












UNC Modification		At what stage is this document in the process?
<h1>UNC 0761:</h1> <h2>Arrangements for Interconnectors with additional Storage capability</h2>		<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="border: 1px solid green; background-color: #00a651; color: white; padding: 2px; display: flex; align-items: center; justify-content: center;">01 Modification</div> <div style="border: 1px solid blue; padding: 2px; display: flex; align-items: center; justify-content: center;">02 Workgroup Report</div> <div style="border: 1px solid purple; padding: 2px; display: flex; align-items: center; justify-content: center;">03 Draft Modification Report</div> <div style="border: 1px solid orange; padding: 2px; display: flex; align-items: center; justify-content: center;">04 Final Modification Report</div> </div>
<p>Purpose of Modification:</p> <p>This Modification proposes changes to the Uniform Network Code (UNC) to incorporate additional commercial arrangements for the operation of Interconnectors with additional storage capability.</p>		
	<p>The Proposer recommends that this Modification should be:</p> <ul style="list-style-type: none"> considered a material change and not subject to Self-Governance assessed by a Workgroup <p>This Modification will be presented by the Proposer to the Panel on 18 March 2021. The Panel will consider the Proposer's recommendation and determine the appropriate route.</p>	
	<p>High Impact: Interconnectors</p>	
	<p>Medium Impact: Shipper Users, Storage Facilities</p>	
	<p>Low Impact: None.</p>	

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Timetable			
The Proposer recommends the following timetable:			Transporter: National Grid NTS
Initial consideration by Workgroup	01 April 2021		 phil.lucas@nationalgrid.com
Workgroup Report presented to Panel	16 September 2021		
Draft Modification Report issued for consultation	17 September 2021		 07825 592518
Consultation Close-out for representations	08 October 2021		Systems Provider: Xoserve
Final Modification Report available for Panel	14 October 2021		 UKLink@xoserve.com
Modification Panel recommendation	21 October 2021		
Final Modification Report issued to Ofgem	22 October 2021		

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1 Summary

What

National Grid NTS has been informed by the operator of an Interconnector currently connected to the NTS (an 'Interconnector Operator' or 'IO') that it intends to offer an additional storage service to Shipper Users whereby gas may be offtaken from the NTS, stored in its system and subsequently be delivered back to the NTS. Concurrently, the Interconnector would be available for its existing use as a means of transporting gas to or from a Transmission System other than the NTS.

Existing UNC terms set out commercial arrangements for the delivery of gas to and from the NTS at Interconnectors and (at separate points) Storage Facilities. However, no such arrangements are included to facilitate the delivery of gas to and from the NTS at Interconnectors with additional Storage capability.

Why

As some aspects of the Transportation Charging arrangements for capacity and associated gas flows at Interconnection Points (IPs) differ with those in place for capacity and associated gas flows at Storage Connection Points, it is necessary to modify the UNC to include additional commercial arrangements to enable application of the correct Transportation Charges at Interconnectors able to offer an additional Storage service to their customers.

How

It is proposed that the UNC is modified to establish the necessary commercial arrangements where an IO elects to offer an additional Storage Service. Such arrangements will only be applicable in respect of Interconnectors that can physically flow gas in both directions. Such revisions seek to:

- set out the point definitions for Interconnectors (with additional storage capability) connected to the NTS;
- set out the determination of daily quantities of the following (at such facilities) in order to facilitate the correct application of Transportation Charges in respect of:
 - entry and exit capacity used for storage;
 - gas flow (UDQI and UDQO) to and from storage.
- set out rules for the application of Capacity Overruns at such facilities;
- set out the rules regarding Nominations and application of Scheduling Charges at such facilities;
- set out rules for the allocation of gas to Users at such facilities; and
- set out the Charging Arrangements for transportation services in respect the use of such facilities.

2 Governance

Justification for Authority Direction

This Modification Proposal is recommended to be sent to the Authority for direction as it is likely to have a material effect on commercial activities relating to the shipping, transportation and supply of gas because, if implemented, it will establish a framework for a new 'dual purpose' point on the NTS and enable the appropriate Transportation Charges to be levied in respect of capacity and gas flows at such points.

Requested Next Steps

This Modification should:

- be considered a material change and not subject to Self-Governance;
- be assessed by a Workgroup for a period of 6 months.

3 Why Change?

National Grid NTS has been informed by the operator of an Interconnector currently connected to the NTS that it intends to offer an additional storage service to GB shippers (Users) whereby gas may be offtaken from the NTS, stored in its system and at a subsequent point in time be delivered back to the to the NTS. Concurrently, the Interconnector primary purpose would be for conventional use for the transportation of gas to or from a Transmission System other than the NTS.

