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Customer Connections *Agora*
22 June 2022

Agenda

Introduction

The Appendix G Process – Steph Wootton

Securities and Cancellation Charges – Gregory Hunt

Q&A

Any questions please enter them in the chat. If we are unable to answer today we will provide a response at a future Agora.

May Agora presented by

Peter Sipawa

GB Offshore Connections Manager

Peter brings extensive industry wide experience in electrical engineering, project management and customer electricity connections to the Offshore Connections Team.



Introduction

The Customer Connection Agora's look to:

Provide an opportunity to learn about a variety of subjects from Connection Processes, Connections related Code and Policy Changes , Network Operability, Operational Compliance, Security Statements Cancellation Charges, and more.

Increase the visibility of the Electricity Customer Connections team to our customers, stakeholders, and the wider electricity market.

Electricity Customer Connections provide updates via a short presentation as well as encouraging engagement and interaction via a monthly Question and Answer segment.

Customer Seminars

20th July - Warwick

17th October - London



Warwick



London



Upcoming Events and Previous Agora's

Electricity Customer Connections Events webpage now live

<https://www.nationalgrideso.com/industry-information/connections/customer-connection-events>

Previous monthly agora's

Watch the video presentations by pressing the play icon where available or download the slides using the link below each image.



April 2022

Customer Portal overview



March 2022

Queue Management update

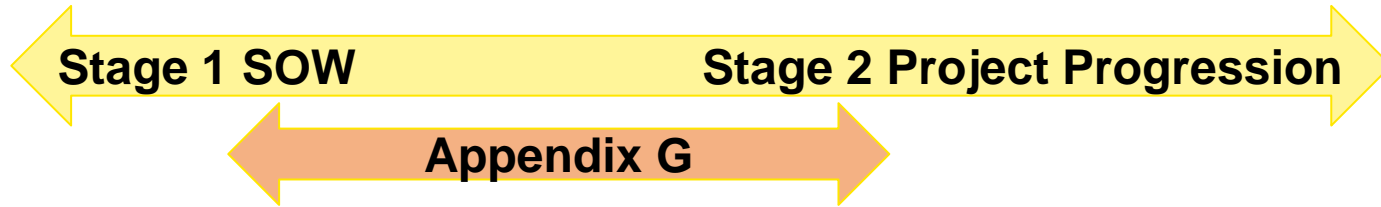
Stephanie Wooten

RDP Strategy Lead



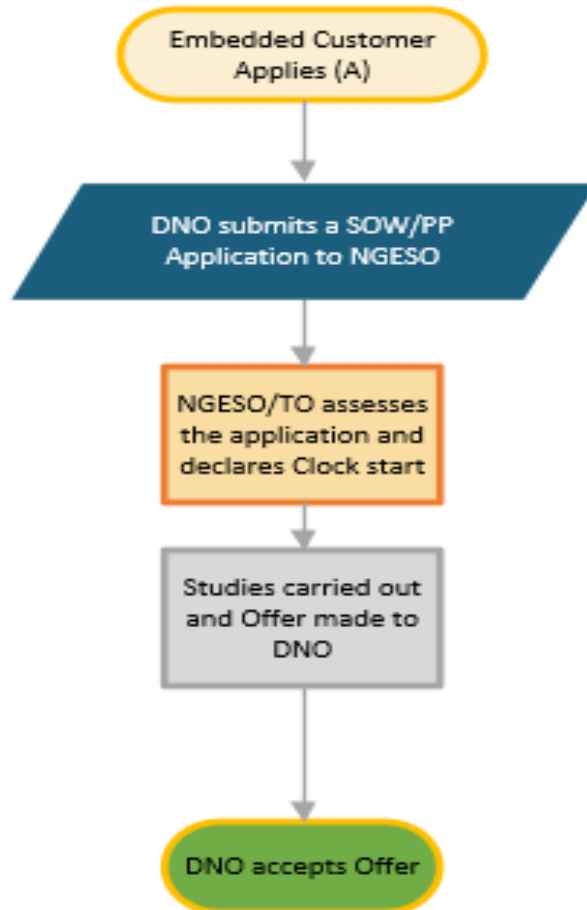
**SOW, Project
Progression and
Appendix G**

