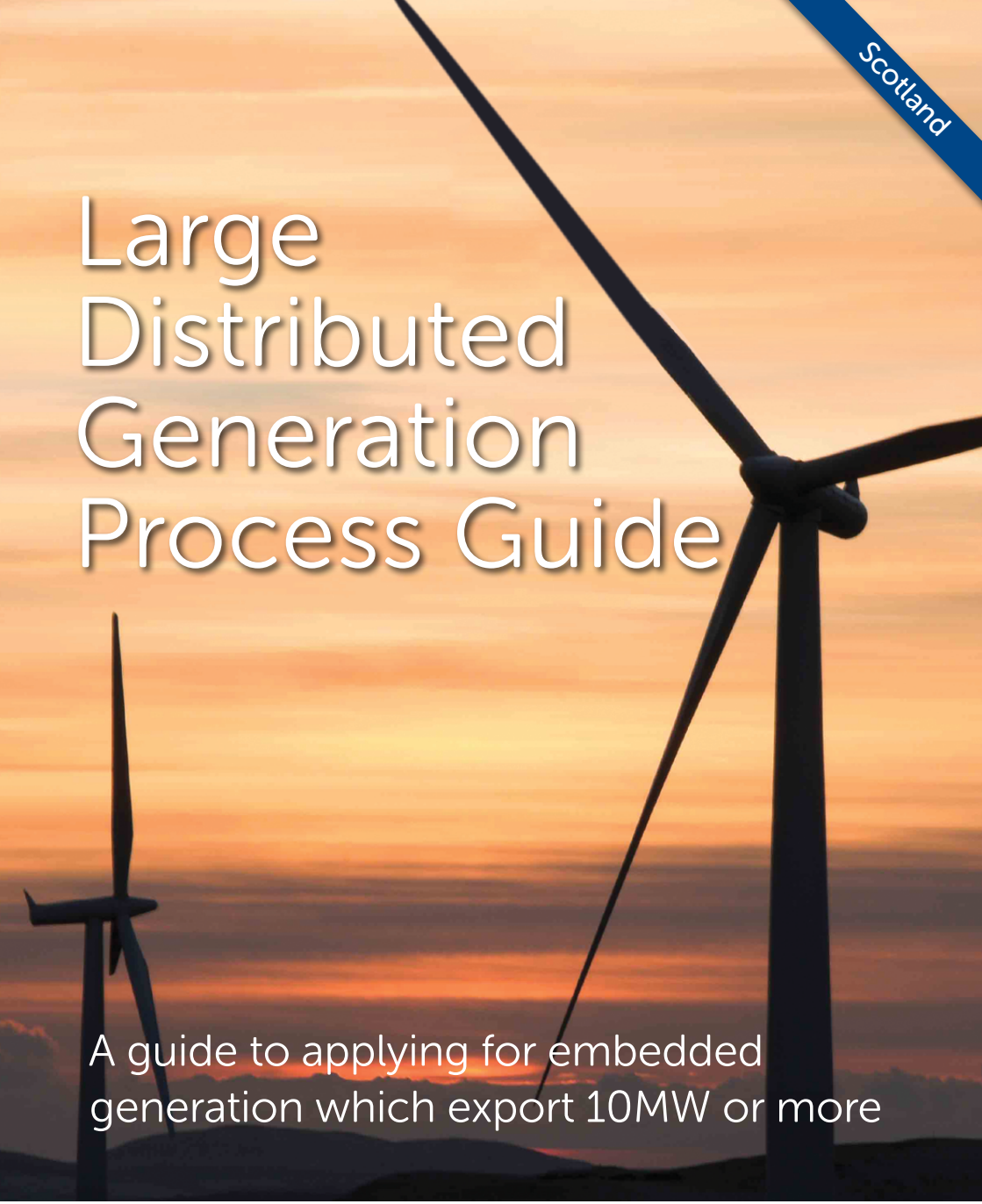


Large Distributed Generation Process Guide

A guide to applying for embedded generation which export 10MW or more

Scottish & Southern Electricity Networks

Contents

Large Generation process guide

About this process guide

This guide is intended to describe the process of applying for embedded generation that export 10MW or more onto Scottish Hydro Electric Power Distribution (SHEPD's) network along with other various requirements that are necessary to be completed in order to achieve the connection.