Aspects of the Transportation Charging arrangements for capacity and associated gas flows at JPs differ with those in place in respect of capacity and associated gas flows at Storage Connection Points. The prevailing Transportation Charging Methodology provides that:

- the **Transmission Services Capacity Reserve Price** for Storage Connection Points is subject to a Specific Point Discount, currently 50%. Following Ofgem's direction to implement Modification 0727 'Increasing the Storage Transmission Capacity Charge Discount to 80%' this discount will increase to 80% from 01 October 2021.
- gas flows to and from Storage Connection Points (except 'own use' gas) are exempt from the **General Non-Transmission Services** charge.

It is worthy of note that Modification Proposal 0729 'Applying a discount to the Revenue Recovery Charge at Storage Points' (currently awaiting a decision from the Authority) proposes that the Specific Point Discount applied to the Transmission Services Capacity Reserve Price is also applied to the unit rate of the **Transmission Services Revenue Recovery** charge payable in respect of Storage Connection Points.

In order to correctly apply the above Transportation Charge principles, it is necessary to modify the UNC to include additional commercial arrangements applicable for Interconnectors with the described additional Storage capability, to enable the Connected System Point to be designated as an JP and a Storage Connection Point (SCP).

The new arrangements will only be applicable in respect of Interconnectors that can physically flow gas in both directions. The definition of Storage Facility in the UNC (TPD R1.2.1(a)(iii)) describes a facility where "...gas is offtaken from the Total System..." and "...stored gas..." is subsequently "...delivered to the Total System". National Grid's interpretation is that gas 'offtaken' and 'delivered' refers to physical delivery as described in TPD Section J and I.

Whilst recognising that concurrent operation of both conventional 'interconnector transportation' and 'interconnector storage' functions may enable the IO to limit physical flows to a 'net' volume in the relevant flow direction, the IO nevertheless has the capability to physically flow in both directions. This enables the correct volumes of gas to be flowed even if there are zero transportation flow volumes on a particular day.

In principle, this is no different to a conventional Storage Facility which is only required to flow a net volume in the relevant direction where on a day (for example) one User wishes to withdraw 10 units of gas from storage

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whilst a different User wishes to inject 20 units of gas into storage. In this case the storage operator is only required to physically inject 10 units of gas into its facility.

Extension of the applicability of the proposed arrangements to Interconnectors who can only offer 'virtual' reverse flow does not align with the definition of Storage Facility in respect of physical flows. Further, such a facility would be unable to physically respond to the commercial needs of its customers if there are zero transportation volumes on a given day and the net storage flows are required in the 'virtual' (non-physical) direction. Hence this proposal limits the arrangements to Interconnectors with capability to physically flow in both directions.

Benefits to the GB Market

Facilitating the availability of additional storage capability connected to the NTS will increase the options available to Users (for the avoidance of doubt, those in GB only) when seeking such a flexibility service, thereby better facilitating competition between those shippers (UNC Relevant Objective (d)). Such a service creates additional optionality for Shipper Users to accommodate temporary market fluctuations and provide assistance with balancing. These benefits help better facilitate the GB market's Security of Supply and have the potential to lower balancing costs.

The solution takes effect in respect of any Interconnector SCP on the NTS where a Storage Connection Agreement is in place between National Grid NTS and the relevant IO. Such arrangements also support the efficient and economic operation of the combined pipeline system and the pipeline system of an IO, furthering UNC Relevant Objectives (a) and (b).

System Classification

Akin to the principal that an **JP** constitutes both a System Entry Point and a Connected System Exit Point (EID A2.1.1(c)) connections to Interconnectors that offer an additional storage service will constitute both an **JP** and a Storage Connection Point. The availability of the UNC terms related to the Storage service at the relevant **JP** are contingent on the establishment of Network Exit Provisions and a Network Entry Agreement (between National Grid and the relevant Interconnector Operator) as per the existing requirements of TPD I1.3.1 and TPD J1.5.2.

Revision of the UNC definition of '**Storage Facility**' is proposed to remove the current limitation to those facilities "*whose principal purpose is the storage of gas*". Deletion of the word 'principal' in this definition would thereby encompass Interconnectors with an additional storage capability where Transportation remains the primary purpose.

The additional deletion the definition of "**Storage Site Point**" in UNC TPD Section Y1.3.2(e) and replacement of the term '**Storage Site Point**' in UNC TPD Section Y1.3.2(i), Y2.8.1(c) and Y2.8.4(a) with '**Storage Connection Point**' would mean that the Transmission Services Specific Capacity Discount would be allocated to a Storage Connection Point (where a Storage Facility is connected to the NTS) as opposed to those points labelled as "Storage Site" in National Grid's Licence. Further to the amendment of the definition of Storage

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Facility described above, this would mean that capacity quantities attributable to an IO provided storage service would obtain the relevant Transmission Services Specific Capacity Discount.

Association of this aspect of the Transmission Services charging arrangements to Storage Connection Points would be consistent with means by which the General Non-Transmission Services Charge exemption is allocated (TPD B2.11.6 and B3.12.7)

In order to enable an IP ASEP to include a Storage Connection Point, a supporting revision of UNC TPD EID A2.2.2 will be required. This will permit an ASEP to include a single physical point that is an IP only, and those that are an IP and a Storage Connection Point.