Basic Assumptions of the Processes



- Statement of Works is a 28 day study to assess impact and triggers no contractual changes
- Project Progression can be invoked independently of a SOW and is a 3 month process that results in a formal Offer to revised contractual terms/carry out works
- The Appendix G process runs in parallel with the SOW/PP process where the GSP has an Appendix G in place
- Embedded Generation of 1-99.9MW (in E&W) can utilize these processes

I'm connecting at a GSP where there isn't an Appendix G so what's the process the DNO follows?

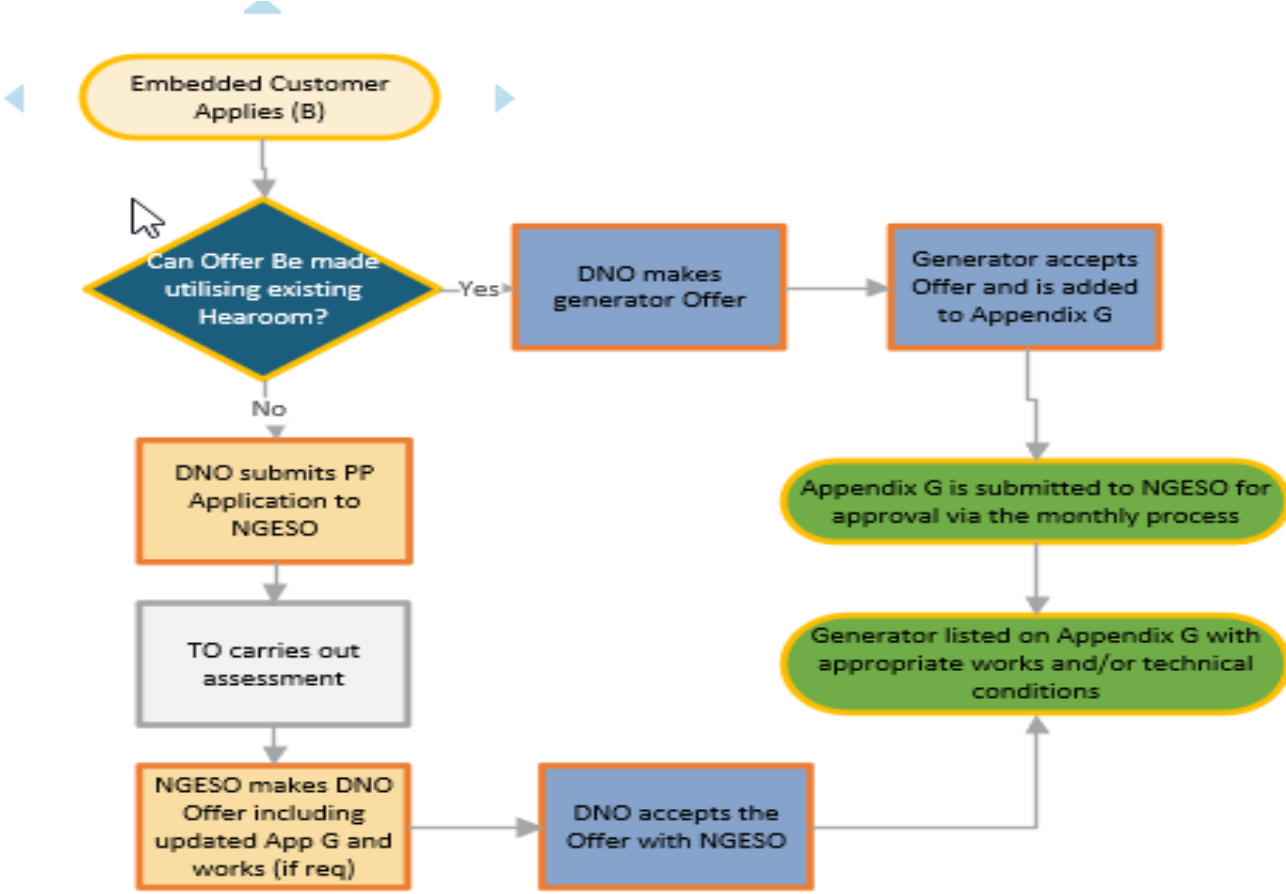


- Where no Appendix G is in place at a GSP, on acceptance the DNO should trigger either a SOW or full Project Progression for assessment
- Where the DER is 50-99.9MW (E&W) and medium, the DNO should go straight to PP to have the relevant GC requirements added to the Bilateral Agreement as a minimum
- DNO will receive either the Study response (SOW) in 28 days from clock start or a full Offer is Project Progression route chosen
- If the SOW recommends works or contractual changes a full Project Progression is then also needed

Basic Principles of Appendix G

- Established via a bulk Project Progression study triggered by the DNO
- Established on a GSP basis
- Appended to the Bilateral Agreement between the DNO and ESO for the GSP
- Provides Headroom, both thermally and fault level for the GSP
- Captures all the DER connecting or connected at the GSP by date and technology
- Captures details of additional site specific requirements
- Details DER connecting under 'non firm' arrangements
- Clearly Identifies DER triggering works and security liability associated with those works (in accordance with CUSC Section 15)
- Allows DNO's to add, amend and remove DER within given set of limits and parameters to manage the 'churn' at a GSP
- Allows non standard Regional Development Principles/Products to be identified against specific DER

Connecting at a GSP with an existing Appendix G What should happen ?



Forthcoming Changes (CMP298)

- CMP298 completed consultation earlier this year and is now with Ofgem for final approval
- CMP298 embeds the Appendix G process into CUSC, however, still allows a DNO to choose the most suitable process to follow from SOW, Project Progress or the use of Appendix G
- The enduring process retains all the current trial principles of the use of Limits (or headroom), the link to works and security liability as well as listing all the DER at a GSP by size and technology
