The Voice of the Networks

Energy Networks Association

Fair and Effective Management of DNO Connection Queues: Treatment of Requests to Change Connection Applications

Good Practice Guide

November 2018

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Fair and Effective Management of DNO Connection Queues: Treatment of Requests to Change Connection Applications

Purpose and Objective

1. The purpose of this guidance document is to outline a good practice approach for Distribution Network Operators (DNO) on queue management and what changes a customer can make to a project after a connection request for it has been made and before energisation, while maintaining the project's place in the connections queue.

2. This guidance has been developed with Distributed Generator (DG) stakeholders on the Energy Network Association's (ENA's) Distributed Energy Resources (DER) Connections Steering Group[1]. The guidance has also been subject to wider consultation with stakeholders[2]. Alongside this document, we have published an anonymised summary of the responses received to our consultation.

3. Projects (generation, demand or both) that wish to connect to the electricity distribution network are required to make an 'application to connect' to the relevant DNO. The application to connect is typically undertaken at an early stage in a project's development timeline. On receipt of a valid application to connect, where applicable[3], the project will be placed in a connections queue and a connection offer made with the expected date of connection often dependant on certain reinforcement being made to the network (and the extent to which other projects already in the connections queue progress along their development pathway).

4. Where a project developer/owner wishes to change the design and/or characteristics of a project after a connection request has been made, this can potentially impact on the position of the project in the connections queue, which in turn may extend the time for it to connect and/or increase the cost for it to connect.

5. DNOs therefore want to ensure that what constitutes an 'Allowable Change' is fair and reasonable, both to the customer needing to make a change to a connection request, and also to other customers who are impacted when those ahead of them in the connections queue make a significant change to their project.

6. Providing greater certainty on how a proposed change to a project will affect a project's position in the connections queue is therefore important for project investors, owners and operators as well as network companies.

7. The principles set out under this guidance can be used by DNOs to guide the fair allocation of network capacity to parties who can make use of it. . The application of these principles across a range of scenarios results in a set of 'Allowable Changes' which a customer can make to a connection request, beyond which queue position may be lost in favour of other

[1] For more information on DER Connections Steering group see www.energynetworks.org/electricity/regulation/working-groups.html

[2] Fair and Effective Management of DNO Connection Queues: Treatment of Changes to Connection Requests http://www.energynetworks.org/news/publications/consultations-and-responses/

[3] Where one or more projects have already made applications to connect to the same part of the network.

customers. These 'Allowable Changes' are intended to work alongside any progression milestones which the DNO is using to reasonably gauge project progression, as detailed in the ENA best-practice guidance note **'Fair and Effective Management of DNO Connection Queues: Progression Milestones Best Practice Guide'[4].**

[4] 'Fair and Effective Management of DNO Connection Queues: Progression Milestones Best Practice Guide' http://www.energynetworks.org/assets/files/news/publications/Reports/ENA%20Milestones%20best%20Practice%20Guide.pdf

Background

8. In response to Ofgem's work on quicker and more efficient connections, the Energy Network Association's (ENA's) DER Connections Steering Group issued a consultation document in January 2018 entitled '*Fair and Effective Management of DNO Connection Queues: Treatment of Changes to Connection requests'* ("The consultation"). The consultation considered what changes a customer can make to a connection request, while maintaining a place in the connection queue.

9. The consultation document set out the steering group 'minded to' position on a number of our proposals, reflecting feedback from the DER Connections Forum stakeholder event held in Birmingham in September 2017. The steering group sought to develop a workable approach that caters for the majority of scenarios i.e. scenarios that experience has shown to be most common or that can be plausibly envisaged. It is recognised that there may be scenarios that may not lend themselves to the approaches set out in this good practice document and so can be considered as unusual and best addressed on a case by case basis.

Potential impact of requesting change(s) to a connection request

10. Customers who request a change(s) to their connection request can, dependent upon the nature of the requested change, detrimentally affect other customers who are behind them in the queue, materially extending the time and/or increasing the cost to connect. Changes to a customer's connection request will therefore generally cause a project to lose its position in the connections queue. Within this good practice guidance we have tried to identify change request scenarios where it seems appropriate for queue position to be maintained. These are called 'Allowable Changes' (see below). Where a customer makes an Allowable Change they will maintain their place in the connection queue.

Defined Terms

Throughout this document we have defined a number of terms. These are described below.