Precedent

A new 'dual purpose' point (i.e. IP and Storage Connection Point) will need to be reflected in the relevant commercial and regulatory arrangements. This would be the first such 'dual usage' point on the NTS.

However, a similar 'dual purpose' facility in Europe is the Etzel storage facility in Germany which is connected to both German and Dutch Transmission Systems. In this case, the primary purpose of the facility is storage with the additional option to utilise the facility for the purposes of transportation between the two Transmission Systems.

At this facility the Shipper makes an ex-ante decision as to the purpose of the flow (i.e. storage or transportation) with two accounts being maintained for each User; one for storage (attracting the relevant discounted charges) and the other for transportation (attracting the standard charges).

Storage in an Interconnector – Application of a Discount

The appropriateness of discounted capacity charges for gas entering or exiting a Storage Facility was recognised by Ofgem in its Minded to Decision in respect of Modification Proposal 0678 and its Alternatives¹:

“When gas enters and exits from the NTS and also enters and exits from a storage facility on route, it could pay entry and exit tariffs for both the NTS and the storage facility. Absent a discount, a fixed amount of gas that uses storage on the NTS could be paying twice as much for cost recovery of the NTS system than the same amount of gas which simply traverses the system. In order to avoid this ‘double charging’ of gas using storage, we therefore consider a discount of at least 50% for storage entry and exit capacity to be appropriate.”

As noted, Ofgem has subsequently directed the implementation of Modification 0727 which will increase this discount to 80%. In its decision letter, Ofgem commented:

“Storage can improve the efficiency of system operation and reduce operating costs by providing additional pressure to the system. The Proposer argues that storage provides a benefit to the transmission system in terms of avoided investment in additional capacity. We agree that there is merit in these arguments. We consider that the proposed higher storage discount would facilitate the continued contribution of storage to the efficient and economic operation of the pipe-line system”.

The nature of the service that will be offered by an IO which enters into a Storage Connection Agreement will, in line with other Storage Facilities connected to the NTS, allow Users to offtake gas from the NTS, to store such gas (in this case within the IO's Storage Facility) for an agreed period and then subsequently deliver an equivalent volume back to the Total System. This characteristic is consistent with the existing UNC definition of

¹ www.ofgem.gov.uk/publications-and-updates/uniform-network-code-unc621abcdefghijkl-amendments-gas-transmission-charging-regime - see paragraph 4.52
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a Storage Facility therefore it is appropriate that associated capacity and gas flows are subject to the relevant rules in the Charging Methodology which apply in respect of other Storage Facilities.

UNC Arrangements – Capacity Principles

No distinct 'storage capacity' product will be made available to Users by National Grid NTS at the relevant ~~IP~~. Alternatively, the bi-lateral arrangements in place between National Grid NTS and the relevant IO will provide for the IO to inform National Grid NTS of the quantity of each User's Entry Capacity or Exit Capacity at the IP (for a relevant day) that should, *ex-post*, be classified as being used for storage.

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In order to ensure that each User has sufficient NTS capacity to be classified as Storage, and that only the capacity intended to be utilised for Storage Purposes obtains the appropriate discount, the actual quantity of a User's capacity at the Interconnector SCP that the Storage Specific Point Discount will be applied to (for the relevant day):

- in the case of Entry, will be equal to the lesser of:
 - the User's IO-specified storage Entry Capacity quantity for that User;
 - the User's Registered NTS Entry Capacity (excluding Existing Registered Holdings); and
 - the User's storage gas Entry allocation.
- in the case of Exit, will be equal to the lesser of:
 - the User's IO-specified storage Exit Capacity quantity for that User;
 - the User's Registered NTS Exit Capacity; and
 - the User's storage gas Exit allocation.

Registered NTS Capacity 'Cap'

This has been included to ensure that the maximum quantity of NTS capacity which can be subject to the Specific Capacity Discount is the quantity of NTS capacity that the User has registered at the relevant IP and which has not been used for the purposes of transportation by the IO. This excludes any NTS capacity the User has registered that is classified as Existing Contracts for the reasons set out below ('UNC Arrangements – Specific Capacity Rules').

We recognise that a User of a Storage (only) Facility obtains a discount on all of its Registered Capacity, however, at Interconnectors with additional storage, the proposed approach is that the capacity quantity that is subject to the Specific Capacity Discount for Storage is also capped at the User's Storage allocation quantity for the relevant day.

Whilst at Storage (only) Facilities, there is no alternative use of that capacity available/possible, and therefore no risk that unused capacity will be used for a 'non-discountable' purpose, this is not the case with Interconnectors with additional storage (the first 'dual purpose' point/s on the Total System) where the risk is present. A specific concern we have is that in absence of storage allocation cap, there would be a commercial incentive for Users to procure additional 'surplus' IO storage capacity if the aggregate cost of this, and the discounted National Grid IP capacity, is less than the cost of any residual un-discounted IP capacity.

