



Scottish & Southern
Electricity Networks

TRANSMISSION

Your Plan, Our Future: R110-T2

www.ssen-transmission.co.uk

TRANSMISSION CONNECTION PROCESS

Consultation Document November 2018

Welcome

Scottish and Southern Electricity Networks (SSEN) Transmission have started working on our business plan for the next price control period, RIIO-T2. The RIIO-T2 price control will start on 1 April 2021 and we believe that our plan will interest you as our work on the electricity transmission system may affect your organisations remit. We are keen that you understand our early proposals and contribute towards the plan ahead of our submission to the electricity industry regulator, Ofgem, in quarter four 2019.

As a natural monopoly, we act to provide our customers with secure and robust connections to the transmission network in our operational area. A key responsibility includes providing customers with information and proposals which enable their decision to develop projects which could connect to our transmission network.

This consultation document intends to gain feedback on the process which new generation and demand customers follow when applying for new connections. The document also highlights the key parties involved in the process and the interdependent relationships and responsibilities. We will ask specific questions about our Transmission Connections process to understand if we are providing the best service and if positive changes can be introduced.

We are keen to receive all comments and opinions ahead of 12 December 2018, when the consultation will close. On conclusion, we will review all feedback and make decisions on how we can improve the way we operate. We will provide feedback to those who contributed to the process ahead of submitting our findings and decisions as part of our final business plan submission to Ofgem in quarter four 2019.

The process discussed in this document are applied to applications made by a customer wishing to access the SSEN Transmission Network. The Transmission network is a dynamic system and the process to access the system can be complex to new connection applicants. We will commit to providing a process that is as straightforward as possible to ensure new customers can make informed decisions about their projects.

The core purpose of this document is to gain your feedback on the process followed by new connection applicants and our Transmission Connections Team.



About us

We are part of Scottish and Southern Electricity Networks (SSEN), operating as Scottish Hydro Electric Transmission plc under licence and are responsible for maintaining and investing in the electricity transmission network in the north of Scotland.

We own and maintain the 132kV, 275kV and 400kV electricity transmission network in our licence area. Our network area extends over a quarter of the UK land mass across some of its most challenging terrain.

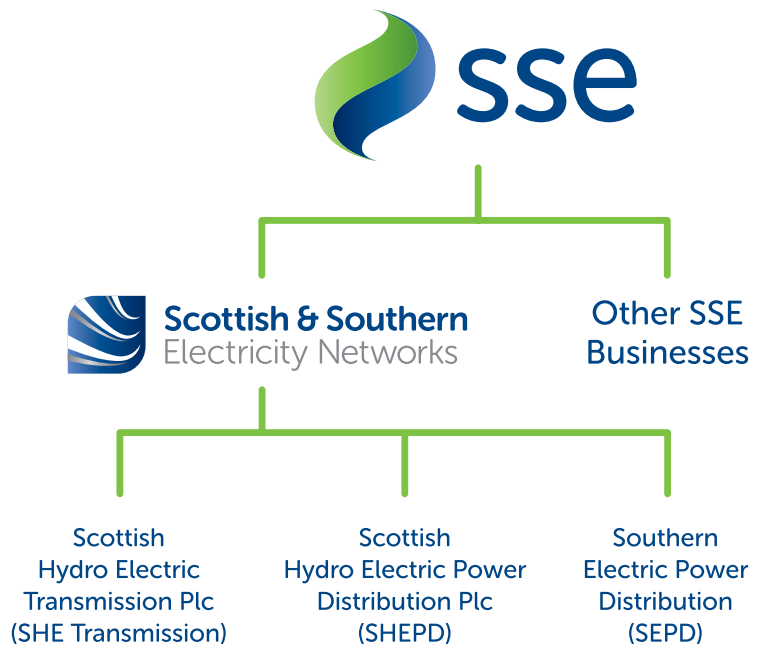
Our operating area is home to vast renewable energy resources and this is being exploited by wind, hydro and marine generation.

Working closely with National Grid Electricity System Operator (NGESO), we also enable these electricity generators to connect to the transmission system by providing a connection and allowing the electricity generated by them to be transported to areas of demand across the country.

As a natural monopoly, we are closely regulated by the GB energy regulator, Ofgem, who determine how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network in the north of Scotland.

These costs are shared between all those using the transmission system, including generation developers and electricity consumers.

In 2016-17, the average cost to maintain and invest in the transmission network was 6.7% (£37) based on an average electricity bill price of £554 for electricity only (£1,123 for dual fuel).



Overview of Transmission projects



Who is involved in the Connection Process?

