Relevant Objectives

As part of the Modification process, each Modification Proposer completed **Section 7.0 - Relevant Objectives** within their Modification. As Modification 0678 and its Alternatives relate to Charging, all Proposers had to also complete the **Charging Relevant Objectives.**

For each Relevant Objective (as outlined above), an assessment was made by the Proposer stating whether the impact of the Modification Solution is negative, neutral (“none”) or positive. This is detailed in Part II of the Workgroup Report.

The Relevant Objectives for Modification 0678 and each of the Alternatives were then assessed by the 0678 Workgroup. Workgroup were asked to provide a commentary against each Relevant Objective for each Modification.

To aid the reader of this document the following table outlines which Modifications are based on Postage stamp and which are based on Capacity Weighted Distance.

Table 1: Modification basis: CWD or Postage Stamp

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| **Postage Stamp (PS) Related Modifications** | **0678A, 0678C,0678H and 0678J** |
| **Capacity Weighted Distance (CWD) Related Modifications** | **0678, 0678B. 0678D,0678E, 0678F,0678G and 0678I** |

**Table** 2below provides a high-level summary of each Proposer’s assessment against the individual Standard Relevant Objectives. Table 2 also states the version of the Modification (and the Relevant Objectives contained within it) which Workgroup considered in its assessment of the Relevant Objectives.

JO: PLEASE centralise text where possible

Table 2: Summary of Proposer's assessments against each Standard Relevant Objectives

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| **Standard Relevant Objective** | **0678** | **0678A** | **0678B** | **0678C** | **0678D** | **0678E** | **0678F** | **0678G** | **0678H** | **0678I** | **0678J** |
| **National Grid**  **V4** | **RWE**  **V3** | **Centrica**  **V3** | **SSE**  **V5** | **ENI**  **V4** | **Gateway Energy**  **V3** | **Storengy**  **V3** | **Vitol**  **V3** | **EP UK V3** | **Gazprom V5** | **South Hook Gas**  **V2** |
| a) Efficient and economic operation of the pipe-line system. | None | None | Positive | Positive | None | Positive | Positive | Positive | Positive | Positive | Positive |
| b) Co-ordinated, efficient, and economic operation of | None | None | None | Positive | None | Positive | Positive | None | None | None | None |
| (i) the combined pipe-line system, and/ or |
| (ii) the pipe-line system of one or more other relevant gas transporters. |
| c) Efficient discharge of the licensee's obligations. | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive |
| d) Securing of effective competition: | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive |
| (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. |
| 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 | None | None | None | None | None | None | None | None | None | None |
| f) Promotion of efficiency in the implementation and administration of the Code. | None | None | None | None | None | None | None | None | None | None | 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. | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive |

Workgroup Assessment of Impacts of the Modification on the Relevant Objectives.

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| **Impact of the Modification on the Relevant Objectives:** | |
| **Relevant Objective** | **Identified impact** |
| a) Efficient and economic operation of the pipe-line system. | **None** – 0678/A/D  **Positive** – 0678B/C/E/F/G/H/I/J |
| 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. | **None** – 0678/A/B/D/G/H/I/J  **Positive** – 0678C/E/F |
| c) Efficient discharge of the licensee's obligations. | **Positive** – 0678/A/B/C/D/E/F/G/H/I/J |
| 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** – 0678/A/B/C/D/E/F/G/H/I/J |
| 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** – 0678/A/B/C/D/E/F/G/H/I/J |
| f) Promotion of efficiency in the implementation and administration of the Code. | **None** – 0678/A/B/C/D/E/F/G/H/I/J |
| 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. | **Positive** – 0678/A/B/C/D/E/F/G/H/I/J |

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Workgroup provided and overall commentary against the suite of 0678 Modifications and then went onto assess each individual Modification.