We believe the flexibility at such IPs warrants the variation in treatment to ensure no utilisation of unused discounted storage capacity for transportation and to prevent unused capacity at the ~~IP~~ attracting the storage related NTS charges. We note that any such residual capacity would be available for transportation (non-storage) purposes and is therefore justifiably priced at the non-discounted capacity charge. This is also consistent with the principle that Transportation remains the primary purpose of an Interconnector offering a supplementary storage service.

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We believe this risk is similar in principle to the risk identified by Ofgem in its Impact Assessment² (and reflected in its final decision³) for Modification Proposal 0728C ('Introduction of a Capacity Discount to Avoid Inefficient Bypass of the NTS') where the risk of the application of a discount to a transportation route, other than one which qualifies for such a discount, was discriminatory. In this case we consider that in absence of a cap equal to the quantity of gas allocated to storage there is a risk capacity other than that intended for storage use will obtain a discount.

UNC Arrangements – Specific Capacity Rules

Capacity classified as:

- Existing Contracts (i.e. Entry capacity procured by a User prior to 6th April 2017) is not able to be utilised for storage purposes at an IP.

Consistent with our views expressed in respect of UNC Modification Proposal 0737 ('Transfer of NTS Entry Capacity from a Capacity Abandoned ASEP') we believe that the effect of Article 35 of the EU Tariff Code (now incorporated into UK legislation as Retained EU Law) is to freeze the terms and conditions applicable to that capacity, such conditions include the intended purpose of the capacity at the time of booking. Such capacity booked at IPs was procured for the solely for the purposes of transportation between the points at either end of the pipeline and was only envisaged as being for this purpose.

Further, limiting the capacity able to be utilised for storage at such IPs as described will ensure that all Users opting to utilise such a facility are subject to the equivalent Reserve Price for capacity thereby facilitating competition between those Users. Additionally, from an implementation perspective this would negate the need for National Grid to track the status of capacity (Existing Contracts or non-Existing Contract) in order to apply the Specific Capacity Discount to the correct payable price for capacity.

- All other capacity (other than Existing Contracts) including capacity acquired/allocated to a User prior to the implementation of this Proposal but after 6th April 2017 is able to be utilised for storage purposes at an IP.

Whilst it can be also be concluded that capacity already allocated at an IP (excluding Existing Contracts) was equally only ever procured in the expectation of use for transportation purposes, there is no 'protection' in the EU Tariff Code in respect of such capacity holdings and therefore no apparent limitation on its use.

Where capacity is traded:

- in the case of Capacity Assignment under UNC TPD B6 (where the Assignee User becomes liable for all associated payments), as the Assignee User is liable for all associated payments and obligations it is proposed that it will obtain a discount for any capacity classified as being for Storage use. The term Registered Capacity includes any Transferred System Capacity (B6.3.1) hence why this term is used in the determination of Capacity Quantities subject to the Specific Capacity Discount in the Solution; and

² See [here](#). Specifically question 4 for respondees and para 3.34 "We [Ofgem] consider that UNC728C carries the risk that the discount may not be used as intended".

³ See [here](#). Specifically page 15, para 2 "... UNC728C carries the risk that the discount may not be used as intended by its proposer because it is conceivable that a user may book discounted entry and exit capacity under UNC728C and then use either or both of these for a route other than the one identified as being at risk of bypass..."

- in the case of Capacity Transfer under UNC TPD B5 (where the Transferor User retains the payment obligation in respect of that capacity), as the Transferor User is not the party utilising the capacity it will not obtain a discount for any IP Capacity classified as being for storage use. As this price is confidential, it is neither practical nor appropriate for the Transferor User to obtain a Transportation Charge discount for any capacity that is subsequently classified as being for storage use. The term Registered Capacity excludes any Transferred System Capacity (TPD B1.4(b)) hence why this term is used in the determination of Capacity Quantities subject to the Specific Capacity Discount in the Solution.

UNC Arrangements – Payable Price for Capacity

A User's Registered Capacity on a day may constitute Firm and Interruptible Capacity components. Therefore, in order to determine the payable price for capacity eligible for the storage discount it is necessary to identify whether the relevant capacity quantity is Firm or Interruptible (Interruptible Capacity is itself eligible for a 10% discount). This is proposed to be achieved by the application of a 'merit order' whereby Interruptible and Firm is applied to the services (i.e. Storage and Transportation) in a predetermined order.

The proposed merit order seeks to align any firm capacity to the transportation component given that the payable price for any capacity allocated as NTS Optional Charge 'Eligible Quantity' is determined on the basis of the relevant discount percentage applied to the Firm Reserve Price (regardless of whether the capacity is Firm or Interruptible).

UNC Arrangements – Storage Overruns

To ensure that a User is incentivised to procure sufficient exit capacity for each distinct service, determination of whether NTS Exit (Flat) Overrun Charges are payable will be made separately in respect of both the proposed storage service and the existing transportation service. This is consistent with the application of exit overruns at Storage Connection Points and IPs.

