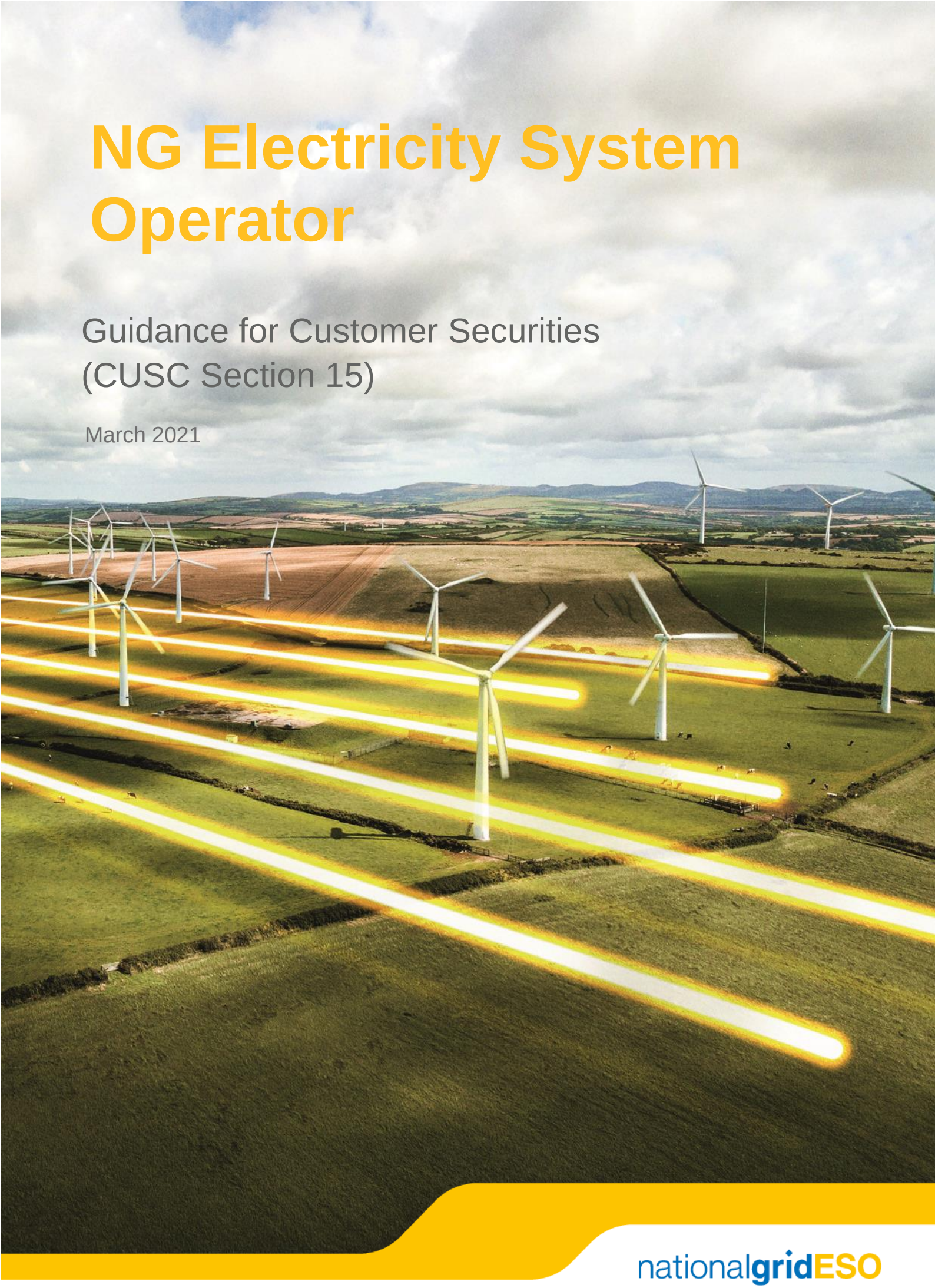
# NG Electricity System Operator

## Guidance for Customer Securities (CUSC Section 15)

March 2021



nationalgridESO

## Contents

## Summary

User commitment arrangements are formally set out in section 15 of the CUSC and comprise of a generic liability to cover broad system investment (Wider), and a specific liability to cover local generator-driven investment (Attributable). All generation projects are liable for a proportion of the wider amount, whilst only pre-commissioning generation projects are liable for their particular attributable amount. In calculating the liabilities, the methodology includes a number of factors to more accurately reflect the risk of inefficient infrastructure spend. These factors cover sharing risk with consumers, potential for asset reuse by Transmission Owners (TO's), catch-up investment, etc. Security for this liability will reduce for pre-commissioning generation projects as a project progresses to completion, whilst no security will be required for post-commissioning users.

## Purpose of this document

This document has been written to provide guidance to customers about how security arrangements impact their projects.

This document covers pre-commissioning securities only and should be read in conjunction with CUSC section 15 and other guidance available on the NGESO website.