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| 1. **Efficient and economic operation of the pipe-line system** | |
|  | **Workgroup comments** |
| **All CWD Modifications**  **(0678, 0678B, 0678D, 0678E, 0678F, 0678G, 0678I)** | National Grid clarified that it did not expect to see any operational benefits or detriments as a result of the Modification 0678.  Some Workgroup Participants noted that there may be behavioural changes as a result of locational signals (or lack of) and changes in booking behaviours compared to the FCC.  Some Workgroup Participants highlighted their view that the distorted locational signals from CWD may negatively impact on the efficient and economic operation of the pipe-line system. |
| **All Postage-stamp Modifications**  **(0678A, 0678C, 0678H, 0678J)** | Some Workgroup Participants noted that the Proposers of the Postage Stamp Modifications do not believe that their Modifications impact positively on this Relevant Objective but rather remains neutral for this Relevant Objective. This is because the aim of the suite of Postage Stamp Modifications is the recovery of historical sunk costs and not the provision of signals to Users in relation to operation of the network.  Some Workgroup Participants highlighted their view that compared with the current arrangements, the absence of locational signals from Postage Stamp may negatively impact on the efficient and economic operation of the pipe-line system. |
| **0678** | No additional comments. |
| **0678A** | No additional comments. |
| **0678B** | Some Workgroup Participants noted that Modifications that include an Optional Charge, potentially facilitate this better than those that do not. This is because of the incentive of where to locate and flow on the network.  For example, at St Fergus, gas transported to Peterhead power station (approx. 400m) on a private pipeline would result in a change of compressor use on the NTS and therefore impact system operation.  A Workgroup Participant noted that this Relevant Objective is unlikely to be positively impacted because it is referring to system operation which is unlikely to be affected by a ‘Shorthaul’ type charge. |
| **0678C** | Workgroup Participants noted that the Storage Discount proposed enables the NTS, as System Operator to benefit from the counter injection and withdrawal in relation to storage. Without the Storage Discount these facilities would be detrimentally impacted which in turn would have a negative impact the operation of the NTS and this Relevant Objective a).  Other Workgroup Participants noted that the minimum 50% Storage Discount should be sufficient to ensure efficient operation of the NTS in relation to Storage.  Workgroup Participants noted that Ofgem (in its 0621rejection letter) had observed that:  *“Therefore, under a number of the UNC621 modifications (i.e. those which propose a storage discount less than 86%), some storage facilities may encounter challenges in continuing operations in the medium to longer-run. “*  Workgroup Participants noted that if this transpired, it could have a potentially detrimental impact on the operation of the system. |
| **0678D** | Some Workgroup Participants noted that Modifications that include an Optional type Charge potentially facilitate this better than those that do not because of the incentive of where to locate and flow on the network. An example is that if, at St Fergus, gas transported to Peterhead power station (approx. 400m) on a private pipeline would result in change of compressor use on the NTS and therefore positively impact system operation.  A Workgroup Participant noted that this Relevant Objective is unlikely to be positively impacted because it is referring to system operation which is unlikely to be affected by a ‘Shorthaul’ type charge.  A Workgroup Participant noted that encouraging gas to flow shorter distances (e.g. via ‘Shorthaul’) is likely to positively impact this Relevant Objective.  From Eni: (Workgroup response required in order for this to be included)  The whole charging package contained in this Modification 0678D has been designed to encourage fair and efficient access to the pipeline system. The expected more stable and predictable charges compared with what is generated from the current methodology should encourage more stable and predictable use of the system by shippers - something that should in turn help National Grid generate accurate capacity usage forecasts for setting charges in future. The removal of free capacity products is an important aspect of the proposal as is the inclusion of an NTS Optional Capacity charge (to replace the Optional Commodity Charge). Without an NTS Optional Capacity charge there will likely be an increased incentive for the use of some system bypass pipelines because some of the charges being generated by CWD produce counter-intuitive outcomes – high exit charges for large sites located close to entry points (the same argument could be made had the reference price methodology been Postage Stamp). By improving the predictability of the use of the system, National Grid should be better placed and better prepared to operate it in a more efficient manner. By encouraging efficient use of the system by Users (e.g. by avoiding inefficient bypass) National Grid will ensure that its operations can be economically optimised so that costs are kept as low as possible on a pence / kWh flowed basis.  At the same time, this Modification 0678D recognises that the current level of Optional Commodity Charge discounts applied to Transmission Owner (TO) charging has become distorted in recent years by its structural link to the rising level of TO Commodity charges. Modification 0678D is therefore designed to promote efficiency and economy in the use of the NTS pipeline system by reducing the level of revenue under-recovery to a more appropriate level, whilst increasing the costs paid by Users shipping along routes which qualify for the NTS Optional Capacity charge in line with the costs for building and maintaining a bypass pipeline of the same distance. Where Users/customers are able to choose between the costs of using the NTS or building and maintaining a bypass pipeline, and where the cost of using the NTS are a reasonable proxy for private ownership, the outcome will be efficient. A cost based Optional charging methodology provides a robust, enduring basis for dis-incentivising inefficient NTS bypass. |
| **0678E** | No additional comments. |
| **0678F** | No additional comments. |
| **0678G** | Some Workgroup Participants noted that Modifications that include an Optional type Charge, potentially facilitate this objective better than those that do not. This is because of the incentive of where to locate and flow on the network. For example, at St Fergus, gas transported to Peterhead power station (approx. 400m) on a private pipeline would result in a change of compressor use on the NTS and therefore positively impact system operation.  A Workgroup Participant noted that this Relevant Objective is unlikely to be positively impacted because it is referring to system operation which is unlikely to be affected by a ‘Shorthaul’ type charge.  A Workgroup Participant noted that encouraging gas to flow shorter distances (e.g. via ‘Shorthaul’) is positively impacting this Relevant Objective. |
| **0678H** | Some Workgroup Participants noted that Modifications that include an Optional type Charge potentially facilitate this better than those that do not because of the incentive of where to locate and flow on the network. For example, at St Fergus, gas transported to Peterhead power station (approx. 400m) on a private pipeline would result in a change of compressor use on the NTS and therefore positively impact system operation.  A Workgroup Participant noted that this Relevant Objective is unlikely to be positively impacted because it is referring to system operation which is unlikely to be affected by a ‘Shorthaul’ type charge.  A Workgroup Participant noted that encouraging gas to flow shorter distances (e.g. via ‘Shorthaul’) is positively impacting this Relevant Objective. |
| **0678I** | Some Workgroup Participants noted that inclusion of the Wheeling Charge potentially facilitates this Relevant Objective better than those that do not include any ‘Shorthaul’ type charge, because this encourages the flowing of the gas through the NTS rather than through a private pipeline.  A Workgroup Participant noted that this Relevant Objective is unlikely to be positively impacted because it is referring to system operation which is unlikely to be affected by the Wheeling charge.  A Workgroup Participant noted that encouraging gas to flow shorter distances (e.g. via ‘shorthaul’) is likely to positively impact this Relevant Objective. |
| **0678J** | Workgroup noted that 0678J contains the same Optional Charge solution as that given in 0678G and 0678H. Therefore, some Workgroup Participants noted that Modifications that include an Optional type Charge potentially facilitate this Relevant Objective better than those that do not, because of the incentive of where to locate and flow on the network.  A Workgroup Participant noted that this Relevant Objective is unlikely to be positively impacted because it is referring to system operation which is unlikely to be affected by a ‘Shorthaul’ type charge.  An additional example of where not including an optional type charge will negatively impact the operation of the system can be seen at Milford Haven. National Grid has determined, in a recent PARCA application, that funded incremental capacity is required to release additional capacity at Milford Haven. If a private pipeline was to be built instead of the NTS incremental investment then this reduces the local demand for the gas which results in the gas from Milford Haven having travel further into the network prior to being off taken without the commitment from an applicant, therefore having a negative impact on the operation of the pipeline.  A Workgroup Participant noted that encouraging gas to flow shorter distances (e.g. via ‘shorthaul’) is positively impacting this Relevant Objective. |