'Allowable Change'

11.We have introduced this new term, *'Allowable Change'*, to distinguish from the similar concept of 'Material Change'. A 'Material Change' is when a customer who has made a connection request is asked to submit a new connection request to the DNO. The requirement to submit a new application often means that the customer will lose its place in the connections queue, but not in all situations. Stakeholder feedback to consultation supported a greater focus on the impact on a customer's queue position, which led to the need to differentiate from Material Change.

12. Losing a place in the connections queue can have a significant impact on a customer, potentially extending the time and/or increasing the cost to connect to the network. Consequently, DNOs want to ensure that what constitutes 'Allowable Change' is fair and reasonable, both to the customer wanting to make changes to an application but also other customers who are detrimentally impacted when those ahead of them in the connections queue make a significant change to their project.

'Disallowable Change'

13. *'Disallowable Change'* in this document means a change which is generally not Allowable, and as such the term *Disallowable* has been used to populate the example scenarios which follow, to help stakeholders understand what kinds of change request will normally lead to a loss of queue position.

'Detrimental Impact'

14. *'Detrimental Impact'* in this document means firstly either a material extension of the time or material increase in the cost to connect for any other applicant in the connections queue. It secondly applies to any other applicant or user where it means a material reduction in forecast revenue due to increased curtailment.

15. Note that the term 'Detrimental Impact' solely relates to time to connect, cost to connect, and curtailment impact. Further updates of this guidance will take account of changes as a result of work currently underway, for example, ENA's Open Networks Project and Ofgem's Significant Code Review of current network access and charging arrangements.

Approach for determining 'Allowable Change'

16. Section 1.12 of this good practice guidance sets out high level principles for considering change requests and Section 2 details the specific treatment across a number of common scenarios.

17. This good practice guidance has been developed on the basis of providing a framework that is fair and best facilitates competition consistent with DNO licence obligations.

18. **It should be noted that the high level principles should take precedence in any conflict between the principles and the scenarios. The purpose of the scenarios is to provide a helpful illustration of how the principles will apply across a range of common change request scenarios.**

19. In requesting any form of change users should assume that it may not be Allowable and queue position could be lost. In applying the principles, DNOs can take a flexible and pragmatic approach where changes that might typically be considered as a Disallowable Change do not impact detrimentally on other applicants in the queue. However, the final decision shall be at the DNO's sole discretion.

20. This good practice guidance considers user change requests. If a required change is instigated by the DNO then the impact on a projects positon in the connections queue will be considered on a case-by-case basis.

Consistency and treatment of Allowable Change

21. The overall objective of this guidance is to develop a clear and consistent approach that can be applied across DNOs when considering change requests. To this end we believe that the principles and scenarios set out under sections 3 and 4 will provide a number of benefits which include:

- Provide greater certainty to customers on the likely impact of a change to a project;
- Assist DNOs in applying a fair and reasonable approach to change requests that takes into account the circumstances of all customers in the connections queue;
- Assist customers in understanding DNO decisions on change applications; and
- Consistency of treatment of change applications across all DNO licensees.

Network Connections and Change Requests for Storage

22. DNOs have seen an increasing number of applications for the connection of electricity storage facilities (generally battery technology) over the last two years. It is commonly recognised that the unique operational and commercial flexibility that an electricity storage facility can provide poses a number of technical, planning and commercial challenges in its integration to the distribution networks. Ofgem and BEIS in their call for evidence document *"A Smart. Flexible Energy System"* published in November 2016 identified a number of storage related issues for the industry to consider[5]. One of these issues is how storage should be treated within the context of existing connection requests. Specifically, further clarity was sought on whether the addition of storage to an existing connection request constitutes an Allowable Change.

23. Here we provide information on storage technologies and their use which has informed the treatment of storage in the context of Allowable Change and the scenarios set out in this guidance.

24. On 29 September 2017, Ofgem published a consultation *"Clarifying the regulatory framework for electricity storage: licensing[6]"* which set out the regulator's proposals to modify the electricity generation licence for storage. The document makes clear that Ofgem and the Government have agreed that it is important to ensure consistency between both storage and electricity generation and consider that the existing electricity generation licence is best placed to clarify the regulatory framework for storage. This is because generation and storage share similar characteristics and perform similar functions in terms of generating and exporting electricity to the grid. For the purpose of this document and the approaches it sets out, consistent with the regulators' proposed approach, we have classified storage as a form of generation.