If you have any feedback or questions in respect of any part of this guidance document or any aspect of user commitment and security, we would welcome your feedback and encourage you to discuss this with your ESO Connections Contracts Manager or via the email address below;

transmissionconnections@nationalgrideso.com

## Background

Transmission Owners (TOs) undertake investment works to accommodate the needs of generators already connected and those expected to connect in the future to the electricity transmission network. However, a generator may decide to cancel its project or reduce its capacity where the associated works have already begun. This may result in unnecessary costs to other network users which are ultimately borne by the end consumer. User commitment arrangements place liabilities on generators triggering particular investment works in order to financially secure the investment being undertaken on their behalf.

User commitment performs a vital function in ensuring adequate information is available to TOs to plan and develop the network in a manner that is economical and efficient and protects the interests of consumers and wider industry. User commitment signals are also financially underwritten to incentivise the provision of accurate and timely information and to ensure that the risk of stranded assets is placed on those parties best placed to mitigate and manage the risk.

# Attributable vs Wider

The security arrangements comprise of a generic liability to cover broad system investment (Wider), and a specific liability to cover local generator-driven investment (Attributable). All generation projects would be liable for a proportion of the wider amount, whilst only pre-commissioning generation projects would be liable for their particular attributable, or local amount.

## Attributable Works

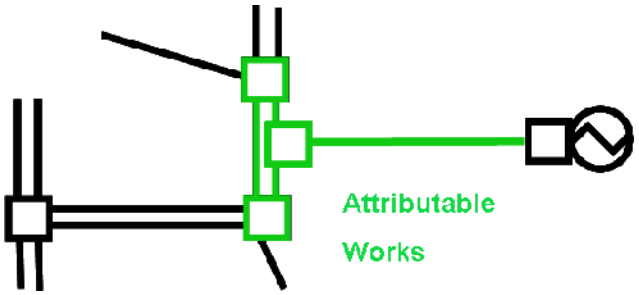
Attributable works are defined as the works required to connect a generator to an existing MITS (Main Integrated Transmission System) node, as defined in Section 14 of the CUSC.

This defines the MITS nodes as:

- Grid Supply Point connections with 2 or more transmission circuits connecting at the site; or
- Connections with more than 4 transmission circuits connecting at the site.

**CUSC Definition of Attributable works**

*Those components of the Construction Works which are required (a) to connect a Power Station which is to be connected at a Connection Site to the nearest suitable MITS Node; or (b) in respect of an Embedded Power Station from the relevant Grid Supply Point to the nearest suitable MITS Node (and in any case above where the Construction Works include a Transmission substation that once constructed will become the MITS Node, the Attributable Works will include such Transmission substation) and which in relation to a particular User are as specified in its Construction Agreement;*




## Enabling Works

Enabling Works are the minimum transmission reinforcement works which need to be completed before a generator can be connected to, and given firm access to, the transmission system. This must include criteria to allow the system to be operated in a safe manner and without incurring excessive costs. Attributable Works do not factor in these criteria.

In some cases it is likely that the Enabling Works will be the same as the Attributable Works, however in some circumstances (e.g. long radial parts of the network), Enabling Works may be required to be greater than the works necessary to connect to the MITS. In other circumstances where there is sufficient diversity of operations, it is possible that Enabling Works will be less than the works necessary to connect to the MITS, and therefore less than the Attributable Works.

## Wider

Both generation and demand drive the requirement for wider transmission investment and therefore the risk of any wider investment being inefficiently incurred should be shared 50/50.

Wider works in this context are the works that are not categorised as Attributable, i.e. the works on the MITS.

## Calculating Liabilities

Liabilities for both the wider and attributable works are calculated differently. The wider liability is generic and covers investment on the wider transmission system. The attributable liability is specific to the local investment driven by a particular connection or set of new connection projects.

### Wider Liability

The wider liability is a zonal £/MW charge. The charges are published annually on the NGESO website and are calculated from the apportionment of load related and non-load related capital expenditure forecasts across system boundaries which are then mapped to the ETYS zones. This process is broken down into the following four steps:

**Step 1** - Each transmission Owner (TO) provides the load related and non-load related capex forecast for the next four years to give the total wider value at risk (VAR).

**Step 2** – The wider VAR is then reduced by two factors

- **User Risk Factor (URF) 50%** - this factor is accounts for the 50/50 share between generation and consumers described in part 4 of this document.
- **Global Asset Reuse Factor (GARF) 33%** - this factor is accounts for the 50/50 share between generation and consumers described in part 4 of this document.

**Step 3** – The VAR is then apportioned across the wider system boundaries and ETYS zones

**Step 4** – An annual statement of zonal wider liabilities is published on the NGESO Website.

### Attributable Liability

The attributable liability is calculated taking into account the specific scheme forecast received from the relevant TO and the reducing factors, which are;

1. **Strategic Investment Factor (SIF)** - applied to limit the attributable liability to the proportion of the investment that a specific project has triggered. This factor ensures the generator isn't liable for more than their proportion should the TO build a component with greater capability and removes the volatility of previous sharing arrangements, where the actions of another generator could significantly impact the liability of another generator.