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| 1. **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.** | |
|  | **Workgroup comments** |
| **All PS Modifications**  **(0678A, 0678C, 0678H, 0678J)** | Workgroup Participants noted that Postage Stamp methodology does not positively impact this Relevant Objective because the aim is recovery of historical sunk costs and the aim is not to provide signals to Users in relation to operation of the network.  Some Workgroup Participants noted Postage Stamp delivers no locational signals in that the charges do not reflect any investment or operation of the network. This approach results in all Users will be paying the same price, this could be argued to be undue cross subsidy and undue discrimination wherein Users flowing gas for short distances are subsidising those who flow across long distances. Compressors are used to transport gas across long distances and therefore this is more accurately reflected in the CWD methodology.  Some Workgroup Participants noted that under a Postage Stamp methodology there could be no added incentive to bring gas onto the network at a particular Entry Point. For example, bringing gas onto the network at a distance far from where it is intended to be consumed is not conducive to operational efficiency, since it would require significant Capital Expenditure and Operational Expenditure as investments in NTS compression to move the gas around the network. (This would also have a negative environmental impact).  Some Workgroup Participants noted that lack of materiality of compression costs must be considered.  Some Workgroup participants noted that PS delivers a higher price at some points than CWD does. |
| **All CWD Modifications**  **(0678, 0678B, 0678D, 0678E, 0678F, 0678G, 0678I)** | Some Workgroup Participants noted CWD is detrimental in relation to Relevant Objective b) in relation to operation of the network because the locational signals given are essentially given by the distance matrix rather than investment or operation of the network. Any behavioural responses to these signals will potentially be unhelpful and detrimental to the network.  Some Workgroup Participants noted that under CWD higher prices at the extremes of the network may have a negative effect on security of supply which is an operational efficiency issue (This is highlighted in the Ofgem Decision Letter on 0621[[1]](#footnote-1)). |
| **0678** | No additional comments. |
| **0678A** | No additional comments. |
| **0678B** | No additional comments. |
| **0678C** | Some Workgroup Participants noted that storage provides support to the entire network. Proximity to demand and flow response to changes in aggregate demand ensures that overall system pressures are supported. The 80% Storage Discount (compared with a 50% discount) is designed to ensure that storage facilities should continue to provide services to the NTS. |
| **0678D** | No additional comments. |
| **0678E** | Some Workgroup Participants noted that storage provides support to the entire network. Proximity to demand and flow response to changes in aggregate demand ensures that overall system pressures are supported. The 80% Storage Discount (compared with a 50% discount) is designed to ensure that storage facilities should continue to provide services to the NTS. |
| **0678F** | Some Workgroup Participants noted that storage provides support to the entire network. Proximity to demand and flow response to changes in aggregate demand ensures that overall system pressures are supported. The 80% Storage Discount (compared with a 50% discount) is designed to ensure that storage facilities should continue to provide services to the NTS. |
| **0678G** | No additional comments. |
| **0678H** | No additional comments. |
| **0678I** | No additional comments. |
| **0678J** | No additional comments. |