To ensure that Existing Contracts are not utilised for Storage, a Storage Entry Overrun charge will be payable where a User's aggregate Available NTS Capacity (excluding Existing Contracts) that can be used towards storage at a relevant IP ASEP is less than its aggregate storage gas allocations at the same IP ASEP.

The prevailing Entry Overrun regime will remain in place. Therefore, on a day where for a User both an Entry Overrun and Storage Entry Overrun is payable, to ensure no duplication of Overrun charges at the ASEP, only the higher of the Entry Overrun charge and the Storage Entry Overrun charge will be payable by the relevant User.

UNC Arrangements – Daily Nominations

Users wishing to flow gas to or from an IO's storage service will be required to submit separate storage Gas Nominations quantities to National Grid NTS. Any gas intended to flow in respect of the existing transportation service are required to be specified net of the quantity intended for storage.

To ensure that National Grid and the relevant IO has a consistent view of each Users storage Gas Nomination quantities, these nominations will be subject to the Matching Procedures and Rules described in EID Section C1.5.2 and C2.3.

To maintain consistency with the rules in place for Scheduling Charges, Scheduling Charges at Entry will be determined at an ASEP level and at Exit, separately for transportation (on the basis of comparing the matched transportation nomination quantity and the transportation allocation) and for storage (on the basis of comparing the matched storage nomination quantity and the storage allocation).

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UNC Arrangements – Allocations

Consistent with the allocation principles in place at other Storage Connection Points, gas flows related to storage will be allocated on the basis of a measurement determined by the IO. Hence an IO which offers a storage service is required to provide National Grid NTS with a daily Exit and Entry IP Storage Measurement that the IO has determined has flowed into, or out of, (respectively) its storage facility.

Therefore, in respect of

- flows into the IO's Storage Facility related to the IO's storage service (Exit Storage Allocations) the requirements of UNC TPD Section E3.2 will apply (provision of an Exit Allocation Statement for each relevant User with the aggregate of the Exit IP Storage Allocations specified being equal to the Exit IP Storage Measurement); and
- flows out of the IO's Storage Facility related to the IO's storage service (Entry Storage Allocations) the requirements of UNC TPD Section E2.1 will apply (provision of an Entry Allocation Statement for each relevant User with the aggregate of the Entry IP Storage Allocations specified and any Unclaimed Entry Allocation Statement, being equal to the Entry IP Storage Measurement).

The allocation principles in place for the transportation gas flows at the IP will remain unchanged i.e. on the basis of 'allocate as nominate' with an Operational Balancing Account in place.

UNC Arrangements – Charging

The determination of the quantity of a User's capacity to be classified as storage requires finalised storage gas allocations (being one component of the 'lesser of' three values calculation). As gas allocations are not closed out at Entry Points until the 15th calendar day of the following month, and at Exit Points until the 5th calendar day following the Gas Day, it is not possible to reflect the Specific Point Discount for storage in the capacity invoice issued to Users on around the fifth calendar day on the month following the Billing Period.

As a consequence all capacity at the IP will be invoiced to Users at the standard (i.e. non-discounted) Transmission Services Capacity charge rate in the Capacity Invoice issued in the month following the Billing Period (i.e. M+1). The Capacity Invoice issued in the month subsequent to this (i.e. M+2) will include an adjustment to reflect the application of the Specific Capacity Discount for Storage for the appropriate capacity quantities classified as being utilised for storage.

As the General Non-Transmission Services charges are invoiced to Users after the respective Close Out period for Entry and Exit, the exemptions from the General Non-Transmission Services charges for Storage Gas Allocations will be reflected in the commodity invoices issued in the month following the Billing Period.

4 Code Specific Matters

Reference Documents

Point classifications – [TPD A](#) / [EID A](#)

Storage – [TPD R](#)

Capacity rules – [TPD B](#) / [EID B](#)

Nomination rules – [TPD C](#) / [EID C](#)

Allocation rules - [TPD E](#) / [EID D](#)

Charging Methodology – [TPD Y](#)

Knowledge/Skills

Transportation arrangements (and broader commercial arrangements) at JPs / Interconnectors and Storage Connection Points / Storage Facilities.

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5 Solution

Point Definition

It is proposed that:

- the UNC definition of '**Storage Facility**' in UNC TPD Section R1.2.1(a)(a)(ii) is revised to remove the word 'principal' as follows "whose ~~principal~~ purpose is the storage of gas".
- the definition of '**Storage Site Point**' in UNC TPD Section Y1.3.2(e) is deleted and that where this is specified in UNC TPD Section Y1.3.2(i), Y2.8.1(c) and Y2.8.4(a), it is replaced with the term '**Storage Connection Point**'.
- the requirement in UNC TPD EID A2.2.2 for an IP ASEP to only contain JPs is revised to permit an IP ASEP to also include those Points that are both an IP and a Storage Connection Point.