The main tasks for getting connected are shown below with more detail on the follwing pages:

Pre-application

Project planning; information gathering; discussions with us (see page 04-05)

Application

Submit formal connection application and we will prepare connection design and connection offer (see page 06)

Connection offer

Assess options and conditions and accept or reject connection offer (see page 08)

Legal considerations

Contracts; wayleaves and waivers (see page 10)

National Grid

Initiate the process of obtaining either a BELLA or a BEGA (see page 11)

Construction and commissioning

Connection infrastructure construction; testing and commissioning of equipment (see page 12-13)

Large Generation

Pre-application

Consider whether you have the time and resource to go through the application process yourselves, or whether you need help from a consultant. If you have partnered with a developer, they will probably handle the application process in-house

Look at our generation capacity maps online to get an idea of whether we will be able to connect your project without reinforcement work. You can find them here:
www.ssen.co.uk/generationavailability

Discuss your plans with us at an early stage. We can talk about:

How close your proposed project is to the network and whether there is any 'spare' capacity

The process of applying and connecting to the network

The choices you will need to make about who will carry out any connection works and the type of connection you go for

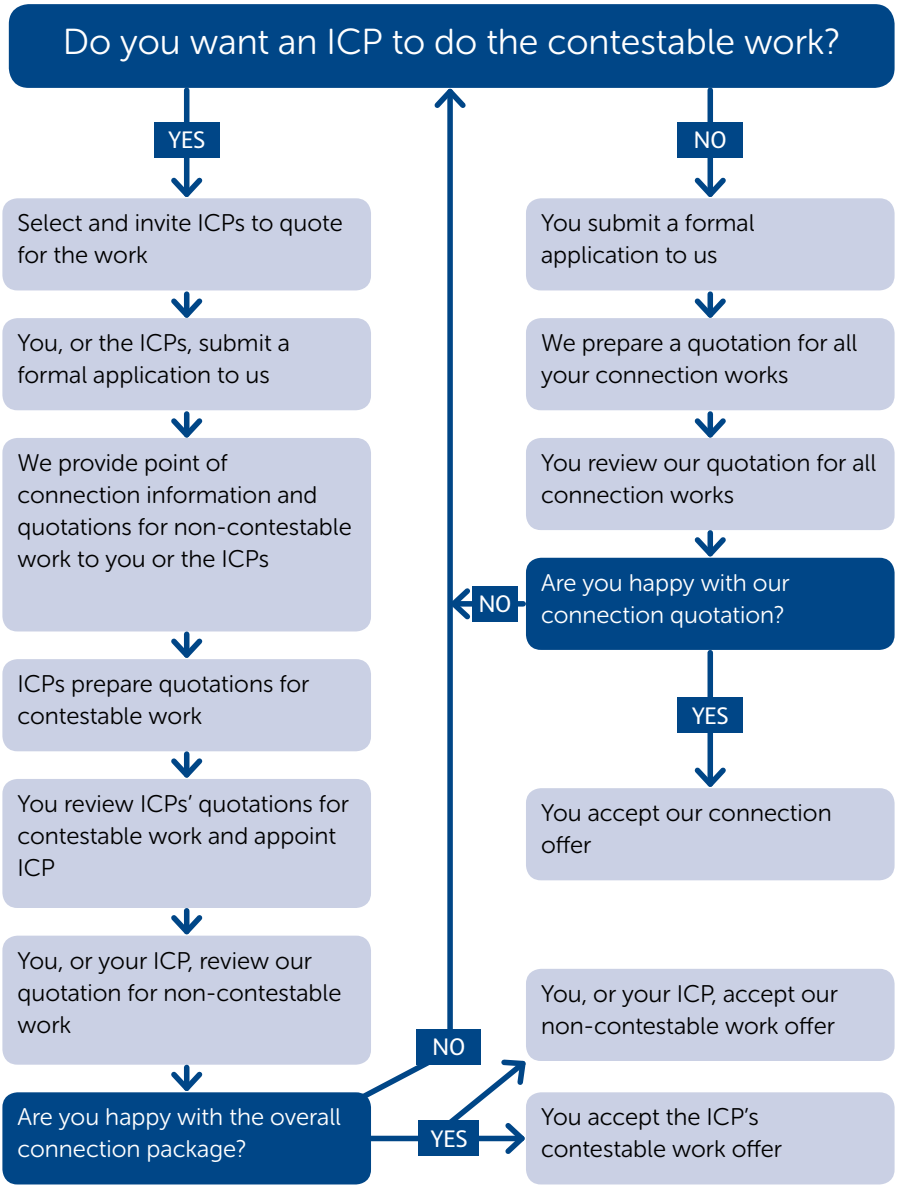
Consider commissioning us to carry out an initial Budget Estimate to get more information on connection layouts and indicative costs.