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| 1. **Efficient discharge of the licensee's obligations** | |
|  | **Workgroup comments** |
| **All Modifications** | Some Workgroup Participants noted that the removal of existing contract volume and revenue before calculating the reference prices leads to a greater distortion between the prices paid by existing contract holders and those making new capacity purchases. Whilst this has been a feature of the regime for some time due to entry capacity purchases made on a fixed price basis not being indexed in any way, the situation becomes extreme which is inconsistent with the licensee’s obligations to avoid undue preference in the supply of transportation services. It is acknowledged that existing contracts have been purchased in monthly or quarterly blocks which cannot be changed whilst new purchases can be profiled more closely to meet expected flows. This may not be sufficient to offset the price disparity. Some Workgroup Participants expect Ofgem to consider this in its Impact Assessment, along with whether this creates a barrier to entry. |
| **0678** | Workgroup Participants were satisfied with National Grid‘s explanation which related to Standard Special Condition A5[[2]](#footnote-2). |
| **0678A** | Workgroup Participants were satisfied with RWE‘s explanation which was based entirely on National Grid’s. |
| **0678B** | Some Workgroup Participants noted that 0678B is a complete charging solution which has a ‘Shorthaul’ type charge, delivered at the same time as the other changes and therefore it better facilitates achievement of this relevant objective c)  Other Workgroup Participants noted that having a ‘Shorthaul’ type charge was not a requirement of TAR NC; a method of managing inefficient bypass can be made via a separate Modification (e.g. UNC0670R noting though that this is only a Review).  Some Workgroup Participants noted that licensees’ obligations include cost reflectivity, clearing allocation and undue preference.  Some Workgroup Participants suggested that 0678B with CWD **and** the optional charge goes some way to compensate for the CWD effect of higher charges at exit points close to entry points and thus improves its cost reflectivity better than if the optional charge were not included.  Some Workgroup Participants noted that the removal of existing contract volume and revenue before calculating the reference prices leads to a greater distortion between the prices paid by existing contract holders and those making new capacity purchases. Whilst this has been a feature of the regime for some time due to entry capacity purchases made on a fixed price basis not being indexed in any way, the situation becomes extreme which is inconsistent with the licensee’s obligations to avoid undue preference in the supply of transportation services. It is acknowledged that existing contracts have been purchased in monthly or quarterly blocks which cannot be changed whilst new purchases can be profiled more closely to meet expected flows. This may not be sufficient to offset the price disparity. Some Workgroup Participants stated that they expect Ofgem to consider this in its Impact Assessment, along with whether this creates a barrier to entry. |
| **0678C** | Workgroup Participants were satisfied with SSE‘s explanation which was based entirely on National Grid’s. |
| **0678D** | No additional comments. |
| **0678E** | No additional comments. |
| **0678F** | No additional comments. |
| **0678G** | No additional comments. |
| **0678H** | No additional comments. |
| **0678I** | No additional comments. |
| **0678J** | Workgroup Participants were satisfied with South Hook Gas’ explanation which was based entirely on National Grid’s.  Some Workgroup Participants noted that a significant proportion of Existing Contracts were typically concluded for peak capacity on a long-term basis in order to signal initial capacity to support capital project investment and/or to provide assurance and visibility as to secured capacity costs over the term of the contract. This differs materially from the decision-making underpinning short term capacity contracting and the methodology for calculating the FCC values. |

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| 1. **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**. | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup wished to note that this Standard Relevant Objective d) is almost identical to Charging Relevant Objective 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;*  Therefore, the Workgroup’s commentary relating to Charging Relevant Objective c) to be found above should be considered for this Standard Relevant Objective d) as well as the comments given below in this table.  Workgroup Participants noted the linkage between cost reflectivity and facilitating competition. Predictability and stability of charges are also important factors in facilitating competition.  Workgroup Participants noted that TAR NC may in some cases limit the benefits that can be brought to bear.  Some Workgroup Participants noted that all CWD based modifications are broadly cost reflective because they use the TAR NC drivers of capacity and distance.  Other Workgroup Participants noted that for a network that is no longer expanding and has excess capacity, then locational signals are not relevant in which case, the recovery of sunk costs is best achieved using a uniform non-discriminatory charge which is achieved using Postage Stamp Model.  One Workgroup Participant noted that the use of the system is changing and indeed in respect of Milford Haven there is an expectation that incremental capacity will be provided.  Some Workgroup Participants suggested gas destined for Milford Haven is unlikely to go to a different terminal.  Some Workgroup Participants noted that neither the CWD or Postage Stamp reserve prices are forwarding looking and do not represent the cost of incremental capacity therefore it is not reasonable to justify either of them as cost reflective in relation to incremental capacity investment.  **Existing Contracts**  The Workgroup noted that excluding Existing Contract revenue and volume from the methodology prior to the determination of reference prices leads to a significant difference in the price paid by Existing Capacity holders and parties buying capacity after 06 April 2017. This could have a detrimental impact on competition between these parties and create a barrier to entry. In Gas Year 2020/21 Existing Contracts account for 64% of entry FCC but only 16% of entry revenue. This results in the average price for new capacity purchases at beach terminals being 10x higher than the average price paid for existing capacity. (See analysis provided by Vermillion[[3]](#footnote-3)).  Some Workgroup Participants noted that TAR NC Article 35 (Existing contracts**)** does provide protection to existing contracts. It should also be noted that under the current methodology, existing contract holders pay higher charges in the round (an additional TO commodity charge) than those who buy on the day.  Workgroup Participants summarised that the current situation already provides an outcome where the same capacity product is charged at a different price depending on when you purchase it. This differential is likely to be exacerbated with a change of RPM. Specifically, the move away from a highly commodity-based charge (as is presently the case) to a mainly capacity based charge. This will be seen initially as a transition effect until such a time as the existing contracts expire.  This is a feature of all Modifications currently under consideration.  Some Workgroup Participants noted that this would be resolved by the introduction of a hand back mechanism. |
| **All Postage Stamp Modifications** | All Entry Users pay the same price and all Exit Users pay the same price and therefore some Workgroup Participants believe it can be argued that there is a degree of cross subsidy and discrimination because Users are not paying roughly in proportion to the costs, they create on the gas network. PS does not recognise any differentiation of costs for different Users by definition.  Other Workgroup Participants noted that the methodology does not discriminate and does not create cross subsidy because it is based on allocation of historical sunk costs by capacity. |
| **All CWD Modifications** | Entry Users and Exit Users pay a price weighted by distance and FCC and therefore some Workgroup Participants believe it can be argued that there is a degree of cross subsidy and discrimination because Users are not paying roughly in proportion to the costs, they create on the gas network.  Other Workgroup Participants noted that the methodology does not discriminate and does not create cross subsidy because it is based on allocation of historical sunk costs by distance and capacity.  Some Workgroup Participants noted that the distance does not accurately apportion the historical sunk costs and therefore is not cost reflective and could be discriminatory against certain entry points on the system. For example, at Milford Haven the CWD model allocated costs based on the average distance to all exit points from entry terminal. However National Grid have published network analysis for Milford Haven (as part of UNC Modification 0645 - Amending the Oxygen content limits in the Network Entry Agreement at South Hook LNG)[[4]](#footnote-4). This network analysis (‘heat map’) indicates this is not possible for Milford Haven to supply all Exit Points on the NTS. Therefore, showing the distance driver under the proposed CWD to be discriminatory. A more appropriate method may have been to use relevant flow scenarios, which more accurately reflect the use of the network, however this was not considered in any of the CWD modifications.  Other Workgroup Participants wished to note in reference to historical sunk costs that within the RIIO-T2 playback document[[5]](#footnote-5) the expected range of future cost largely covers maintenance and mains replacement. This confirms that there is significant ongoing cost of maintaining the network. |
| **0678** | Some Workgroup Participants expressed concern about the FCC Methodology where it sits outside of the UNC and the governance arrangements around it. This is felt to have a negative impact on competition.  Others were not sure there was a definitive link between governance arrangements outside the UNC and a negative impact on competition, rather there may be a potential impact on competition.  Other Workgroup Participants noted that Ofgem has the opportunity to intervene, should it need to do so.  Some Workgroup Participants noted that the current methodology on establishing the TO commodity charges is undertaken by National Grid without the same UNC governance.  Some Workgroup Participants noted that if the FCC Methodology is not in the UNC, it could be changed at National Grid’s discretion and could result in volatile unpredictable tariffs which could negatively impact competition.  Others disagreed.  Workgroup Participants expressed concern about the sources of data for the FCC. Workgroup participants expressed concern that without further clarification it cannot be certain that these will comply with Article 29 and 30. Having these within the UNC will ensure publication to interested parties in a timely and efficient manner thereby improving competition. At present Modification 0678 does not do this. |
| **0678A** | Some Workgroup Participants noted that for 0678A the FCC methodology sits under the UNC, which should provide greater regulatory oversight and more stability in relation to the FCC. This should be better for competition.  Some Workgroup Participants were of the view that there was a lack of clarity as to how this would function in practice. |
| **0678B** | Some Workgroup Participants noted that effective competition relates to cost reflective charges.  Some Workgroup Participants noted that CWD and a suitable Optional charge is an improvement over CWD and no optional charge as it addresses the high non-cost-reflective charges at proximate Entry and Exit Points. Overall CWD and an optional charge is an improvement over CWD and no optional charge and is thus better for competition because it is considered due discrimination that is fully justified.  Other Workgroup Participants expressed the view that an Optional type charge maintains undue discriminatory treatment for certain Users. This will have a detrimental impact on competition.  Some Workgroup Participants noted the CMA ruling of 2007 which referred to a test for discrimination as to whether two parties are relevantly similar which may justify different treatment.  Some Workgroup Participants noted that for 0678B the FCC methodology is defined in the UNC, which should provide greater regulatory oversight and more stability in relation to the FCC. This should be better for competition.  Some Workgroup Participants considered that this approach best facilitated competition compared with other Modifications because it gives the greatest degree of certainty to Users of the network. Parties other than National Grid can propose and progress changes to the methodology via the normal UNC Modification process as a result. |
