



Chapter 5

Connect to and use the system

I want you to make it easy to connect
to and use the electricity network

**Electricity
Transmission**

nationalgrid

5. I want you to make it easy to connect to and use the electricity network

What this stakeholder priority is about

We have many customers who want to connect to and use our electricity transmission network. We provide them with network connections, services related to the connection, and ongoing services once they're connected. We also provide network reinforcements for users who are connected through a Distribution Network Operator (DNO).

This stakeholder priority is about making it easier for customers to connect to and use our network. We aim to achieve this by becoming a more customer-centric business.

Summary of what our stakeholders have told us so far

You have told us that you want our business to:

- Provide a simpler, tailored, flexible and co-ordinated approach to connections.
- Provide options for a wider range of services.
- Provide more information and support upfront before you make an investment decision.
- Reduce the volatility and improve the transparency of our charges.
- Provide more information in advance about planned outages on the network – and minimise any changes to them.

Our current performance on making it easy to connect to and use our network

We have made a long-term commitment to improving the experience our customers have with our business. During RIIO-T1, this has helped us move closer to our goal of being a truly customer-centric business. We will continue to build on this in T2, ensuring we stay focused on our customers, across all our activities, while following our central strategic vision. We are proud to be in the process of transforming our business, so we can deliver better services for customers.

We have a licence obligation to provide connections to the network, and we've seen a substantial increase in the number of customers connecting. Our forecast for the eight-year T1 period is that we'll have connected 12.5GW of generation capacity.

Last year, we had a surge in the number of applications to connect. Of 201 applications in 2018, 99 were new applications, compared to 20 in 2017. Most of these were smaller generators, new to the sector and with less knowledge of the electricity transmission system. This reflects the changing nature and needs of our generation customers.

In serving both our directly connected demand customers and the wider transmission/distribution interface, we forecast that we will have connected 40 new super-grid transformers and 5km of overhead line during the T1 period.

Through listening to stakeholders and gathering customers' feedback, we've improved our customer service, even in the face of rising expectations. Our customer satisfaction rating has increased from 7.4 to 7.7, while our stakeholder satisfaction survey score has risen from 7.7 to 7.9 so far in the T1 period.

We know that we can still do more to improve our focus on customers, and we're doing that across several areas. For connection customers, we've restructured our organisation to help them navigate more easily through the different stages of the connection journey. We also provide a dedicated contact from initial enquiry through to being connected.

We are developing a standardised connection design for storage customers to reduce the time it takes to connect. We're also introducing a cost calculator tool that will help customers estimate the price of connecting to our network.

Additionally, we're in the process of improving the outage experience for customers with multiple connections. They require system access to operate their own networks and we'll continue working with DNOs to ensure we achieve better outcomes for them.

Our direction of travel following stakeholder feedback so far

We are in the process of building our business plan with our stakeholders. In this section, we'll playback the feedback we have heard from you and ask for your views on what we suggest could happen next.

Benefits to consumers

Our plans to make it easy to connect to and use the network will benefit consumers by:

- Enabling the decarbonisation of the electricity system.
- Helping to lower wholesale electricity costs by providing access to market.

Investing in our network to connect new customers

We have a licence obligation to connect customers. Connecting more generation customers to our transmission network increases competition in the wholesale electricity market and this reduces costs for consumers. By connecting customers as quickly as possible and giving them support through the connection process, we can help maximise these benefits for consumers and support the Government's decarbonisation targets.

The nature of the electricity market is such that there will be more customers who apply to connect to transmission networks than the wholesale electricity market can accommodate. This means that not all customers progress their contract to a connection.

At present, we have 73.5GW contracted to be connected from the start of T2. Of that figure, 15GW is of new interconnector capacity. And it's uncertain how many and which of these contracts will result in a connection. This uncertainty is caused by factors such as the rate of uptake of different types of generation; new technologies, such as batteries and electric vehicles; closure of existing plants; the performance of the economy; and government policy. It's our role to facilitate these customers' route to the market. We have successfully managed the connections process in the T1 period, and we propose to refine our approach during T2.

During the T2 period, we expect to invest between £100m and £250m a year, on average, to connect new generation and demand customers. This range is based on the Electricity System Operator's future energy scenarios 2017 (FES 2017) and our own National Grid Electricity Transmission scenarios.

We recognise that this range is very wide. To ensure our funding reflects the actual number of connections our customers will need during the T2 period, we plan to improve our T1 'uncertainty mechanisms'. We will use unit cost allowances to adjust our revenue so customers and consumers only pay for the outputs we deliver (see Chapter 11 for more detail).

Providing tailored solutions for existing and new customers

We have engaged with our customers in immersion sessions and bilateral meetings, as well as through our customer satisfaction survey and our work to improve the electricity connections journey.

You have told us that different customers want different services when connecting to our network. For example:

- Generator customers want more information upfront to help reduce risk on their projects.
- Potential electric vehicle charging customers care about locations.
- Demand customers are interested in system requirements and timelines.

We have seen changes in customer requirements during the T1 period, with trends for more distributed generation and low-carbon generation. As a result, our customers are asking for new services from our network. We expect this trend to grow in the T2 period, for the reasons mapped out in the external context section of this document.

In response to customer feedback, we plan to provide more information and tailored solutions during the T2 period in the following ways:

- Working closely with our customers and using our expertise to help deliver the Development Consent Orders (DCOs) we and our customers both need to move connection projects forward.
- Create a pre-application support framework for engagement, so we can give early guidance to potential customers.
- Provide an online customer portal that will allow customers to design their own tailored solutions for connections. They'll also be able to access real-time information about their projects, at any time.