- The new Appendix G process – or Transmission Impact Assessment (TIA) will enable DNO's to invoke studies from NGET/ESO more quickly via a 'Trigger Study' where limits have been breached
- The existing links to the Interactivity Process will be maintained
- Some DNO's already publish extracts from their Appendix G's on their websites to give transparency around levels of DER connecting and any constraints/available headroom
- Details of the Code Change proposals are on the ESO's website

Gregory Hunt

GB Connections Process & Solutions Manager





NGESO Customer Security Guidance

What is Security?

Customers are required under existing User Commitment Arrangements to financially secure NG's spend in relation to their connection. Pre-Connection customers will receive a security statement from NGENSO through the bi-annual process in January and July.

There are two security methodologies currently in use and will be referred to throughout this pack as:

- **CMP192** – applicable to all generation projects including embedded generators
- **Final Sums** – applicable to DNOs and directly connected demand

Security is codified in the Connection Use of System Code (CUSC) section 15. The links below will take you to CUSC section 15 or relevant CUSC Modifications relating to security;

- [CUSC Section 15](#)
- [CMP192](#)
- [CMP222](#)
- [CMP223](#)
- [CMP351](#)

Security is placed by customers and is a proportion of the liability incurred in relation to the works required to facilitate a particular project. Security is returned upon connection of a project.

Through the bi-annual security process the required security must be placed 45 days before the start of the next security period (with the exception of cash securities – please see CMP351).

As well as receiving a security statement through the bi-annual process in January and July customers will also receive an updated security with mod offer or new contract offer. Upon the signing of a contract or contract variation the customer has 30 days to place the required security.

Types of Security

Cash in Escrow

Parent Company Guarantee
(PCG)

Letter Of Credit
(LOC)

Credit Rating

Bond

Your ESO Connections Contract Manager can provide you with more information on how to place security and the requirements for each form.

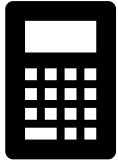
The required credit rating for PCGs is S&P A- or Moodys A3. This must be the credit rating of the company entity submitting the application

Templates for PCGs, LOCs and Bonds are available on the NGENSO website.



Attributable Works

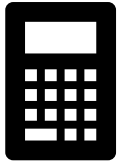
Attributable works are specific schemes relating to or driven by a specific project. Any attributable works within a connection contract will be detailed in both the Appendix H and Appendix MM of the Construction Agreement. Securities associated with attributable works are based on forecast cost profiles from the relevant TO company for each attributable scheme within a connection contract.



Attributable Liability Calculation (Actual)

Spend to Date (inc. 6 month forecast) x (1-LARF) x SIF e.g.
 $£50,000 \times (1-0.46) \times 0.5219 = \text{Attrib. Canc. Charge of } \underline{£14,092.00^*}$

*this is the total attributable liability not necessarily the secured amount.



Attributable Liability Calculation (Fixed)

Pre-Trigger = TEC x (£1k, £2k or £3k)
Post-Trigger = 100% Fixed Value x (25%, 50%, 75% or 100%)

*this is the total attributable liability not necessarily the secured amount.



Actual vs Fixed

- For non-fixed customers attributable scheme cost and profiles are updated every 6 months by the relevant TO.
- Customers are able to fix attributable liabilities and associated security by signing the MM3 statement.
- A fixed customer fixes the current TO forecast for their attributable schemes and remains with that value regardless of TO updates to scheme figures.
- A fixed customer will no longer receive an MM3 statement.
- For fixed customers there is no reconciliation of the cancellations charge upon termination.



Attributable Schemes are reduced by two factors;

- **Strategic Investment Factor (SIF)** – customer’s share of scheme based on Capability of Scheme and Customer TEC.
- **Local Asset Reuse Factor (LARF)** – what proportion of an asset can be re-used or utilised if a customer terminates.

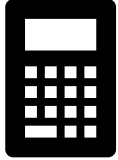
FAQs



- Q. If I fix my securities can I go back to actual securities?
A. No
- Q. Does fixing apply to both attributable and wider works?
A. Fixed security only applies to attributable works
- Q. Can the total cost and 6 monthly forecast of my attributable schemes change?
A. Yes – if you are not fixed the TO will update scheme costs and forecasts every 6 months
- Q. How do I find my attributable schemes and associated SIF and LARF figures?
A. Any attributable schemes, the LARF and the SIF can be found in Appendix MM of the Construction Agreement. The description of the works can be found in Appendix H.
- Q. My security statements only look at the next 6 month period, where can I get a forecast of my attributable works?
A. Your ESO Contract Manager can provide you with a spend profile for your attributable works.

Wider Works

As well as attributable works customers are also required to secure a proportion of wider works being progressed on the transmission system. The calculation for the wider liability is directly related to geographical location and size (MW) of the project.



Wider Liability Calculation

(Transmission Entry Capacity (TEC) x £/MW Wider Tariff) x Wider profile % e.g.

(1500MW x £1798.98) x 50% = Wider Canc. Charge of **£1,349,235.00**



- The wider works tariff is based on a £/MW tariff for all generators in a particular ETYS zone.
- A new tariff statement is published on the NGESO website every year in January.
- The tariff statement contains the tariff for the coming year (effective from 1st April) and three years forecast.
- Wider Securities are only required post-trigger.
- Wider Works cannot be fixed.

FAQs

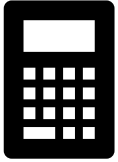


- Q. Why do I not have any wider liability showing on my MM1?**
A. You are either pre-trigger or in an ETYS zone where the tariff is zero.
- Q. When do I start incurring wider liabilities?**
A. Any customer who passes the trigger date is required to pay security for both attributable and wider liability.
- Q. Once I've passed the trigger date can I go back to being pre-trigger if I submit a mod app?**
A. No – once the trigger date is passed you cannot go back to being pre-trigger regardless of any changes in connection date.



Total Cancellation Charge

The total cancellation charge consists of the following:



Total Cancellation Charge

Attributable Canc. Charge + Wider Canc. Charge



- The total cancellation charge is the amount that will be invoiced if the contract is terminated within the next security period.
- Termination invoices are payable within 14 days of contract termination.
- If a customer is on actual securities the cancellation fee will be reconciled in the 12 months following cancellation
- The total cancellation charge is the first number located on the MM1 statement.

FAQs



- Q. Is the cancellation charge the same as the termination fee?**
A. Yes
- Q. Why isn't my security the same as my cancellation charge?**
A. The purpose of the security methodology is to reduce the security requirement over time as projects become more certain.
- Q. Is my security taken off the cancellation charge?**
A. No – any termination invoice is to be paid in full and security will be returned.
- Q. What happens if I don't pay my cancellation charge?**
A. Any security that is being held by NGENSO will be drawn down on and any difference between the total cancellation charge and security held will be pursued by NGENSO.



Liability vs Security

It's important to understand that liability and security are two different things and although in some cases the amounts will be the same there are other instances where this will not be the case.



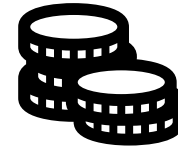
Liability

- The total liability is the sum of the attributable cancellation charge and the wider cancellation charge.
- This information is found on the MM1 security statement and is the figure that will be invoiced for if a contract is terminated within the next security period.



Security

- The security requirement is the proportion of the total liability that must be secured by the customer.
- Pre-Trigger the security requirement is always 100% of the total liability
- Post-Trigger the security requirement varies dependent on contract type and consenting status
- The required security figure is found on the MM2 security statement



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

FAQs

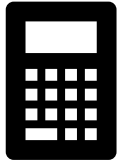


- Q. Why do I not have any wider liability showing on my MM1?**
A. You are either pre-trigger or in an ETYS zone where the tariff is zero.
- Q. When do I start incurring wider liabilities?**
A. Any customer who passes the trigger date is required to pay security for both attributable and wider liability.
- Q. Once I've passed the trigger date can I go back to being pre-trigger if I submit a mod app?**
A. No – once the trigger date is passed you cannot go back to being pre-trigger regardless of any changes in connection date.

Trigger Dates

The trigger date is a key date within the securities methodology. The trigger date is three full financial years ahead of the completion date and represents the point at which a customer becomes liable to pay not only the attributable works cancellation charge but also the wider works cancellation charge upon termination of the contract.

The security requirement post-trigger also changes from 100% to a lower percentage based on the connection type and consenting status of the project.



Trigger Date Example 1

| | |
|-----------------------------|-------------------------|
| Completion Date | 01/06/2021 |
| Start of Completion Date FY | 01/04/2021 |
| Trigger Date | 01/04/2018 |
| 100 % Year | 01/04/2021 – 01/06/2021 |
| 75% Year | 01/04/2020 – 31/03/2021 |
| 50% Year | 01/04/2019 – 31/03/2020 |
| 25% Year | 01/04/2018 – 31/03/2019 |

Trigger Date Example 2

| | |
|-----------------------------|-------------------------|
| Completion Date | 31/01/2026 |
| Start of Completion Date FY | 01/04/2025 |
| Trigger Date | 01/04/2022 |
| 100 % Year | 01/04/2025 – 31/01/2026 |
| 75% Year | 01/04/2024 – 31/03/2025 |
| 50% Year | 01/04/2023 – 31/03/2024 |
| 25% Year | 01/04/2022 – 31/03/2023 |

FAQs



- Q. I have passed my trigger date but now want to delay my project, can I go back to being pre-trigger?**
- A. No you will stay on the % you are currently on until the profile catches back up.
- Q. I am pre-trigger and want to push back my trigger date, can this be done?**
- A. Yes – any time a pre-trigger date project is delayed the trigger date will move with the new program but the mod offer **must** be signed by 31/03 in the year of the trigger date.
- Q. Is the trigger date always 1st April?**
- A. Yes
- Q. I am post-trigger, how can I stop my liability stepping up to the next level?**
- A. You will need to submit a mod app to delay your connection that must be signed before 01/04 in the year before the next step up in liability.



Securities - Profile Example (Non-Fixed)

PRE-TRIGGER

Attributable liability is reduced by the SIF and LARF factors also detailed within Appendix MM

Pre-trigger security is always the same value as the total liability or TO spend (less the SIF and LARF).