| **0678C** | Some Workgroup Participants noted that for 0678C the FCC methodology is defined in the UNC, which should provide greater regulatory oversight and more stability in relation to the FCC. This should be better for competition.  Some Workgroup Participants considered that this approach best facilitated competition compared with other Modifications because it gives the greatest degree of certainty to Users of the network. Parties other than National Grid can propose and progress changes to the methodology via the normal UNC Modification process as a result.  Some Workgroup Participants noted that under 0678C Revenue Recovery Charges are applied to Existing Entry Contracts and new entrants which will minimise price distortion and therefore this is better for competition.  Some Workgroup Participants noted that the under 0678C the non-application of Revenue Recovery Charges associated with Existing contracts at Storage sites compared to non-Storage sites may be considered undue discrimination.  Some Workgroup Participants highlighted in Ofgem’s GTCR final decision letter they acknowledged that gas parked in storage has already paid revenue recovery charges to enter the NTS and then exit the NTS and to charge Revenue Recovery Charges on storage flows again would be double counting.  Some Workgroup Participants highlighted that not all Storage facilities are captured within this proposal, which may negatively impact competition by treating the same class of Users in a different way.  The Proposer’s view is that the Rough facility referred to above is no longer a storage site and is therefore not treating the same class of Users in a different way.  Some Workgroup Participants highlighted the existing capacity at Easington and Abandoned Storage Capacity at Bacton was procured for the sole purpose of providing access to storage and therefore ought to be given the same treatment as other Storage sites.  Workgroup Participants noted that with respect to an 80% discount rather than a 50% discount for storage, there is a ~1% -2 % increase to all other Users charges using the National Grid sensitivity tool for 2019/20 and 2020/21 (from Vermilion’s analysis material).  Workgroup Participants noted Ofgem’s comments that Storage facilities may be detrimentally impacted if the minimum (50%) discount is provided. The Workgroup noted that two storage facilities had closed within the last year due to adverse market conditions. This may impact on both competition within the storage market (due to concentration of market power) and within the market for (gas supply) flexibility, security of supply and network investment. Some Workgroup participants expect Ofgem to assess (through its RIA) whether the increased cost (1-2% for all other Users) is justified in this case.  Some Workgroup participants agreed that it is due discrimination.  Workgroup Participants noted the existence of the GSOG/WWA report[[6]](#footnote-6) justifying the 80% Storage discount but had not had time to review this. |
| **0678D** | Workgroup Participants expressed concern about the FCC Methodology where it sits outside of the UNC and the governance arrangements around it. This is felt to have a negative impact on competition.  Some Workgroup Participants noted that the current methodology on establishing the TO commodity charges is undertaken by National Grid without the same UNC governance.  Some Workgroup Participants noted that if the FCC Methodology is not in the UNC, it could be changed at National Grid’s discretion and could result in volatile unpredictable tariffs which could negatively impact competition.  Others disagreed.  Workgroup Participants expressed concern about the sources of data for the FCC. Workgroup participants expressed concern that without further clarification it cannot be certain that these will comply with TAR NC Article 29 and TAR NC Article 30. Having these within the UNC will ensure publication to interested parties in a timely and efficient manner thereby improving competition. At present Modification 0678D does not do this. |
| **0678E** | Workgroup Participants noted that with respect to an 80% discount rather than a 50% discount for storage, there is a ~1% -2 % increase to all other Users charges using the National Grid sensitivity tool for 2019/20 and 2020/21 (from Vermilion’s analysis material).  Workgroup Participants noted Ofgem’s comments that Storage facilities may be detrimentally impacted if the minimum (50%) discount is provided. The Workgroup noted that two storage facilities had closed within the last year due to adverse market conditions. This may impact on both competition within the storage market (due to concentration of market power) and within the market for (gas supply) flexibility, security of supply and network investment. Some Workgroup Participants expect Ofgem to assess (through its Regulatory Impact Assessment (RIA)) whether the increased cost (1-2% for all other Users) is justified in this case.  Some Workgroup Participants agreed that it is due discrimination.  Workgroup Participants noted the existence of the GSOG/WWA report justifying the 80% Storage discount but had not had time to review this. |
| **0678F** | Some Workgroup Participants noted 0678F has the addition of a capacity hand back type scheme which may introduce an amount of volatility to future charges, which may be detrimental to competition. The effect of hand back would be an increase in tariffs for all Entry Users.  Other Workgroup Participants noted that without the hand back Users could hold capacity that they are no longer wished to use.  Workgroup Participants noted that with respect to an 80% discount rather than a 50% discount for storage, there is a ~1% -2 % increase to all other Users charges using the National Grid sensitivity tool for 2019/20 and 2020/21 (from Vermilion’s analysis material).  Workgroup Participants noted Ofgem’s comments that Storage facilities may be detrimentally impacted if the minimum (50%) discount is provided NEED LINK). The Workgroup noted that two storage facilities had closed within the last year due to adverse market conditions. This may impact on both competition within the storage market (due to concentration of market power) and within the market for (gas supply) flexibility, security of supply and network investment. Some Workgroup participants expect Ofgem to assess (through its RIA) whether the increased cost (1-2% for all other Users) is justified in this case.  Some Workgroup participants agreed that it is due discrimination.  Workgroup participants noted the existence of the GSOG/WWA report justifying the 80% Storage discount but had not had time to review this. |
| **0678G** | Some Workgroup Participants noted that effective competition relates to cost reflective charges.  Some Workgroup Participants noted that CWD and a suitable Optional charge is an improvement over CWD and no optional charge as it addresses the high non-cost-reflective charges at proximate Entry and Exit Points. Overall CWD and an optional charge is an improvement over CWD and no optional charge and is thus better for competition because it is considered due discrimination that is fully justified.  Other Workgroup Participants expressed the view that an Optional type charge maintains undue discriminatory treatment for certain Users. This will have a detrimental impact on competition.  Some Workgroup Participants noted the CMA ruling of 2007 which referred to a test for discrimination as to whether two parties are relevantly similar which may justify different treatment. |
| **0678H** | Some Workgroup Participants noted that effective competition relates to cost reflective charges.  Some Workgroup Participants noted that PS and a suitable Optional charge is an improvement over PS and no optional charge as it addresses the high non-cost-reflective charges at proximate Entry and Exit Points. Overall PS and an optional charge is an improvement over PS and no optional charge and is thus better for competition because it is considered due discrimination that is fully justified.  Other Workgroup Participants expressed the view that an Optional type charge maintains undue discriminatory treatment for certain Users. This will have a detrimental impact on competition.  Some Workgroup Participants noted the CMA ruling of 2007 which referred to a test for discrimination as to whether two parties are relevantly similar which may justify different treatment. |
| **0678I** | NEED TEXT HERE |
| **0678J** | Some Workgroup Participants noted that PS and a suitable Optional charge is an improvement over PS and no optional charge as it addresses the high non-cost-reflective charges at proximate Entry and Exit Points. Overall PS with an optional charge is an improvement over PS and no optional charge and is thus better for competition because it is considered due discrimination that is fully justified.  One Workgroup Participant expressed the view that an Optional type charge maintains undue discriminatory treatment for certain Users. This will have a detrimental impact on competition.  Some Workgroup Participants noted the CMA ruling of 2007 which referred to a test for discrimination as to whether two parties are relevantly similar which may justify different treatment. |

