

Electricity distribution network study

Call for evidence

NATIONAL
INFRASTRUCTURE
COMMISSION

Better infrastructure for all

February 2024

Our remit

The Commission provides government with impartial, expert advice on major long term infrastructure challenges.

The Commission's objectives are to:

- support sustainable economic growth across all regions of the UK
- improve competitiveness
- improve quality of life
- support climate resilience and the transition to net zero carbon emissions by 2050.

In fulfilling our purpose and objectives, we:

- **set a long term agenda** – identifying the UK's major economic infrastructure needs, and the pathways to address them
- **develop fresh approaches and ideas** – basing our independent policy recommendations on rigorous analysis
- **focus on driving change** – building consensus on our policy recommendations, and monitoring government progress on their delivery.

A fuller description of the Commission's remit can be found on our website at nic.org.uk/about/what-we-do/. This includes a table of devolved administration responsibilities by infrastructure sector.

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Hall FREng



Professor Sadie
Morgan OBE



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Kate Willard OBE



Nick Winser CBE

Full biographies can be found on our website at nic.org.uk/about/the-commission/

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Introduction

The government has asked the National Infrastructure Commission to provide recommendations on the policy decisions required to make the electricity distribution network in Great Britain fit for net zero. Our approach will be informed by the terms of reference for the electricity distribution network study.

The lower voltage distribution network connects the high voltage electricity transmission network to homes and businesses. Smaller sources of generation and flexibility, such as solar and batteries, also connect to the distribution network. The owners of each part of the distribution network are regulated by Ofgem, which sets the outcomes that must be delivered and the revenues that may be collected.

As the economy decarbonises over the next decade and beyond, electricity demand is expected to materially increase. This increase in demand will mean electricity networks at both transmission and distribution level will need to carry more energy. The availability of capacity on the network, in terms of the volume of electricity it can carry, will be important to maintaining service levels and ensure the system is resilient. Without available capacity new sources of supply or demand will not be able to connect. This could constrain the speed of decarbonisation if, for example, consumers cannot connect electric heating appliances or electric vehicles charge points, or industry cannot secure the level of connection it needs.

Investment to increase capacity is likely to be needed, but the amount could be reduced through further application of non-network solutions, such as the use of local flexibility markets, enhanced use of demand side response and improved use of data and digitalisation.

Government has recently published a Connections Action Plan (jointly with Ofgem), which sets out plans to accelerate connections to the electricity network, and the Transmission Acceleration Action Plan, which responds to the Electricity Networks Commissioner's report on accelerating electricity transmission network build and seeks to halve the end-to-end build time of electricity transmission network infrastructure. The Commission will take these into account in this study and build on their recommendations.

In making its recommendations, the Commission will consider:

- the **technologies and solutions** that can make best use of existing network capacity, when and why capacity may need to be increased and how this could be achieved at lowest cost
- how **policy, regulations and governance structures** can support the delivery of these technologies and solutions in a timely manner to maintain service levels
- how the **process of connecting** new sources of demand and generation to the distribution network can be further improved, reflecting on existing work by government, Ofgem and industry in this area.

The Commission will provide final recommendations to government within the next 12 months. The government has an obligation to respond to the recommendations made.

Call for evidence

In order to provide a robust assessment, the Commission is aiming to gather a wide range of views and data from different stakeholders. This call for evidence is a first step to building this evidence base and will be supported by broader analysis and stakeholder engagement over the course of the study.

Although the following section includes targeted questions, the Commission would also welcome general responses. It is not expected that respondents will answer all questions. Please answer only those questions where you have evidence that you think it is important for the Commission to consider as part of its assessment.

The call for evidence is seeking responses to the following 11 questions. Please provide sources as part of your evidence.

Call for evidence questions

Policy, regulation and governance

1. Does the current RII0-ED2 price control do enough to enable required investment in additional capacity? What changes should be considered for the next price control period (RIIO-ED3) to ensure that required investment is identified and enabled?
2. Does current planning policy impede the deployment of distribution network upgrades? If so, what solutions could alleviate this? Please provide examples.
3. To what extent can a move to more strategic planning of the network at transmission level be replicated for the distribution network? What would be the benefits and costs of doing so? In answering this question, please consider the interaction with forthcoming changes to strategic energy planning, such as the introduction of Regional Energy Strategic Planners.
4. To what extent will making the distribution network fit for net zero also help ensure that it is adapted to a changing climate? Are there any potential conflicts between meeting additional demand and adaptation, or any additional steps required to ensure adaptation is effective?
5. Are there any other ways in which policy, regulation and governance could be improved to deliver a resilient electricity distribution network fit for net zero?

Technologies and solutions

6. What solutions could be used to provide additional capacity without new network investment? Does the current price control do enough to encourage non-network solutions? Please provide evidence of their real world or potential impact on avoided network investment.

7. What role could digitalisation and data play in supporting efficient management of existing capacity and targeting of investment in new capacity? Are there examples of where the benefits have been realised through trials or examples used in other markets?

Connecting to the distribution network

8. What barriers or delays are currently being experienced in the process for managing connections to the distribution network? Why do these occur? To what extent are these issues likely to be addressed by the government and Ofgem's **Connections Action Plan**? Please provide specific examples, differentiating between different users (e.g. domestic and non-domestic demand, distributed generation, etc).
9. How does transmission network capacity cause delays in connecting to the distribution network and what is the scale of the challenge? How far are these issues addressed by transmission network policy, particularly the government's **Transmission Acceleration Action Plan**? Please provide examples, where possible.
10. How could processes requiring contact with, or work from, the distribution network operators be improved? Is there a case for more standardisation of processes between network operators to improve the customer experience and, if so, where would standardisation be most beneficial?
11. What best practice examples exist of network operators improving processes and information for customers looking to connect to the network (either for demand or generation purposes)?

How to respond

Please provide sources and references, examples, data and evidence to support your responses where possible. We encourage responses to be as succinct as possible and to be no longer than 10 pages in total (not including supplementary supporting evidence).

Responses should be sent to electricitydistributionstudy@nic.gov.uk by **10 May 2024**.

Evidence received will be reviewed by the Commission. If further information or clarification of any evidence submitted is required, the Commission Secretariat will contact the evidence provider.

The Commission is not planning to accept responses to the call for evidence in hard copy. Please contact the Commission by the email address above if this poses a problem for your response. Representative groups responding to this call for evidence are asked to give a summary of the people and organisations they represent, and where relevant who else they have consulted in reaching their conclusions when they respond.

FoI and privacy statements

There may be occasions when the Commission will share the information you provide, including any personal data, with external analysts. This is for the purposes of call for evidence response analysis only. The Commission's privacy policy can be found [here](#). We may also publish any responses received to this call for evidence, excluding personal data. However, information provided in response to this call for evidence, including personal information, may be subject to publication or disclosure in accordance with the Freedom of Information Act 2000 (FOIA) or other relevant legislation. If you want information that you provide to be treated as confidential please be aware that, under the FOIA, there is a statutory code of practice with which public authorities must comply and which deals, amongst other things, with obligations of confidentiality.

In view of this, it would be helpful if you could explain to the Commission why you regard the information you have provided as confidential. If the Commission receives a request for disclosure of the information, it will take full account of your explanation, but cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Commission.


The Commission is subject to legal duties which may require the release of information under the Freedom of Information Act 2000 or any other applicable legislation or codes of practice governing access to information.

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Windsor House
Victoria Street
London SW1H 0TL

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