Attributable liability is re-calculated for non-fixed parties every 6 months based on the TO data

The wider liability is not applicable until the trigger date is passed, therefore the pre-trigger spend and security requirement

POST-TRIGGER

Wider liability increases by 25% each year post-trigger

Post-trigger security requirement drops from 100% to either 42% or 45% dependent on the contract type and consenting status.

Post-trigger security requirement drops from 100% to either 42% or 45% dependent on the contract type and consenting status.



Securities - Profile Example (Fixed)

PRE-TRIGGER

The wider liability is not applicable until the trigger date is passed, therefore the pre-trigger spend and security requirement

The fixed pre-trigger tariff is based on a £/MW calculation and is;

£1,000 p/MW in the year of signing
 £2,000 p/W in the year after signing
 £3,000 p/MW for all other years

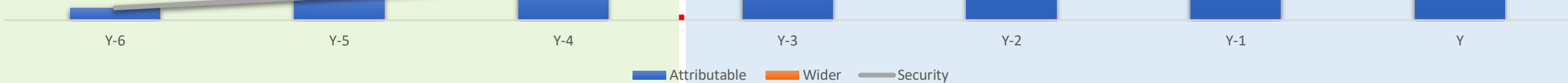
Pre-trigger security is always the same value as the total liability.

POST-TRIGGER

Both the attributable and wider liability profile increase by 25% each year post-trigger.

Post-trigger security requirement drops from 100% to either 42% or 45% dependent on the contract type and consenting status.

Post-trigger security requirement drops from 100% to either 42% or 45% dependent on the contract type and consenting status.



Example MM1 Security Statement

Exhibit MM1

Cancellation Charge Statement

Dated 01/03/2021

Project Name:
User:
Connection Site:
Agreement Reference:

Cancellation Charge

The Cancellation Charge (excluding VAT) which will or might fall due on termination of the Construction Agreement during the period commencing on and including 1 April 2020 and ending on and including 30 September 2020 is:

£43,073.42

This figure is based on:

1. Estimate of Actual Attributable Works Cancellation Charge

£8,981.29

2. Wider Cancellation Charge

£34,092.14

Wider Cancellation Charge calculation methodology: Zonal Amount x TEC x Percentage

Calculation parameters:

ETYS Zone: N3
Zonal Amount: £1,377.46
TEC: 49.50
Percentage: 50.00 %

This is the total cancellation charge due if the project terminates within the next securities period. It is the total of the attributable and wider cancellation charges.

Actual attributable cancellation charge made up of the total attributable spend and reduced by the SIF and LARF

*Wider cancellation charge of;
£1,377.46 x 49.50 x 50%*

The wider cancellation charge is calculated using these parameters;

TEC x Zonal Amount x Percentage



Q. Why is my zonal tariff £0.00?

A. Some ETYS zones are £0.00 p/MW. Zonal tariffs are calculated by spreading the TO Capex forecast across the different zones. If the zone has a £0.00 tariff it suggests there is no liable generation connecting in that zone over the next 4 year period.

Q. Why is my wider percentage 0%?

A. The wider percentage showing as 0% indicates that you are pre-trigger and therefore not required to secure the wider liability.

Q. How can I get a forecast beyond the next security period?

A. Your ESO CCM can provide you with an indicative spend profile based on the latest TO forecast.

Q. Does the zonal amount change?

A. Yes, the zonal tariff changes each year and published on the ESO website.



Example MM2 Security Statement

Exhibit MM2

Cancellation Charge Secured Amount Statement

Dated 01/03/2021

Project Name:
User:
Connection Site:
Agreement Reference:

The MM2 figure is calculated using the percentage of the cancellation charge from the MM1 statement the customer is required to secure based on the methodology plus VAT.

The Cancellation Charge Secured Amount for the period commencing on and including 1 April 2020 and ending on and including 30 September 2020 is:

£5,168.81

The Cancellation Charge Secured Amount is based upon **10%** of the Cancellation Charge for this period (**£43,073.42 plus VAT**) as set out in Exhibit MM1 Cancellation Charge Statement.