The responsibilities and obligations for the safe installation, operation and maintenance of the transmission network are split across two parties – the Transmission Owner (TO) and NGENSO.



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We are part of Scottish and Southern Electricity Networks, operating as Scottish Hydro Electric Transmission plc (SHE Transmission) under licence and are responsible for maintaining and investing in the electricity transmission network in the north of Scotland.

We own the existing system and are responsible for the planning, design, construction and maintenance of a network which currently comprises 138 Grid Substations, 5100km of circuits and 11390 pylons and structures.

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NGESO is the System Operator of the transmission network across the whole of Great Britain and ensures that minute by minute electricity demand is matched by an equal volume of electricity generated by power stations.

In addition to its obligations to operate the network, NGESO is also responsible for the coordination, issue and management of contracts for the connection of new, large power stations using all technologies – wind, hydro, marine, gas, nuclear or coal.



Connection Customers

A Connection Customer can be for either Generation, Demand or both and can include wind farms, hydro generation, solar power, gas fired plants and battery storage etc.



Typically, all connections in Scotland have an impact on the Transmission System and can connect either via the local Distribution Network Operator (SHEPD) as an embedded connection or directly on to the Transmission Network.



An embedded connection is generally for smaller connections and larger projects typically connect directly to the Transmission Network. As part of whole system planning approach, we will work with SHEPD to assess the most economic, efficient and coordinated solution depending on the capacity and location.

Regardless of the type of connection, SHE Transmission encourage and welcome customers to have a pre-application discussion with us, in conjunction with SHEPD and NGENSO as appropriate. We are available to discuss connections to provide network information and guidance ahead of an application and at every stage thereafter.

Preparing for an Application

Applying for a new connection is a considerable step for any developer, the first step is to discuss the individual requirements of the proposed project. SHE Transmission work closely with SHEPD and the NGENSO Connections Team and all initial discussions with the team are free and do not require commitment until an application is made.



Talk to us

We can work with you to review your plans, discuss potential options and guide you through the application process. We'll put you in touch with the right people, both here at SHE Transmission and also at NGENSO, ensuring you have all the guidance you need on initial feasibility, application and data requirements. We'll provide any support you may need to get your application off the ground.

If you wish to discuss any potential connection requests, please contact us at transmission.commercial@sse.com, SHEPD at mcc@sse.com or NGENSO at transmissionconnections@nationalgrid.com



Preparation of information

When a customer is ready to discuss a proposed connection request, in order to make the best use of our engagement, customers should have the following information available:

- Capacity of the development in Megawatts (MW);
- Planned location of your substation in the form of a six-digit grid reference (or preferred GSP if an embedded connection);
- Aspirational date to be connected to the network.



Complete Application Documents

When applicants are ready to make an application, there are specific documents which are required to be completed.



Question 1:

Are there any further steps which we should consider during the 'Preparing an application' stage?

Direct Connections to the Transmission Network

If customers in the north of Scotland require a network connection directly to the Transmission network, they are required to make an application directly to NGEESO.

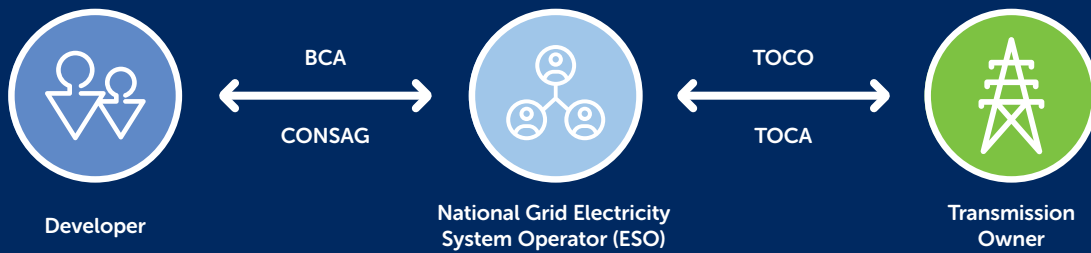
NGEESO, in turn, makes an application to ourselves asking us to specify the most economic and efficient design for the development and to provide costs and timescales for the completion of necessary work.

Detailed guidelines on how both NGEESO and ourselves jointly process your application are documented in the System Operator Transmission Owner Code (STC) under procedure STCP18-1 Connection and Modification Application.