Improving the network access experience for planned outages

We have to take parts of our network out of service temporarily, which is called an outage. We do this to carry out our work safely, to replace and repair ageing infrastructure and assets, and to complete new connections.

Our customers have told us they want us to provide more information in advance of planned outages and to minimise any changes to them. The issues our stakeholders have raised include: our decisions on outages are not always collaborative; there can be a lack of information on when an outage might end; and we sometimes shift outages incrementally, instead of fully re-planning the work.

We are already acting on our stakeholders' feedback. We will be improving our T1 Network Access Policy (NAP), which enables the Electricity System Operator (ESO) and our business to co-ordinate outages for the benefit of consumers. For customers with multiple connections, our goal is to create an improved outage experience, which our processes and system requirements are linked to.

Based on stakeholder feedback, our direction of travel for the T2 period is to build on the improvements we're already making in the outage experience. It's important that we improve the outage experience for directly connected customers, who typically

have single-site connections. In line with our approach to multiple connections, our ambition would be to design and implement an improved outage experience that's linked to our processes and system requirements.

Improving customer and stakeholder satisfaction

As mentioned above, we have improved our customer and stakeholder satisfaction ratings during the T1 period. However, we know there is much more to do. Our goal is to exceed the expectations and needs of our changing base of customers and stakeholders. We're striving to become one of the leading companies in our sector for customer satisfaction.

We are already taking forward many initiatives to improve our systems, customer journeys, customer analytics and our employees' skills. These include a new customer complaints process; a Customer Relation Management tool that helps us understand our customers' businesses better; and improved tools to provide information more quickly to our stakeholders.

Based on our stakeholders' feedback so far, our direction of travel for the T2 period includes the following:

- Developing bespoke, digital customer journeys, including digital options, to improve our customers' experience.
- Developing a multi-channel approach so we can adapt our engagement style to suit our customers.
- Creating a culture where we understand, anticipate and meet our customers' needs.

We are working with Ofgem and our stakeholders to update existing customer satisfaction and engagement regulatory incentives. We want them to provide a strong motivation for us to improve our customer service and engagement in the T2 period. Ofgem set out its consultation proposals on pages 14-24 of [Ofgem's sector-specific methodology consultation annex on electricity transmission consultation](#).

Improving the predictability and transparency of our charges

Through our meetings, seminars and satisfaction survey, some of our customers have told us they are concerned about the volatility of our charges. They have also told us they want us to be clearer about our predicted charges and how likely they are to change.

There are two elements to our charges for customers:

1. Connection charges – for assets installed solely for and only capable of use by an individual user.

Customers pay connection charges directly to the ESO. The current charging framework sees us pass our costs through to customers. We would like to know whether stakeholders think we should be incentivised to reduce these connection costs.

2. Transmission Network Use of System (TNUoS)

charges recover the costs of installing and maintaining the transmission system.

We understand that changes to these charges can have an impact on our customers. There are several reasons why our charges change, including the size and nature of the charging base, the ESO charging methodology itself, and the way the price control operates. Not all of these factors are within our control.

Our direction of travel for the T2 period is to work with the ESO and Ofgem to seek improvements to the price control framework, which will help reduce the volatility of charges. We also consider it would be in our customers' interests for there to be an incentive to reduce connection costs.



We welcome your views:

Question:

What are your views on our direction of travel in relation to making it easy to connect and use our network in the T2 period?

Submit your feedback online [here](#):



What it could cost

**Low
£0.1bn**

**T2 annual
spend range**

**High
£0.25bn**

**T1 annual
expenditure
(forecast)
£0.2bn**

Our indicative range of spending – to make it easy to connect to and use the network in the T2 period – is between £0.10bn and £0.25bn a year. This range reflects the different future energy scenarios, along with how many new generators and how much new demand we might need to connect to our network.

Connections are a particularly unpredictable area of our business. We will be working with our stakeholders and Ofgem to propose uncertainty mechanisms that adjust our allowances to the connections we deliver in the T2 period (see Chapter 11 for more information on uncertainty mechanisms).

How we will continue to engage with our stakeholders

We are continuously engaging with our customers about how we can improve our connection services and ongoing services. The feedback we receive will be instrumental in the development of our T2 plan.

We welcome feedback on this chapter of the consultation. In particular, on our direction of travel towards more tailored services, improved customer journeys and whether the regulatory framework should change to incentivise us to reduce connection costs to customers.

How to use this document

We want your feedback

Who is this consultation aimed at?

We are interested in the views of all stakeholders who are impacted by what we do or interested in shaping the future of electricity transmission. This includes the views of all users of our network, government, regulatory bodies and energy industry professionals.

Tell us what you think

This consultation is open until 31 March 2019. You may give us feedback in the ways outlined below. We particularly seek your views in response to the specific questions we have posed. These are summarised on page 9. You may respond to all questions or just those relevant to your specific views.

Ways to feedback:

Make notes

Throughout the document, we have provided space for you to read and make notes at the start of each chapter (opposite). Use the section numbering as a way to reference accurately. You can then type up your notes and send them in an email or submit them online.



Interactive pdf notes

Alternatively, we will be sending out editable pdf versions of this document with note fields for you to type directly into.

Email

We have a dedicated email address specifically for your feedback to this document. We welcome your thoughts at: **gary.stokes@nationalgrid.com**

Alternatively, you can put your thoughts in writing and send to: **Gary Stokes, National Grid House, Warwick Technology Park, Gallows Hill, Warwick CV34 6DA.**



Online

You can go directly to the website and submit your comments [here](#).



You can learn more about how we are working with stakeholders by visiting our [website](#). This site makes it easy to follow our progress and shows you how to get involved.



Please share
your thoughts: