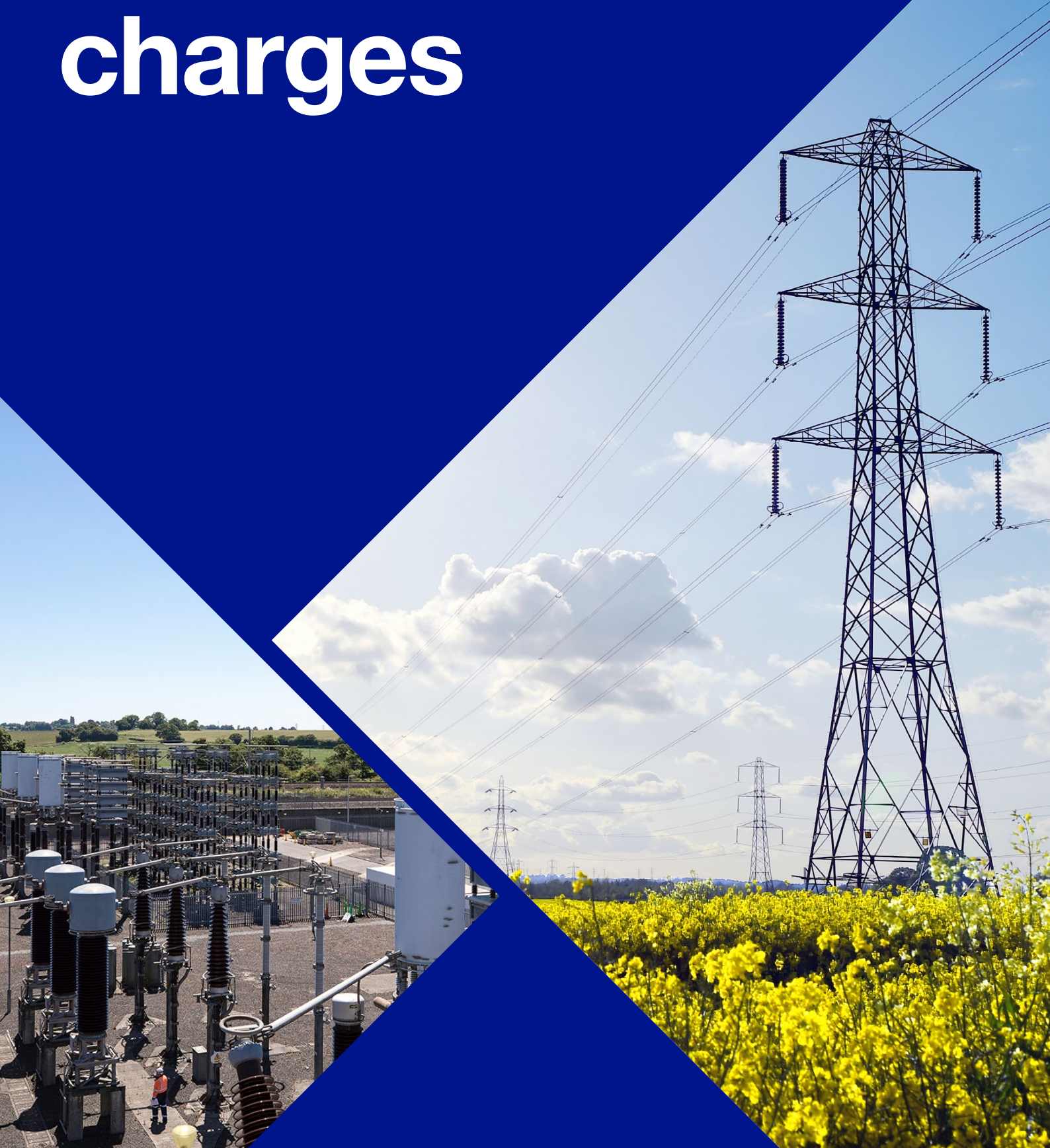


**Electricity
Transmission**

nationalgrid

Connection charges



Who we are

As the **Transmission Owner (TO)** we build, operate and maintain your assets.

The **Electricity System Operator (ESO)** provides your supply of electricity and balances demand in real-time.

If you do have connection assets, they will be confirmed within your contract (Appendix A of your Bilateral Connection Agreement). Likewise, any associated charges will be included within your contract (Appendix B of your Bilateral Connection Agreement).

What is an ownership boundary?

The standard ownership boundary is defined within CUSC (Paragraph 2.12). However, when you submit your connection application form, you are given the option to suggest a different ownership boundary. If NGET agrees to own more assets than is standard, we will discuss with you the charging implications of this.

What are connection charges?

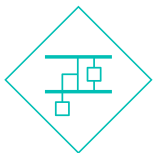
When we, as an electricity Transmission Owner, connect your business to the National Electricity Transmission System (NETS), we incur costs which we recover through connection charges. These costs include the design and build of any connection assets, which vary from connection to connection but could include the procurement and installation of transformers, switchgear, metering, cables, and short sections of overhead lines and their associated civils works. The cost of clearing and preparing land for your new connection is also included.

What are connection assets?

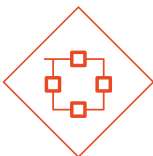
Connection assets (also known as transmission connection assets or sole use assets) are the assets we use to connect you to the transmission system. These assets are exclusively for your connection.

Depending on where your ownership boundary is, you may have connection assets as part of your contract.

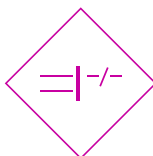
For example:

**Double busbar type connections:**

are those assets connecting your assets and the first transmission licensee owned substation, up to and including the double busbar bay;



Mesh connections: are those assets from your assets up to the HV disconnector / point of isolation. Transformer tertiary connections are those assets from your assets up to the connections to the tertiary winding LV disconnector load-side earth switch;



Cable and overhead lines at a transmission voltage: are those connection circuits connected at a transmission voltage of 2km in length that are not potentially shareable.

Understanding codes

CUSC is the contractual framework for connecting to and using the National Electricity Transmission System.

STC is the System Operator Transmission Owner Code which sets out the charges due.

Likewise, if the substation you are connecting to is a Gas Insulated Switchgear substation, there are further options for you to select where the ownership boundary should be. These are described within the CUSC (Paragraph 2.12.1 (f) (i) and (ii)).

How are connection charges calculated?

Connection assets are assigned a financial value known as their 'Gross Asset Value' (GAV). The GAV represents the costs incurred to build and install all the connection assets. It is split into four areas:

Type of cost	What this means
Engineering and construction costs	To procure and install the assets.
Interest During Construction	We have to finance the spend needed to build and install the connection assets prior to their use. However, this cost is waived if you choose to pay the capital component of your charge up front in alignment with our construction program.
Liquidated Damages Premium	This is an optional additional cost that you can choose which reduces your connection charge if we don't deliver your connection assets on the agreed completion date.

To discuss the above steps further, please make an enquiry, we're here to help.

E: etenquiry@nationalgrid.com
W: nationalgridet.com

The GAV is then used to calculate your connection charge liability. The connection charge has **two** components:

1

Capital component – this makes sure we can recover the costs incurred to provide your connection.

- The cost of your connection assets' depreciation – typically over 40 years
- Our permitted Rate of Return for delivering your assets

2

Non-capital component – this is a contribution to the annual running costs of the business and the maintenance of your connection.

- The cost of maintaining your connection assets to keep them in good working order
- The overhead cost of supporting our maintenance activity

Each year we'll update the GAV using inflation or the current cost of replacing those assets. We'll share the updated data you need to calculate your annual charge liability with the ESO, who will then charge you on our behalf.

How can I pay for my connection charges?

You can pay for the charges annually or you can pay a lump sum for the capital component of your connection charge, what we call 'Capital Contributions'. Once the time value of money is considered, the cost recovered through the capital component of the charge will be the same regardless of the payment terms agreed.

Capital Contributions can be made at different times:

- **pre-commissioning** – alongside our investment to build and install your connection assets. We'll then waive the 'Interest During Construction' portion of the connection asset's GAV.
- **post commissioning** – either in full on completion, or partial capital contributions during the lifetime of your connection. The 'Interest During Construction' isn't waived in this scenario.

Why do I pay the ESO for these connection charges?

The ESO is the counterpart for your connection agreement. They also own the Charging Methodology in the Connection and Use of System Code (CUSC) which you need to comply with. We provide the ESO with the data they need to bill for connection charges on our behalf. This is done on an annual basis using a process determined in the 'STC' code.



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