25. Storage can open up many possibilities. It can help to integrate variable renewable generation, reduce the costs of operating the system and help avoid or defer reinforcements to the network. Therefore, whilst we have classified storage as a form of generation when considering what constitutes an Allowable Change, we recognise that there may be circumstances where proposed changes to a connection request involving storage may not be treated in the same way as conventional generation. The ENA Open Networks Project[7] is

[5] 'Call for Evidence: A smart flexible energy system' Chapter 2, Table 3 Network Connections for Storage www.gov.uk/government/consultations/call-for-evidence-a-smart-flexible-energy-system

[6] "Clarifying the regulatory framework for electricity storage: licensing https://www.ofgem.gov.uk/system/files/docs/2017/10/electricity_storage_licence_consultation_final.pdf

[7] ENA Open Networks Project http://www.energynetworks.org/electricity/futures/open-networks-project/open-networks-project-overview/

taking forward work that considers these questions the results of which will inform further updates to the guidance set out in this document.

Flexible and Conventional Connection Offers

26. The consultation did not cover requests to change between so-called flexible and conventional connection offers. As such, this document does not set out good practice for this scenario, but may be updated in future as necessary.

Telecoms

27. Where there is a change to the method of telecoms provision for a project this can normally be expected to constitute an Allowable Change as it is unlikely to have a Detrimental Impact on other projects in the connections queue.

High Level Principles

28. Please see below the high level **Overriding Principles (OP)** that DNOs may apply when considering change requests. We have included further clarification on the application of the principles.

> **OP1.** Any change request by the applicant that has a '**Detrimental Impact**' on any other applicant or user as per the definition below will generally impact the applicant's queue position and will NOT be regarded as an Allowable Change.
>
> **OP2.** Where a customer makes changes at the Point of Supply (PoS) which affects the Point of Connection (PoC) such that the PoC moves from one circuit to a different circuit this is NOT an Allowable Change and will impact on the applicant's position in the connections queue. (This means a change in circuit connectivity and not for example, a request to move from outside 2 Acacia Avenue to outside 4 Acacia Avenue, or from pole 57 to pole 58). A change to the PoC on the same circuit may not automatically be considered an Allowable Change dependent upon the nature and scale of the requested change. DNOs will apply discretion proportionate to the scale of the project and its connection.
>
> **OP3.** Where there is a fundamental change to the operational profile of the connection, for example from 'import' only to 'import and export' this is NOT an Allowable Change and will impact on the applicant's position in the connections queue. Change requests which materially increase the technical impact may be considered as a Disallowable Change, such as for example a change which significantly increases the user's fault level contribution or causes disturbance on the network.
>
> **OP4.** Where there is no Detrimental Impact on other applicants in the connections queue (or other users) the DNO will engage with the applicant to ensure project progression without the applicant losing their position in the connections queue (this may require an updated connection application form or updates to related application information).

‘Disallowable’ Change and Queue Position

29. Where a change is not an Allowable Change, whilst noting the overriding principles above, then a new connection request will need to be submitted to the DNO which will result in a project losing its existing position in the connections queue. In practice making a new application may be done as an amendment to the existing connection request. The DNO will then issue the customer a new offer incorporating the updated requirements.

Change Request Scenarios

30. The four example change request scenarios are:

    Scenario 1: Request to change generation technology type or mix of generation technology types from any one technology type (or mix of technology types) to a different technology type (or mix of technology types).

    Scenario 2: Request to alter the meter arrangements (downstream of Point of Connection (PoC)) with no change to overall requested capacity.

    Scenario 3: Request to alter capacity (kVA/MVA).

    Scenario 4: Request to change location of the Point of Supply (PoS).

31. It should be noted that, where more than one change request scenario applies to a single application, the project must pass all of the tests in order to be considered as an Allowable Change.

Change Request Scenario One

Scenario One: Request to change generation technology type or mix of generation technology types from any one technology type (or mix of technology types) to a different technology type (or mix of technology types).

32. The scenario variants cover circumstances where a change to the connection request encompasses any of the following:

    A. A change from **one generation technology type to storage**, for example, from a wind turbine(s) to storage (i.e. storage replaces the technology used in existing connection request);

    B. **The addition of storage** to an existing connection request, for example, from wind turbine(s) only to wind turbine(s) and storage (i.e. storage is added to the existing technology and the Maximum Import Capacity (MIC) and/or Maximum Export Capacity (MEC) increases);

    C. A **change to the prime mover(s) or similar fundamental change** in a project, for example, wind turbine(s) to diesel reciprocating engine(s) or similar change to technology or technology mix contained in the existing connection request;

    D. A **minor change** to essentially the same project, for example, change from wind turbine Type ‘X’ to wind turbine Type ‘Y’.