For and on behalf of
National Grid Electricity System Operator Limited

On the left on this page is an example of an MM2 security statement. It's important to note that this statement shows the **security requirement** which may differ from the cancellation charge shown on the MM1 statement.



Q. Why is VAT added to the total security requirement?

A. Termination invoices issued for the cancellation charge will carry VAT therefore VAT is added to the required security amount. The only exceptions to this are where a company is not liable for VAT.

Q. If I terminate my agreement is this the figure I am liable for?

A. No – you should refer to the MM1 for your total cancellation charge.

Q. Why has my security requirement decreased?

A. There could be a number of valid reasons why your security requirement has decreased from one period to the next e.g. your project has passed the trigger date, you have achieved consents or the spend profile for your project has changed for some reason e.g. a change in your connection date.

Q. When are my securities due?

A. The deadline for security will vary dependent on what method is being used to place it with cash having a later deadline than other forms of security. The covering letter sent with your statement will detail the deadline for your security. If you require additional clarity on this you should speak with your ESO Contract Manager.

Example MM3 Security Statement

Exhibit MM3
Notification of Fixed Attributable Works Cancellation Charge
Dated 03/03/2021

Project Name:
 User:
 Connection Site:
 Agreement Reference:

| Financial Year | Pre Trigger Amount | TEC (MW) | Fixed Cancellation Charge |
|--------------------------|--------------------|----------|---------------------------|
| 1 Apr 2021 - 31 Mar 2022 | £3000 | 1400 | £621,472.26 |

| Financial Year | Attributable Works Cancellation Amount | Cancellation Charge Profile (%) | Fixed Cancellation Charge |
|--------------------------|--|---------------------------------|---------------------------|
| 1 Apr 2022 - 31 Mar 2023 | £2,485,889.05 | 25 | £621,472.26 |
| 1 Apr 2023 - 31 Mar 2024 | £2,485,889.05 | 50 | £1,242,944.52 |
| 1 Apr 2024 - 31 Mar 2025 | £2,485,889.05 | 75 | £1,864,416.78 |
| 1 Apr 2025 - 31 Mar 2026 | £2,485,889.05 | 100 | £2,485,889.05 |

In cases where the pre-trigger tariff would be more than 25% of the total fixed amount the 25% cancellation charge figure will apply

This is the 100% fix value that in this example the customer would fix at.

Fixed Attributable Works Cancellation Amount based on

| Component | Attributable Works Capital Cost | LARF (%) | SIF (%) | Distance Factor (%) | Attributable Works Cancellation Amount |
|--------------|---------------------------------|----------|---------|---------------------|--|
| Scheme Names | £2,241,142.00 | 9.08 | 27.72 | 100 | £564,892.05 |
| | £1,920,997.00 | 0.00 | 100.00 | 100 | £1,920,997.00 |

The bottom of the MM3 shows the attributable schemes, their total cost, reducing factors and total attributable cancellation charge.

The total of the last column should equal the 100% fix value

On the left is an example of an MM3 security statement. It's important to note that this statement is a view of what the attributable cancellation charge would look like on a fixed basis.



- Q. Why don't any of these figures tie up to the MM1 and MM2 statements?**
 - A. The MM3 statement is stand alone and is not meant to directly link to the figures on the MM1 and MM2. The MM1 and MM2 statements are looking at the liability and security over the next 6 month period whereas the MM3 is looking out to the connection date and the total attributable liability value.
- Q. Can my scheme costs change if I fix my securities?**
 - A. No
- Q. Can my reducing factors change if I fix my securities?**
 - A. Generally no but it is possible for the SIF to change if a customer applies for a TEC decrease.
- Q. How do I fix my securities?**
 - A. Sign your MM3 statement and return to your ESO Connections Contract Manager.

Q&A

Feedback



Please ask any questions in the meeting chat

nationalgridESO

Please take the time to give us some feedback on today's Agora



Thank you

Next Customer Connections Agora

<DATE>

Please ask any questions in the meeting chat