Decide who will construct the connection. Some of the work is non-contestable (Work must be carried out by us and is not open to competition) and some is contestable (Work is open to competition and can be conducted by Independent Connection Providers (ICPs)). You will need to decide whether to appoint an ICP to do the contestable work or whether you'd like us to do it all – this will affect the connection process. The flow diagram might help you decide.

We also run monthly connections surgeries where you can discuss your project with a designer and a commercial manager, see our online events calendar at www.ssen.co.uk/stakeholderevent/basicsearch for more information.

Contact Us

01738 516886
Or email commercial.contracts@sse.com


Do you want an ICP to do the contestable work?
YES
NO
Select and invite ICPs to quote for the work
You, or the ICPs, submit a formal application to us
We provide point of connection information and quotations for non-contestable work to you or the ICPs
ICPs prepare quotations for contestable work
You review ICPs' quotations for contestable work and appoint ICP
You, or your ICP, review our quotation for non-contestable work
Are you happy with the overall connection package?
NO
YES
You submit a formal application to us
We prepare a quotation for all your connection works
You review our quotation for all connection works
Are you happy with our connection quotation?
NO
YES
You accept our connection offer
You, or your ICP, accept our non-contestable work offer
You accept the ICP's contestable work offer

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Application

- Submit a formal connection application, which can be done online or by downloading the form from our website, www.ssen.co.uk/generationconnectionhome
- You may need support from us or an industry consultant to help you complete the form, which requires comprehensive data about your generating equipment and its location
- If you want us to do all the work – both the contestable and non-contestable – then you/ your Industry consultant will submit the application form. If you appoint an ICP, they will liaise with us on your behalf.
- You will need to liaise with National Grid to start the process of obtaining either a
  - BELLA (Bilateral Embedded Licence Exemptible Large Power Station Agreement) or
  - a BEGA (Bilateral Embedded Generation Agreement)
  - This is to be done at application stage or before you can accept your Distribution Connection Offer, please see page 11 for more information.

All applications to be sent to MCC@sse.com

The below checklists are the minimum requirements in order for SHEPD to provide a Budget Estimate or Formal Quotation. If there is any other information which you believe may be relevant to your connection, please provide this along with the application.

Budget Estimate

Information checklist

- ☑ Contact details and site address
- ☑ A site layout plan showing where the connection is required
- ☑ The Export and/or import capacity of the connection

Formal Quotation

Information checklist

- ☑ Contact details and site address
- ☑ A site layout plan showing where your metering connection point is required
- ☑ Fully completed ENA application form
- ☑ A Single Line Diagram (SLD showing how the generation is to be connected to our network
- ☑ Letter of authority *

*Letter of Authority – when you do not own the site, you will require a signed letter from the land owner granting permission for you to apply for a grid connection on their behalf or on their land.

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Connection offer (Formal Quotation)

- Once we have received all the forms necessary to make your application competent (please see the information checklist on page 7) we will carry out a number of studies to assess the impact of your generation on the network.
- Maximum timescales for us to provide you with a quote:

1. All Works quote (Contestable and non-contestable work):
   - 65 working days for HV (High Voltage = 11kV)
   - 65 working days for EHV (Extra High Voltage = 33kV) generation
2. Non-contestable work only:
   - 50 working days for HV
   - 65 working days for EHV

- The quote will contain details of the connection charges, which are broken into categories in the box below, as well as options available to you and any conditions that may apply to the connection.