The scenario change types and impact on queue position are shown in the table below:

Impact on Queue Position:

Scenario 1	Change Type (Variant)	Impact on Queue Position		
Request to change generation technology type or mix of generation technology types from any one technology type (or mix of technology types) to a different technology type (or mix of technology types)[*1].		**Post Application – Pre Offer**	**Post Offer –Pre Acceptance**	**Post Acceptance – Pre Energisation**
	A	Disallowable	Disallowable	Disallowable
	B	Disallowable	Disallowable	Disallowable
	C	Disallowable	Disallowable	Disallowable
	D	Allowable	Allowable	Allowable

Table note *1 – Instead of changing an existing connection application, note that a new proposal can progress in parallel to the original application with its own separate position in the connections queue, although it may be dependent on the first scheme progressing.

Rationale: A change in technology generation type as described above, for example, can be expected to have a significantly different impact on the network compared to the original project. For example, a DNO may be able to connect a wind farm at certain locations on the network without reinforcement. However, if the technology changes to diesel it can have a very different impact on the network and require reinforcement to be made. It therefore seems fair to other customers in the connections queue that these types of change request are treated as wholly new connection requests and the queue position is lost.

Change is solely to make or model of technology used

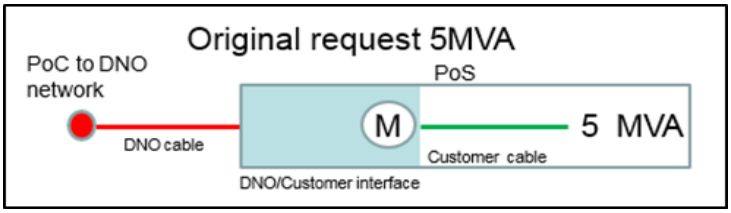
Where a change is solely a change to the make or model of the technology type(s) contained in the original application, for example, change from Supplier 1's wind turbine to Supplier 2's turbine, with all other aspects of the project remaining unchanged, this is typically classed as an Allowable Change and will not impact on a project's queue position. NB. This allows a site to contain wind turbines from different manufacturers. This approach also applies to the technology combination scenarios described above.

Change Request Scenario Two

Scenario Two: Request to alter the meter arrangements (downstream of Point of Connection (PoC)) with no change to overall requested capacity.

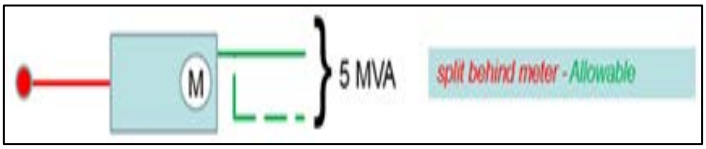
33. The diagrams below show the 'original request' and two variants to the original request 'a' & 'b' that can occur downstream (i.e. within the premises boundary) of the Point of Connection (PoC).

The 'original request' shows a single cable connection to a single metering point (Point of Supply (PoS).



The first variant 'a' shows the capacity split between two cable connections with each cable connected to its own individual metering point. This allows the 5MVA demand/output to be split or apportioned between the two cables with each cable feed metered separately.

The second variant 'b' shows the capacity split across two cable connections with both cables connected to a single metering point. This allows the 5MVA capacity to be split/apportioned across two cables feeds with both metered at the same metering point.



Impact on Queue Position:

Scenario 2	Change Type (Variant)	Impact on Queue Position		
		Post Application - Pre Offer	**Post Offer –Pre Acceptance**	**Post Acceptance – Pre Energisation**
Request to alter the meter arrangements (downstream of Point of Connection (PoC)) with no change to overall requested capacity.	a) Split connection into two or more connection/metering points (no change to capacity)	Original PoS retains position in connection queue. Additional PoS is disallowable and treated as a new connection request.	Original PoS retains position in connection queue. Additional PoS is disallowable and treated as a new connection request.	Original PoS retains position in connection queue. Additional PoS is disallowable treated as a new connection request.
	b) Split capacity (total unchanged) across two or more customers utilising one connection/metering point	Allowable	Allowable	Allowable

Rationale: If a customer wishes to change between any of the connection designs illustrated above, provided there is no increase in capacity (MVA), then other than for variant ‘a’ it is considered to constitute an Allowable Change.

Under variant ‘a’ the queue position for the original point of supply (PoS) would be retained but the additional second metered point of supply would constitute a Disallowable Change and therefore be treated as a new connection request. This would also result in any un-utilised capacity under the original connection request being relinquished and allocated to the next person in the connections queue.