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| 1. **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.** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup participants agreed this was not relevant. |

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| 1. **Promotion of efficiency in the implementation and administration of the Code.** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup participants agreed this was not relevant. |

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| **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.** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup Participants noted that all 0678 Modifications under consideration are an improvement over the current charging methodology, i.e. they positively impact this Relevant Objective g).  Workgroup Participants wished to highlight to readers of the Workgroup Report, the UNC Modification Panel and Ofgem, that the section of the Workgroup Report should be read in conjunction with **Section 4.9 of the Workgroup Report – TAR NC Compliance Assessments.** In addition, readers should consult the individual compliance assessments contained as appendices to the Modifications or referenced in Part II.  Workgroup participants noted that it could be argued that 0678 and 0678A provide two foundational Modifications with what could be argued as a minimum approach implementation of TAR NC. Other Modifications add in additional areas felt to be of importance to their Proposers which can be justified separately under TAR NC whilst it should be noted that UNC 0670R could be argued to be doing this too.  Workgroup participants noted that in relation to the potential for non-01 October Effective Dates, that these could be non-compliant with TAR NC Article 6 (3) due to the IP charges being set for a year.  Workgroup Participants noted that Modifications 0678C and 0678I only allow for 01 October Effective Dates.  Workgroup Participants noted that Ofgem will take this issue into account and that Ofgem has indicated to Workgroup that Ofgem appreciates the flexibility to implement on a non-01 October Effective Date.  Workgroup Participants recognised that Ofgem will have to make their own assessment on Compliance. |

**Table two - A summary of each Modification and the Proposer’s assessment against each Charging Methodology Relevant Objectives.**

The table below which provides a summary of the Proposer’s assessment against each Charging Methodology Relevant Objective. It also includes details of the version of the Modification (and the Relevant Objectives contained within it) have been considered as part of the Workgroup’s assessment of the Charging Methodology Relevant Objectives.

PLEASE centralise text where possible

Table 3: Summary of Proposer's assessment against each Charging Methodology Relevant Objectives

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| **Charging Relevant Objective** | **0678** | **0678A** | **0678B** | **0678C** | **0678D** | **0678E** | **0678F** | **0678G** | **0678H** | **0678I** | **0678J** |
| **National Grid**  **V2** | **RWE**  **V2** | **Centrica**  **V2** | **SSE**  **V3** | **ENI**  **V1** | **Gateway Energy**  **V1** | **Storengy**  **V1** | **Vitol**  **V1** | **EP UK**  **V1** | **Gazprom**  **V1** | **South Hook Gas**  **V1** |
| 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 | None | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive |
| aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:  no reserve price is applied, or  that reserve price is set at a level -  (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; | Positive | None | Positive | None | Positive | Positive | Positive | Positive | Positive | Positive | Positive |
| b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business; | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | 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; | Positive | None | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | 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 | None | None | None | None | None | None | None | None | None | 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. | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive | Positive |

Workgroup Assessment of Impacts of the modification on the Relevant Charging Methodology Objectives.