Connection charges

The cost of connection can be broken into three categories:

1. New infrastructure for the equipment to connect your generating project (the point of supply) to the point of connection to the network. These are sole use assets and so are paid for by you in full
2. Reinforcement of the existing network to increase the electrical capacity and enable the flow of electricity onto the network. You will pay a proportion of this cost which is relative to the capacity of your project
3. Recovery of costs from previous works carried out for other connections. This will only apply if you use assets provided for other connection customers within a prescribed time period.

There are several options that you will need to consider:

- If you have asked us to quote for both the contestable and non-contestable work, you will need to decide if you will accept the quote for all connection works or whether you would like an ICP to carry out the contestable works
- If your connection requires expensive reinforcement work, it is worth considering a 'flexible connection'. This allows us to temporarily reduce your capacity, known as curtailment, at times when the network is under pressure. You will need to weigh up the pros and cons as your connection cost could be lower, but there may be times where your ability to export electricity is constrained
- When we have more than one application for a connection to the same part of the network, the applications become interactive connection applications (When two or more applications for connection are made that are competing for limited capacity on the same part of the network or otherwise have a material operational effect on that network). If this happens, we will let you know in writing along with your position in the queue and the process for accepting interactive connection offers.

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Legal considerations

There are a number of agreements and contracts that need to be put in place before we can connect your generation to the network. You may wish to seek professional advice if you are in any doubt.

- You, or your ICP, will normally have 90 days to formally accept the connection offer, as long as it does not become interactive. The offer then becomes the contract between you, or your ICP, and us to meet the terms, conditions and payments specified
- You will also be required to enter into a connection agreement with us. This is the lifetime agreement for the connection once it is energised and includes our rights and obligations to one another. For instance, you will be required to comply with the Distribution Code (see www.dcode.org.uk for more information)
- Where the connection works are carried out by an independent connection provider, an adoption agreement is put in place for us to adopt the assets constructed and will be between us and your appointed ICP
- When the equipment required to connect your generation to the network (e.g. cables, substations) is on someone else's land, we will need to secure land rights through an easement[1], wayleave[2] or land transfer[3] for the asset over the long term. We may also require consents for overhead lines, environmental restrictions and planning. Our wayleave and legal guide can be found on the following website for further information www.ssen.co.uk/LandRights/

1 Easement – a right to cross or otherwise use someone else's land for a specified purpose.

2 Wayleave – a right of way granted by a landowner.

3 Land transfer – transfer of ownership from the landowner to us.

Large Generation

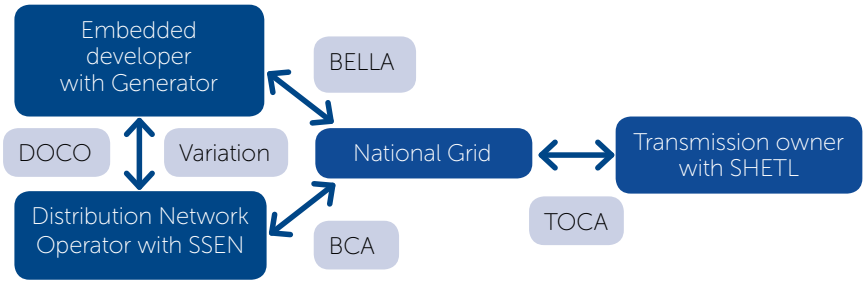
National Grid

In order to accept your distribution quotation you are obliged to initiate the process with National Grid of obtaining either a BELLA (Bilateral Embedded Licence Exemptible Large Power Station Agreement) or a BEGA (Bilateral Embedded Generation Agreement).

This would then trigger the formal assessment of the transmission network which may result in your connection date being amended and potentially the requirement to securitise transmission upgrades required for your connection.