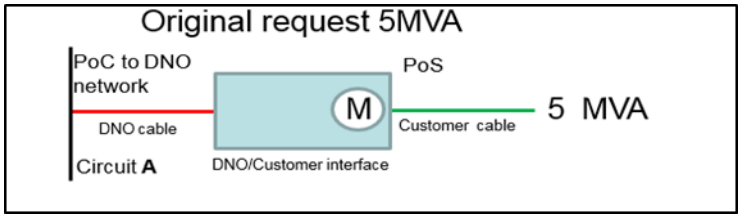
This approach is consistent with the impact on the design of the DNO’s network assets required under the original application or on any technical aspect of the connection, for example, it would not result in a change to any reinforcement that may be required under the original application, safety systems, fault level, harmonic contribution, etc.

Change Request Scenario Three

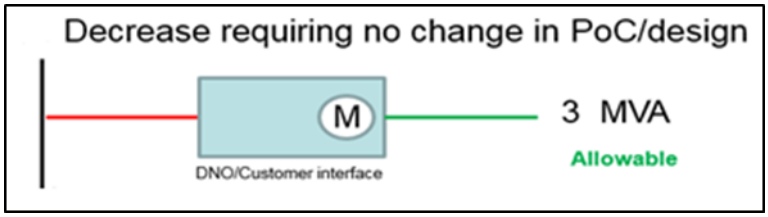
Scenario Three: Request to alter capacity (MVA)

34. The examples below use a 5 MVA capacity 'original request' and three variants to the original request.

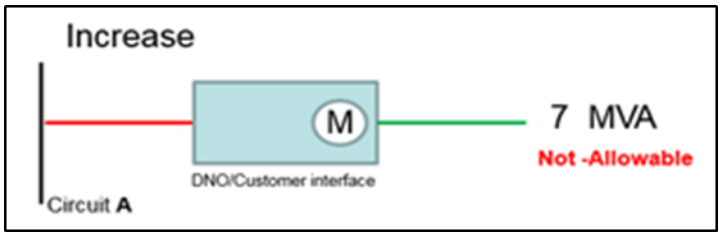
The **'original application request'** shows a 5 MVA capacity with a Point of Connection (PoC) at Circuit A.



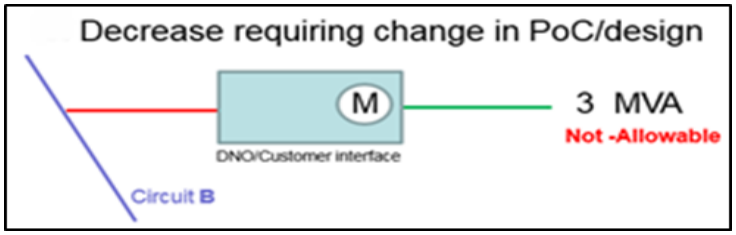
The **first variant (a.)** shows a decrease in capacity with no change to the Point of Connection (PoC) (Circuit A).



The **second variant (b.)** shows an increase in capacity with no change to the Point of Connection (PoC) (Circuit A)



The **third variant (c.)** shows a decrease in capacity with a change to the Point of Connection (PoC) (Circuit B)



Impact on Queue Position:

Scenario 3	Change Type (Variant)	Impact in Queue Position		
Request to alter capacity		**Post Application - Pre Offer**	**Post Offer –Pre Acceptance**	**Post Acceptance – Pre Energisation**
	a) Decrease in capacity requiring no change in PoC/design	Allowable	Allowable	Allowable
	b) Any increase in capacity requiring no change in (PoC)/design	Disallowable	Disallowable	Disallowable
	c) Decrease in capacity with a change to the (PoC)/design	Disallowable	Disallowable	Disallowable

Rationale:

An increase in the requested capacity or a change to the Point of Connection (PoC) will impact on the network in that area and therefore may affect other projects that may already be in the connections queue. This will require the DNO to undertake a reassessment / redesign study in the area.

Where a reduction in capacity does not result in the need to change the PoC it will not have a Detrimental Impact on other projects in the connections queue and is an Allowable Change. It may also result in other projects connecting earlier and/or at less cost than would be the case under the original connection request.

Consequently, we consider that any request to increase capacity or to change the PoC is Disallowable and will result in loss of a project's position in the connections queue.