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For the avoidance of doubt, the availability of the UNC terms related to the Storage service at the relevant JPs are:

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- limited to Interconnectors that can physically flow gas in both directions; and
- contingent on the establishment of Network Exit Provisions and a Network Entry Agreement (between National Grid and the relevant Interconnector Operator) as per the existing requirements of TPD I1.3.1 and TPD J1.5.2.

Capacity – Determination of Capacity Quantities subject to Specific Capacity Discount

It is proposed that at an Interconnector SCP for each day, a User's IP Storage Capacity Quantity (SCQ_d) (i.e. the quantity of capacity which is entitled to the storage Specific Capacity Discount) is determined (separately for Entry and Exit) using the following formula:

$$SCQ_d = \text{Min} (IPOC_d, IPRC_d, IPA_d)$$

where

$IPOC_d$ means the provisional IP Capacity quantity that should be classified as being for Storage use as specified by the IO to National Grid NTS for the relevant day for that User pursuant to the Storage Connection Agreement;

$IPRC_d$ means the quantity of the User's IP Registered Capacity on the relevant day excluding Existing Registered Holdings; and

IPA_d means the User's Storage UDQI or Storage UDQO for the relevant day.

For the avoidance of doubt, any capacity held by a User in excess of SCQ_d will not be subject to the storage Specific Capacity Discount.

Capacity Utilisation and OVERRUNS

It is proposed that a User's IP Entry Capacity classified as Existing Available Holdings is not able to be utilised for storage at an Interconnector SCP.

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It is proposed that in relation to a Day at an Interconnector SCP, NTS Exit (Flat) Overrun Charges are payable where:

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- the User's Storage UDQO exceeds the User's Exit Storage Available Capacity (and the aggregate of all Users' Storage UDQO exceeds the sum of all Users' Exit Storage Available Capacity); and/or
- the User's Transportation UDQO exceeds the User's Exit Transportation Available Capacity (and the aggregate of all Users' Transportation UDQO exceeds the sum of all Users' Exit Transportation Available Capacity).

It is proposed that in respect of a User's NTS Entry Capacity at an IP for a day, a User will only be required to pay the higher of:

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- a **System Entry Overrun Charge** in respect of the ASEP comprising the relevant IP and SCP determined as per TPD B2.12; and
- an **IP Storage Entry Overrun Charge** in respect of the ASEP comprising the relevant IP and SCP.

The IP Storage Entry Overrun Charge will be payable where the User's ASEP Entry IP Storage Allocation Quantity (i.e. withdrawal from storage) exceeds its ASEP Entry IP Storage Available Capacity Quantity. To determine this, the two values will be assessed as follows:

- ASEP IP Storage Available Capacity Quantity ($IPSA_{d}$) is determined using the following formula:

$$IPSA_{d} = \text{Min} \left(\sum IPOC_{d}, IPAC_{d} \right)$$

where:

\sum means the sum of the relevant quantities from all System Entry Points in the Aggregate System Entry Point;

$IPOC_{d}$ means the provisional Entry IP Capacity quantity that should be classified as being for Storage use as specified by an IO to National Grid NTS for the relevant day for that User; and

$IPAC_{d}$ means the quantity of the User's Entry IP Available Capacity at the Aggregate System Entry Point on the relevant day excluding quantities allocated via Existing Contracts.

- ASEP IP Storage Allocation Quantity ($IPSA_{d}$) is determined using the following formula:

$$IPSA_{d} = \sum SAQ_{d}$$

where

\sum means the sum of the User's Storage UDQIs from all System Entry Points in the Aggregate System Entry Point;

SAQ_{d} means the User's Storage UDQI at a [relevant System Entry Point].

The IP Storage overrun quantity is the amount by which the $IPSA_{d}$ exceeds $IPSA_{d}$. The IP Storage Entry Overrun Charge is equal to the IP Storage overrun quantity multiplied by the values specified in TPD B2.13.3.

Capacity Payable Price

It is proposed that a User's Available Capacity Quantity will be allocated in the following order:

- Interruptible; then
- Firm.

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It is proposed that the allocation of a User's Available Capacity Quantity (as specified above) will be applied to the individual 'usage components' in the following order:

- Storage: then
- Transportation.

Nominations

It is proposed that in respect of the storage service at a relevant Interconnector Storage Connection Point for each Day:

- Users will be required to submit separate DM Output Nominations in respect of the Storage Connection Point which constitutes a Connected System Exit Point (as per TPD C2.2.1(a));
- Users will be required to submit separate DM Input Nominations in respect of the Storage Connection Point which constitutes a System Entry Point (as per TPD C3.2.1); and
- the DM Output Nominations and DM Input Nominations submitted in line with the above requirements will be subject to the same Matching Procedures and Rules in place at the relevant JP as per EID C1.5 and described in EID C

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It is proposed that in respect of the transportation service at a relevant Interconnector JP for each Day:

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- Users will be required to submit separate DM Output Nominations in respect of the JP which constitutes a Connected System Exit Point (as per TPD C2.2.1(a) and EID C2);
- Users will be required to submit separate DM Input Nominations in respect of the JP which constitutes a System Entry Point (as per TPD C3.2.1); and
- for the avoidance of doubt, the DM Output Nominations and DM Input Nominations submitted to the above requirements will be subject to the Matching Procedures and Rules in place at the relevant JP as per EID C1.5.

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It is proposed that in respect of Scheduling Charges at a relevant joint JP and Storage Connection Point for each Day:

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- the determination of Input Scheduling Charges for each User at an Aggregate System Entry Point will take account of the following:
 - DM Input Nominations for both the Storage Connection Point and the JP will be included in the Scheduling Input Nomination Quantity described in TPD F3.2.1(a); and
 - the UDQs for both the Storage Connection Point and the JP will be included in the Input Scheduling Quantity as described in TPD F3.2.1(b);
- the determination of Output Scheduling Charges for each User will be assessed for each (i.e. the Storage Connection Point and the JP will individually constitute Output Scheduling Points for the purposes of TPD F3.3.1(a)(ii)) and accordingly:
 - DM Output Nominations for the Storage Connection Point and the JP will be classified as separate Scheduling Output Nominated Quantities for the purposes of TPD F3.3.2(a)(i); and
 - the UDQs for the Storage Connection Point and the JP will be classified as separate Scheduling UDQs for the purpose of TPD F3.3.2(b).

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Allocations

It is proposed that in respect of the storage service at a relevant Interconnector Storage Connection Point for each Day:

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- the Entry Point Daily Quantity Delivered will be provided to the Transporter by the IO (as the Storage Operator) as per the Measurement Provisions in the relevant Network Entry Provisions (as referred to in TPD I2.5.3);
- each relevant User must submit an Entry Allocation Statement as per TPD E2.1.2 which will determine each relevant User's UDQI;
- the CSEP Daily Quantity Offtaken will be determined in accordance with the CSEP Network Exit Provisions; and
- each relevant User must submit an Exit Allocation Statement as per TPD E3.2.2 which will determine each relevant User's UDQO.

It is proposed that in respect of the transportation service at a relevant Interconnector **JP** for each Day:

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- the Measured Quantity (which is subject to the allocation provisions of EID E2 and E3) will exclude the Entry Point Daily Quantity Delivered and CSEP Daily Quantity Offtaken determined in respect of the storage service for the same Day;
- on an OBA day:
 - the UDQI for each relevant User will be determined as per EID E2.1.1(b);
 - the Entry Point Daily Quantity Delivered will be determined as per EID E2.1.1(c);
 - the UDQO for each relevant User will be determined as per EID E2.2.1(b); and
 - the CSEP Daily Quantity Offtaken will be determined as per EID E2.1.1(c).
- on a Non-OBA day:
 - the UDQI for each relevant User will be determined as per EID E3.2.2(a);
 - the Entry Point Daily Quantity Delivered will be determined as per EID E3.2.2(b);
 - the UDQI for each relevant User will be determined as per EID E3.2.2(c); and
 - the Entry Point Daily Quantity Delivered will be determined as per EID E3.2.2(d).

Charging

It is proposed that for each relevant User for each Day:

- the quantity SCQ_d will be subject to the Specific Capacity Discount for Storage
- General Non-Transmission Services Charges will not be payable in respect of the Storage Connection Point UDQI and UDQO.

6 Impacts & Other Considerations

Does this Modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

None.

Consumer Impacts

Implementation will increase the range of commercial storage service available to GB shippers to optimise trading positions. Whilst no direct impacts are foreseen, the increased optionality and efficient use of existing

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assets should help consumers indirectly through reducing balancing costs and providing an additional buffer for short term price fluctuations, which would ultimately have an economic benefit for the consumer.

Cross Code Impacts

None. The scope of the new arrangements that need to be established are limited to the UNC.

EU Code Impacts - Alignment with Retained EU Law

As a consequence of the UK's withdrawal from the European Union, the European Union (Withdrawal Agreement) Act 2020 has effectively incorporated into UK law those EU Regulations in force as at the end of the Implementation Period, therefore:

- the definition of 'Interconnector' in the EU regulations (as at that date) applies in the UK from 31st December 2020.

Regulation 2018/1999 and Directive 2019/692 revised the definition of interconnector, which is now as follows:

'interconnector' means a transmission line which crosses or spans a border between Member States for the purpose of connecting the national transmission system of those Member States or a transmission line between a Member State and a third country up to the territory of the Member States or the territorial sea of that Member State;

Article 3(2) of Regulation 2017/459 (network code on capacity allocation mechanisms in gas transmission systems) includes the following definition:

'interconnection point' means a physical or virtual point connecting adjacent entry-exit systems or connecting an entry-exit system with an interconnector, in so far as these points are subject to booking procedures by network users;

In conclusion, the additional operation of an Interconnector as a Storage Facility and additional utilisation of the connection to the NTS as an entry/exit point for the purposes of storage does not conflict with any regulatory limitation placed on the Interconnector or its connection to the NTS.

