely affect the confidentiality of proceedings where such confidentiality is provided by law.

The ICO's guidance on this exception advises that 'proceedings' can cover a range of activities but there must be a degree of formality. NESO's principal functions are established in the Energy Act 2023. These include the provision of advice, analysis or information to a minister of the Crown in connection with energy sector developments and the net zero, security of supply and resilience, and economy and efficiency objectives set out in the Act.

We have determined that the commissioning of advice and recommendations from NESO under section 171 of the Energy Act falls within the definition of 'proceedings', as it involves a means to formally consider an issue and reach a decision. NESO established a panel to provide expert review, challenge and guidance for our assessment.

The exception requires that there is a basis in law for the confidentiality of the proceedings. The confidentiality may be provided in statute or derived from common law. In this case, a common law duty of confidentiality applies based on the expectations of the parties and the terms of reference, which specified that the advice was to remain confidential.

The exception only applies where the disclosure of information would adversely affect the confidentiality of proceedings. Disclosure of the information would have a negative impact on the confidentiality of security of supply assessments provided by NESO under the Energy Act.

Public Interest Test

All EIR exceptions are subject to a public interest test. NESO is mindful that the EIR requires us to apply a presumption in favour of disclosure when considering the public interest test. There is a public interest in NESO, as a public corporation, being accountable for its advice and in disclosure of information that could help to inform public debate around clean power and energy security. NESO recognises that there is a public interest in adoption of renewable energy sources and decarbonisation plans which impact on the environment. We note that there is a particular public interest in the impact of data centre growth on energy consumption, sustainability, efficiency and grid connectivity at the current time.

There, however, an extremely weighty public interest argument in protecting critical national infrastructure and the security of energy supply. NESO needs to protect critical national infrastructure in a volatile and hostile geopolitical climate in which energy related infrastructure and sources have been targeted in other parts of the world.

Having weighed up the public interest arguments our opinion is that the public interest lies in maintaining the exception at 12(5)(a). Although mindful of the presumption in favour of disclosure under the EIR, we are conscious of the strong public interest in national security and protecting critical national infrastructure and security of energy supply.

It is not in the public interest for NESO to release data which is still in the course of completion as this could result in loss of trust amongst wider stakeholders. Our FES26 10YF has to go through quality assurance and FES governance processes ahead of publication. Disclosure of the information before these processes are complete would make it more difficult for NESO to complete this work, as we would have to devote resource to managing queries about provisional data whilst working to finalise that data. We have, therefore, concluded that the public interest lies in maintaining the exception at Regulation 12(4)(d) and for our FES26 10YF to be published following the processes set out in the FES methodology document which ensures the assumptions used are rigorously reviewed and validated.

With regards to Regulation 12(5)(d), the ICO acknowledges that there is a public interest in maintaining confidentiality. For this reason, the grounds on which confidences can be overridden are normally limited. Breaching an obligation of confidence would undermine the

relationship of trust between Government and NESO. The public interest is better served in this instance by the NESO being able to fulfil its statutory functions effectively.

Next steps

If you are dissatisfied with our handling of your request, you can ask us to review our response. If you want us to carry out a review, please let us know within 40 working days and quote the reference number at the top of this letter. You can find our procedure here: [Freedom of Information and Environmental Information Regulations | National Energy System Operator](#). The ICO's website also provides guidance on the internal review process: [What to do if you are dissatisfied with the response | ICO](#).

If you are still dissatisfied after our internal review, you can complain to the Information Commissioner's Office (ICO). You should make complaints to the ICO within six weeks of receiving the outcome of an internal review. The easiest way to lodge a complaint is through their website: www.ico.org.uk/foicomplaints. Alternatively, they can be contacted at: Wycliffe House, Water Lane, Wilmslow, SK9 5AF.

Thank you for your interest in the work of the National Energy System Operator (NESO).

Regards,

The Information Rights Team, National Energy System Operator (NESO)