For further information please go to:

www.nationalgrideso.com/codes/system-operator-transmission-owner-code?code-documents

Transmission Connection Process



BCA Bilateral Connection Agreement
CONSAG Construction Agreement

TOCO Transmission Owner Construction Offer
TOCA Transmission Owner Construction Agreement

Embedded Connections to the Transmission Network

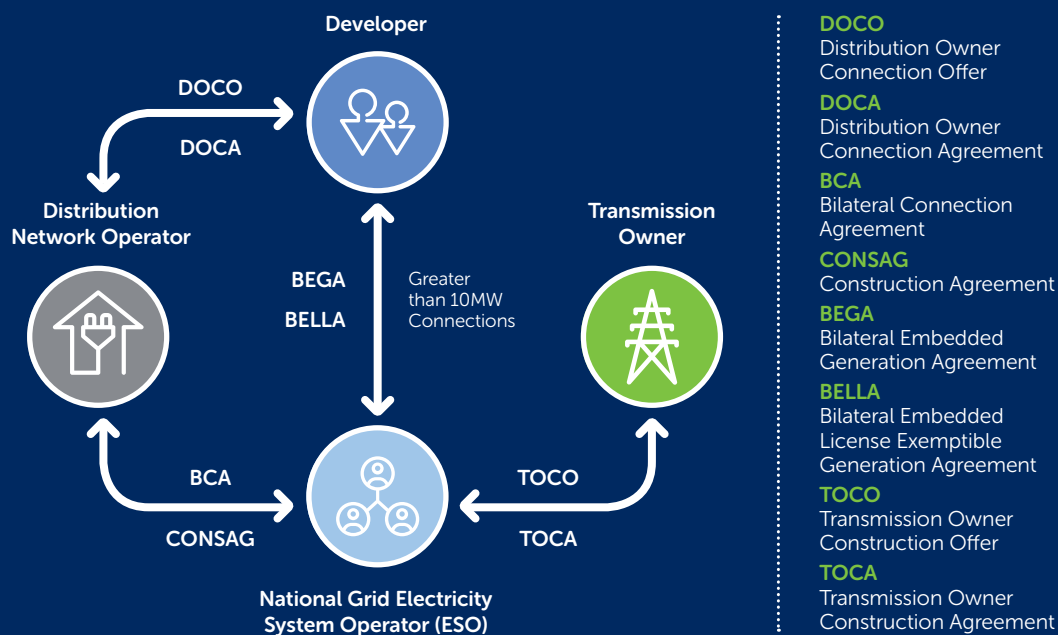
Customers wishing to connect to the distribution network are referred to as “Embedded Connection Customers” and will initially have made an application and contracted with SHEPD.

Following this, an application should be made to NGENSO for access to the transmission network for either a statement of works (SOW) (projects less than 10MW) or BELLA/ BEGA (projects greater than 10MW).

SHE Transmission will work with NGENSO to carry out network assessments which will determine if there is connection capacity available for immediate access. Alternatively, it may be identified that there is a need to reinforce or alter the transmission network to accommodate the connection.

More information on the embedded application process can be found at www.ssen.co.uk/connections and www.nationalgrideso.com/connections/applying-connection

Relationship for Embedded Connections



Question 2:

Do you think we can make improvements to the interactions between Customers, SHEPD, NGENSO, SHE Transmission?

Our commitment to new connection customers

We aim to make all new applications to connect to our network as straightforward as possible and are committed to providing you with support throughout the process.

For direct connections:



We will meet you to discuss your requirements prior to you starting your application



A dedicated Contract Manager will contact you at Clock Start, providing their contact information and confirming your application requirements.



A Planning Engineer will contact you around day 40 of the process to confirm and discuss our outline technical design



Your Contract Manager will contact you when we have completed our draft connection offer and issued it to National Grid Electricity System Operator



Once you have received your connection offer we are available, in conjunction with National Grid Electricity System Operator, invite you to meet and discuss the offer terms and answer any questions you may have

We have a dedicated team who will assist new customers with connection applications and throughout the process until their project reaches energisation. The Transmission Connections Team will work flexibly with all new connection customers to meet individual requirements.

The team are contactable during business hours Monday - Friday and can discuss matters in person, through use of Skype, by phone and by traditional methods such as email or letter.

transmission.commercial@sse.com

We also have a dedicated webpage which hosts helpful information at www.ssen-transmission.co.uk

Question 3:

Do you think we should consider anything further when handling new connection requests and should we consider different ways to allow access to information to assist customers in advance of applications?



The Connection Offer

The connection offer that applicants receive works in two stages. The first is a Transmission Owner Construction Offer (TOCO) that we provide to NGENSO.

The second is a suite of contracts given to you by NGENSO.