- the definition of 'Storage Facility' in the EU regulations (as at that date) applies in the UK from 31st December 2020.

The discount applied to capacity-based transmission tariffs described in Article 9(1) of Regulation 2017/460 (as amended by The Gas (Security of Supply and Network Codes) (Amendment) (EU Exit) Regulations 2019) applies in respect of a 'storage facility'. Regulation 715/2009 (as amended by The Electricity and Gas etc. (Amendment etc.) (EU Exit) Regulations 2019) defines a "**storage facility**" as:

a facility used for the stocking of natural gas and owned or operated by a natural gas undertaking, including the part of LNG facilities used for storage but excluding the portion used for production operations, and excluding facilities reserved exclusively for transmission system operators in carrying out their functions

In conclusion, the additional operation of an Interconnector for the purposes of storage is consistent with the definition of Storage Facility as this additional storage service will be available for Shippers who wish to utilise this facility (i.e. it is not reserved exclusively for use by TSOs). Therefore, as a Storage Facility, the discount afforded to capacity-based transmission tariffs described in Article 9(1) of Regulation 2017/460 at such facilities are applicable.

Central Systems Impacts

There will be impacts on Gemini and UK Link invoicing systems. These impacts are being assessed. The CDSP (Xoserve) has been consulted on all stages of development of this project and National Grid will continue to ensure this is the case.

7 Relevant Objectives

Impact of the modification on the Relevant Objectives:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	Positive
b) Coordinated, efficient and economic operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters.	Positive
c) Efficient discharge of the licensee's obligations.	Positive
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	Positive
e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers.	None
f) Promotion of efficiency in the implementation and administration of the Code.	None
g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

Enabling Interconnectors to provide additional storage services will incentivise greater use of the NTS and provide Shippers will an additional service to assist with system balancing. This will support cost recovery over a wider customer and product base, hence leading to a more economic and efficient use of the system as per Relative Objective (a) and (b).

In addition, the service provides further balancing tools for Shippers which are subject to appropriate NTS charging arrangements. This will promote a level playing field through consistency of Shipper charges across the range of balancing services as per Relevant Objective (d). Such a service creates additional optionality for Shipper Users to accommodate temporary market fluctuations and provide assistance with balancing. These benefits help better facilitate the GB market's Security of Supply and have the potential to lower balancing costs.

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Impact of the modification on the Relevant Charging Methodology Objectives:	
Relevant Objective	Identified impact
a) Save in so far as paragraphs (aa) or (d) apply, that compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;	Positive
aa) That, in so far as prices in respect of transportation arrangements are established by auction, either: <ul style="list-style-type: none"> (i) no reserve price is applied, or (ii) that reserve price is set at a level - <ul style="list-style-type: none"> (I) best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and (II) best calculated to promote competition between gas suppliers and between gas shippers; 	None
b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;	Positive
c) That, so far as is consistent with sub-paragraphs (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and	Positive
d) That the charging methodology reflects any alternative arrangements put in place in accordance with a determination made by the Secretary of State under paragraph 2A(a) of Standard Special Condition A27 (Disposal of Assets).	None
e) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

Implementation would not conflict with paragraphs 8, 9, 10 and 11 of Standard Condition 4B of the Transporter's Licence as it does not propose any changes to the Connection Charging Methodology.

Implementation would not conflict with paragraphs 2, 2A and 3 of Standard Condition 4B of the Transporter's Licence as it does not propose any changes to the process of the determination of Reserve Prices or the publication of transportation charges.

Regarding Relevant Charging Objective (a), the additional storage service at Interconnectors would be subject to the specific NTS charging arrangements applicable to other GB storage facilities. This is an accurate reflection of the fact that gas entering a GB storage facility is subsequently redelivered to the NTS.

The proposed change to the current Charging Methodology also takes account of the additional use of Interconnectors to offer a Storage Service and hence takes into account developments in the transportation business, as per Relevant Charging Objective (b).

By facilitating the increase in the options available to Users (for the avoidance of doubt, those in GB only) when seeking a storage service and ensuring that the appropriate transportation charging arrangements are in place for this, implementation better facilitates competition between those shippers (UNC Relevant Objective (d) and Relevant Charging Methodology Objective (c)). In addition, the proposed change ensures that all users of additional storage services offered by Interconnectors will incur consistent NTS transportation charges.

8 Implementation

No implementation timescales are proposed.

9 Legal Text

Text Commentary

To be provided subsequent to clarity of solution

Text

To be provided subsequent to clarity of solution

10 Recommendations

Proposer's Recommendation to Panel

Panel is asked to:

- Agree that Authority Direction should apply;
- Refer this proposal to a Workgroup for assessment for a period of six months.