2. **Local Asset Reuse Factor (LARF)** - for each attributable scheme the LARF is an estimate of what percentage of the component could be reused should the project triggering the requirement for the works cancel their project.

3. **Distance Factor** - where the nearest suitable MITS is not the connection MITS, the attributable works will be the pro rata share of the transmission capacity to connect the generation project to the nearest suitable MITS on the transmission network. This factor allows the TO to make design decisions without exposing the attributable generation project to more than the minimum Attributable works. This factor is only applicable for components where distance is relevant. i.e. cables and overhead lines. This factor will be determined at the start of the project based on the estimated straight-line distances and will not be updated throughout the construction programme.

An example of the attributable liability calculation is shown below:

**Attributable Liability = Spend to Date (inc. 6 months forecast) x (1-LARF) x SIF x DF e.g.**

**£50,000 x (1-0.46) x 0.5219 x1 = Attrib. Canc. Charge of £14,092.00***
* this is the total attributable liability not necessarily the secured amount.

## Liability Profiles

This part of the guidance document breaks down how the wider and attributable liabilities are profiled from the application of a pre commissioning project through to connection to the system.

### Wider Profile

For pre commissioning generation, the wider liability begins four years from the contracted completion date and builds up from 25% of the wider liability to 100% in the year immediately before commissioning.

### Attributable Profile

The attributable liability begins when the TO commits cost to the attributable assets, this liability will be provided biannually and will give an estimate of the next biannual security period and for the total attributable cost for each project.

## Actual vs Fixed

Customers are given the choice to either fix their liability or to receive a biannual update of their costs from the relevant TO that will feed into the bi-annual security statement issued by the ESO. Only the attributable liability can be fixed, the wider liability will continue to be based on the annual tariff.

### Actual

Actual security is the default position and unless a customer chooses the fixed option, they will receive an updated statement biannually which will reflect the total liability as well as the liability for the coming security period based on the TO's expected expenditure up to that period. Upon termination or capacity reduction, whilst on the actual option, the cancellation charge will be reconciled to reflect the actual TO spend as a result of that project.

### Fixed

At the time the biannual statement is issued, a notification will also be provided demonstrating the cancellation amounts should the generator opt to fix the liability. Should this option be taken, the total liability will be fixed and then apportioned in 25% stages from the trigger date (four years from the contracted completion date). If the fixed option is taken prior to the trigger date, the generation project will have a £/kW liability until the trigger point is reached starting at £1/kW building up to a maximum of £3/kW.

Should the generation project terminate their agreement of reduce the capacity of their agreement, this fixed cancellation charge will not be reconciled (no refund will be given, and no further amounts will be invoiced).

## Security

Security should be thought of differently to liability even though in some cases the values are the same. Customers are required to secure a proportion of their total liability and that proportion is dependent are various different factors as shown below:

| Security Requirement | | Transmission Connected | Distribution Connected |
|---|---|---|---|
| Pre-Trigger | Not Consented | 100% | 100% |
| | Consented | 100% | 100% |
| Post-Trigger | Not Consented | 42% | 45% |
| | Consented | 10% | 26% |

### Key Consents

Key consents which trigger the reduction in security to 10% of liability are the customer key consents for their project. This has been used as a milestone as analysis of terminated projects showed minimal risk of generation projects not reaching completion after consents had been achieved. Consents will be specific to each contract; however, they will cover all key consents required for the generation project. Evidence of consents granted will need to provided to the ESO through the Connections Contract Manager who will then obtain ESO approval to drop the security requirement to 10% of the total liability.

## Termination, closure and capacity reduction

### Pre commissioning - Actual

For a generation project that has remained on the Actual liability, should the agreement be terminated, National Grid will invoice for the liability detailed in the MM1 (cancellation charge).

The liability would then be reconciled to actual spend and the difference either invoiced or credited to the generation project.

Should the generation project fail to pay the invoiced cancellation charge, National Grid would draw down on the secured amount detailed in MM2 (Cancellation Charge Secured Amount) and seek to recover any remainder through other channels.

### Pre commissioning - Fixed

Once a generation project has chosen to fix their liability, should the agreement be terminated, National Grid will invoice for the liability detailed in the MM1 (cancellation charge). If they reduce capacity (partial termination), National Grid will invoice for the proportion of the liability that the MW reduction reflects.

As the fixed option has been chosen the cancellation charge will not be reconciled to reflect actual spend.

As with Actual, should the generation project fail to pay the invoiced cancellation charge, National Grid would draw down on the secured amount detailed in MM2 (Cancellation Charge Secured Amount) and seek to recover any remainder through other channels.

## Typical Actual Profile


## Typical Fixed Profile