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Stage 1

SSEN Transmission will provide a TOCO to NGENSO which captures the following key elements:

- **Design:** an identification of the connection and infrastructure works required to connect the proposed development to the network, plus any wider indirect infrastructure works which are necessary across the rest of our part of the National Electricity Transmission System (NETS);
- **Costs:** an identification of the direct costs (connection) and indirect costs (infrastructure) involved;
- **Programme:** an identification of the key milestone dates relating to consent, commencement of work, commissioning and completion.

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Stage 2

NGESO will provide a suite of contracts which the applicant must consider and enter into:

- BCA (Bilateral Connection Agreement) which details how generators are required to comply with the Grid Code Connection Use of System (CUSC) and Balancing and Settlement Code (BSC). It also defines arrangements for connection to the National Electricity Transmission System (NETS);
- CONSAG (Construction Agreement) which details the design, cost and programme as well as other industry requirements associated with connection to the National Electricity Transmission System (NETS).

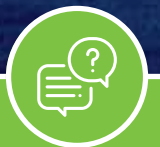
Timescales

We will work with NGENSO to identify a clearly defined schedule as part of the application process.

- All applications are checked by NGENSO and ourselves for technical verification. If all information provided is correct, applicants will be contacted by NGENSO within five working days to provide a contact for the connection;
- Upon receipt of this confirmation and payment of your fee to NGENSO (whichever happens later) we (SHE Transmission and NGENSO) initiate 'Clock Start'. 'Clock Start' marks a point in time where we have a maximum of three months to provide you with a connection offer;
- Applicants are permitted three months to accept or decline the connection offer on receipt.

Question 4:

Are there any further steps which we should consider during the 'Connection offer' stage and following contract agreement?



Paying for your application, connection and infrastructure

There are three distinct areas that new connection customers will need to consider before making an application: the application fee, construction costs and ongoing charges.

- The application fee is made to NGENSO and is dictated by several factors, including your network area and the capacity of your development in Megawatts
- Infrastructure works are paid for via Transmission Network Use of System (TNUoS) Charges. Generation customers pay all charges levied to NGENSO and we, in turn, are paid by them under established regulatory mechanisms
- Ongoing connection charges can either be paid in advance of your network access or over the lifetime of the development which is typically 40 years

Further details are available from: www.ssen-transmission.co.uk/information-centre/industry-and-regulation/charging-statements-and-information and also: www.nationalgrideso.com

Question 5:

Do you think we should consider anything further in respect of 'Paying for your application, connection and infrastructure'?



Your feedback

We will be developing detailed plans and proposals to inform our future business plan which will be submitted to Ofgem in quarter four 2019. We are keen to understand stakeholders' views and opinions ahead of finalising our proposals and ask that you tell us what is important to you whilst we plan, develop and deliver our assets.

We would appreciate you providing your thoughts on our processes and how we make decisions for assets. A summary of our questions are as follows:

Question 1:

Are there any further steps which we should consider during the 'Preparing an application' stage?

Question 2:

Do you think we can make improvements to the interactions between Customers, SHEPD, NGENSO, SHE Transmission?

Question 3:

Do you think we should consider anything further when handling new connection requests and should we consider different ways to allow access to information to assist customers in advance of applications?

Question 4:

Are there any further steps which we should consider during the 'Connection offer' stage and following contract agreement?

Question 5:

Do you think we should consider anything further in respect of 'Paying for your application, connection and infrastructure'?

Responses

Responses to the consultation questions should be provided by 16:00 on 21 December 2018 and can be submitted using the following avenues:

Written responses can be sent to:

Kevin Kavanagh
RIIO-T2 Project Team, SSE,
6th Floor, Waterloo Street,
Glasgow, G2 6AY

Email

yourplanourfuture@sse.com

Online

Responses can be logged via our webpage questionnaire at
www.ssen-transmission.co.uk/information-centre/industry-and-regulation/riio-t2/

We assess all received feedback and produce a summary document which will indicate how we will plan, make decisions and deliver assets during the next price control period.



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To illustrate the level of engagement and attendance we have at our events we take photographs and utilise comments made by attendees as evidence in our annual regulatory submissions and in marketing materials. Quotes/comments are generally anonymous but there may be occasions whereby we would like to attribute these to companies or individuals. Please let us know if you do not wish for your details to be used in this way.

The Scottish and Southern Electricity Networks group comprises, Scottish and Southern Energy Power Distribution Limited, Scottish Hydro Electric Transmission plc, Scottish Hydro Electric Power Distribution plc, and Southern Electric Power Distribution plc all of which will rely on this consent.

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