As noted previously, instead of changing an existing connection application, a new proposal can progress in parallel to the original application with its own separate position in the connections queue, although it may be dependent on the first scheme progressing

Change Request Scenario Four

Scenario Four: Request to change location of Point of Supply (PoS)

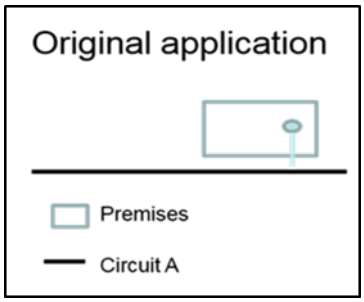
35. The diagrams below show a number of locational changes that can be made to a project's PoS relative to the original premises boundary. Where any change to the location of the PoS is wholly within the original premises boundary and does not require a change to the PoC, then this constitutes an Allowable Change (subject to the overriding principles). Therefore, a change to the PoS that results in a change to the PoC is considered Disallowable and queue position is lost. Similarly, any change that locates the PoS outside of the original premises boundary is considered Disallowable and queue position is lost.

36. Note that consistent with the definition used in the Electricity Act 1989 (as amended) the term "premises" includes any land, building or structure. The scenarios used apply this definition with the inference that the "premises" constitutes the "development boundary" of a project, which should largely reflect that as submitted to the relevant authority for planning permission.

37. In circumstances where the "development boundary" spans a significant area, for example potentially several kilometres, it should be recognised that there may be limits to what can reasonably be considered an Allowable Change even where relocation of a PoS is within a project's original premises/development boundary. For example, in this type of scenario any relocation of a PoS may change the circuit that the connection is to be made to and therefore the queue position would be lost.

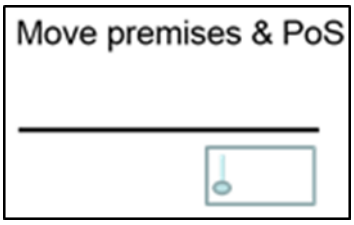
    The examples below show an 'original request' and three variants to the original request.

The original request shows the Premises and Point of Supply for the project with a Point of Connection at Circuit A.

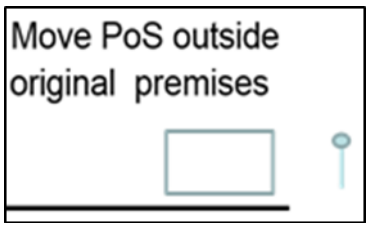


The **first variant (a.)** shows a change to the location of the Point of Supply (PoS) with the new location of the PoS being within the boundary of the premises as provided in the original application. No change to the Point of Connection (PoC)

The **second variant (b.)** shows a change to both the location of the Premises and the Point of Supply (PoS) with the new location of both the Premises and the PoS different to those provided in the original application.



The **third variant (c.)** shows a change to the location of the Point of Supply (PoS) to outside the Premises provided in the original application.



Impact on Queue Position:

Scenario 4	Change Type (Variant)	Impact on Queue Position		
Request to change location of Point of Supply (PoS)		**Post Application - Pre Offer**	**Post Offer –Pre Acceptance**	**Post Acceptance – Pre Energisation**
	a. Move PoS only within original premises (no change to PoC)	Allowable	Allowable	Allowable
	b. Move premises & PoS	Disallowable	Disallowable	Disallowable
	c. Move PoS outside original premises *1	Disallowable	Disallowable	Disallowable

Table note *1 A change in ownership of the proposed connection assets which necessitates a new PoS location for the connection without impacting the PoC may be an Allowable Change in certain circumstances. This may take place outside of the original premises in exceptional circumstances; for example, where a licenced DNO is taking on the connection. The host DNO will need to consider the overriding principles and any other applicable examples from this document in considering whether the change request is Allowable.

Rationale: DNOs accept that as a project develops, there may be some circumstances whereby customers need to change the location of their PoS within the premises, for instance for planning permission or as particular characteristics of a site become better known. DNOs will do all they can to ensure that this can be accommodated. The DNO may need to undertake a variation to the connection Offer if the costs or design of the connection are impacted.

Where a change to the location of the PoS does not require a change to the PoC and is within the original premises boundary then this will be considered an Allowable Change.

Where the proposed new location of the PoS is wholly or partially outside of the premises boundary in the original application (regardless of whether or not there is a change to the PoC, subject to the Table Note above) this is Disallowable and a project will lose its position in the connections queue and a new application will be required.

We consider that this approach will drive customers to undertake reasonable research and validation on the location of the project prior to submitting a connections application to the DNO. This leads to a more efficient use of DNO time and resources for all stakeholders.