Please see the below link which will direct you to National Grids website
www2.nationalgrid.com/uk/services/electricity-connections/new-connection

Should you have any questions in relation to the above please contact National Grid. Email address is transmissionconnections@nationalgrid.com



BEGA – Bilateral Embedded Generation Agreement

BELLA - Bilateral Embedded Licence Exemptible Large Power Station Agreement

TOCO – Transmission Owner Connection Offer

DOCO – Distribution Owner Connection Offer

Variation – Variation to your DOCO following completing process with National Grid (System Operator)

Major schemes

Construction and commissioning

Once you have accepted our connection offer and dealt with any legal requirements, it's time to build and connect your project.

- Stay in touch with us and your ICP (if you have one) during the construction phase. It is essential that we are working to the same timelines and that all work meets the required standards.
- Once construction is complete, it is your responsibility to carry out full commissioning tests which we may need to witness. You need to:
  - Submit registered data[1] to us
  - Put commercial arrangements in place and keep your supplier informed of when you expect to start generating
  - Make sure you have metering arrangements in place (see box below).
  - Send us a completed commissioning form within 30 days of completing the commission tests.

1 Registered data – the final confirmed parameters of the generation equipment, including the location, export and import requirements.

Metering explained

We will not fit your meter. You or your supplier are required to appoint a MOP (Meter Operator) who will install and operate your meter.

There are two categories of meter:

- Non-Half Hourly (NHH) for generation less than 30 kW. It is the responsibility of the supplier to appoint the meter operator and collect the data
- Half Hourly (HH) for generation over 30 kW. You must appoint a meter operator. See the Association of Meter Operators for a list of accredited providers and further information on the services they can provide.

Checklist of other tasks

Whilst we (or your ICP) are constructing your connection, you should be:

- ☑ Completing the construction of your generation project
- ☑ Working with us to negotiate easements or wayleaves
- ☑ Appointing a meter operator (see box on the left)
- ☑ Finalising negotiations with a supplier who will purchase your energy

Glossary

Adoption Agreement	An agreement which sets out the terms and conditions for the DNO to adopt assets which have been constructed by an ICP.
BEGA	Bilateral Embedded Generation Agreement
BELLA	Bilateral Embedded Licence Exemptible Large Power Station Agreement
Connection agreement	An agreement between you and the DNO detailing terms and conditions for connecting to and remaining connected to the DNO's network.
Connection offer	A formal offer from the DNO containing terms, conditions and charges to enable connection to the DNO Network. Issued either to you or the ICP where applicable.
Contestable	Work that is open to competition and can be conducted by Independent Connection Providers (ICPs).
Curtailment	A temporary reduction in electricity generation imposed on the generator.
Distributed generation (DG)	A generating scheme that is connected to the distribution network.
Distribution network	A network of electricity lines and equipment that connects the transmission network and distributed generation to end users. In England and Wales the distribution systems are the lines with a voltage less than or equal to 132 kV.
Distribution network operator (DNO)	The DNO owns, operates and maintains a distribution network and is responsible for confirming requirements for the connection of distributed generation to that network.
DOCO	Distribution Owner Connection Offer
EHV	Extra High Voltage = networks operating above 22 kV, i.e. 33 kV.
HV	High Voltage = networks operating between 1 kV and 22 kV, i.e. 11 kV.
Independent Connection Provider (ICP)	Companies that have the necessary accreditation to provide new connections in competition with the DNOs. See the see the Lloyds Register website for a list.

Interactive connection applications	When two or more applications for connection are made that are competing for limited capacity on the same part of the network or otherwise have a material operational effect on that network.
LV	Low Voltage = less than 1 kV networks, i.e. 230/400 V.
Non-contestable	Work must be carried out by the DNO and is not open to competition.
Registered data	The final confirmed parameters of the generation equipment, including the location, export and import requirements supplier meter operator.
Reinforcement	Increasing the electrical capacity of those parts of the network that are affected by the introduction of new generation or demand.
TOCO	Transmission Owner Connection Offer
Transmission network	A network of electricity lines and equipment that connects power stations and substations. In England and Wales the transmission system is rated above 132 kV.
Variation	Variation to your DOCO following completing process with National Grid (System Operator)

Contact us

To register a project

call 0345 072 4319
or email mcc@sse.com


www.ssen.co.uk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