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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 – 0678/B/C/D/E/F/G/H/I/J  None – 0678A |
| aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:   1. no reserve price is applied, or 2. that reserve price is set at a level -   (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; | Positive – 0678/B/D/E/F/G/H/I/J  None – 0678A/C |
| b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business; | Positive – 0678/A/B/C/D/E/F/G/H/I/J |
| 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; | Positive – 0678/B/C/D/E/F/G/H/I/J  None – 0678A |
| 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 - 0678/A/B/C/D/E/F/G/H/I/J |
| 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. | Positive – 0678/A/B/C/D/E/F/G/H/I/J |

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| **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;** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup noted that cost reflectivity is subjective and is not defined for this Relevant Objective.  Some Workgroup Participants noted that for this Relevant Objective, it is very difficult to differentiate between CWD and PS as the main RPM. A case can be made for either or both. In which case, it may be that the other Relevant Objectives are more pertinent for the assessment of these 0678 Modifications.  Some Workgroup participants noted that there may be a difference between ‘costs incurred’ as defined in TAR NC and the allowed revenue as defined by National Grid’s license.  Some Workgroup Participants noted that any of the methodologies propose a method of distribution of revenue across the network (operation under revenue control).  Some Workgroup Participants noted that use of CWD cost drivers (a combination of capacity and distance) better reflect the cost drivers of investment in the network compared with PS. PS is not designed to reflect any drivers of cost.  Some Workgroup Participants noted however, that the distance drivers under CWD model assume the ability to flow from every entry point to every exit point and do not realistically reflect the use of the network and therefore incorrectly apportions network costs, leading to potential discriminatory pricing for certain sites. A more appropriate method may have been to use relevant flow scenarios, which reflect the use of the network, however this was not considered in any of the modifications. |
| **0678** | No additional comments. |
| **0678A** | Workgroup noted the material in Annex 1: “0678A Some thoughts on Cost Recovery associated with 0678A Postage Stamp RPM” This can be found at the end of the Analysis prepared by RWE focusing on 0678A:  <http://www.gasgovernance.co.uk/0678/Analysis>  Workgroup noted this analysis and the Proposers assessment against this Relevant Objective. |
| **0678B** | Some Workgroup participants suggested that 0678B with CWD and the optional charge goes some way to compensate for the CWD effect of higher charges at exit points close to entry points and thus improves its cost reflectivity better than if the optional charge were not included. |
| **0678C** | No additional comments. |
| **0678D** | Some Workgroup participants suggested that 0678D with CWD and the optional charge goes some way to compensate for the CWD effect of higher charges at Exit Points close to Entry Points and thus improves its cost reflectivity better than if the optional charge were not included. |
| **0678E** | No additional comments. |
| **0678F** | No additional comments. |
| **0678G** | Some Workgroup participants suggested that 0678G with CWD and the optional charge goes some way to compensate for the CWD effect of higher charges at Exit Points close to Entry Points and thus improves its cost reflectivity better than if the optional charge were not included. |
| **0678H** | Some Workgroup participants suggested that 0678H with PS and the optional charge goes some way to compensate for the effect of higher charges at Exit Points close to Entry Points and thus improves its cost reflectivity better than if the optional charge were not included. |
| **0678I** | Some Workgroup Participants suggested that 0678I with CWD and the Wheeling charge goes some way to compensate for the CWD effect of higher charges at routes with zero km distance and thus improves its cost reflectivity better than if the Wheeling charge were not included. |
| **0678J** | Some Workgroup participants suggested that 0678J with PS and the optional charge goes some way to compensate for the effect of higher charges at Exit Points close to Entry Points and thus improves its cost reflectivity better than if the optional charge were not included. |

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| **aa) That, in so far as prices in respect of transportation arrangements are established by auction, either:**   1. **no reserve price is applied, or** 2. **that reserve price is set at a level -** 3. **best calculated to promote efficiency and avoid undue preference in the supply of transportation services; and** 4. **best calculated to promote competition between gas suppliers and between gas shippers;** | | |
|  | **Workgroup comments** | |
| **All Modifications** | Some Workgroup Participants noted that moving to multipliers set to 1 mean that short and long term purchases will in future be on the same footing.  Some Workgroup Participants suggested that this addresses the avoidance of undue preference.  Some Workgroup Participants considered that drawing the comparison to the electricity TCR is potentially an over simplification if it were to be applied to the gas industry.  Some Workgroup Participants noted that competition is best facilitated when supported by cost reflective charges. Economic principles say that cost reflective charges should reflect the forward-looking marginal costs with residuals recovered uniformly (in a flat non-distortive manner) [[7]](#footnote-9).  One of the main principles in the electricity TCR is reduction of harmful distortions by separating charges into forward looking and residual charges. It can be argued that for the gas network, the focus could be on the residual charges.  Some Workgroup Participants felt that this is best achieved through the use of PS Methodology.  Other Workgroup Participants felt that retaining a locational element is appropriate through the use of CWD. | |

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| **b) That, so far as is consistent with sub-paragraph (a), the charging methodology properly takes account of developments in the transportation business;** | |
|  | **Workgroup comments** |
| **All Modifications** | Some Workgroup Participants noted compliance with TAR NC can be considered a development in the transportation business.  Workgroup Participants agreed with Proposers that in implementing a new RPM in line with TAR NC this Relevant Objective is furthered. |

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| **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;** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup wished to note that this Charging Relevant Objective c) is almost identical to Standard Relevant Objective 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.*  Therefore, the Workgroup’s commentary relating to Standard Relevant Objective d) to be found above should be considered for this Charging Relevant Objective c) as well as the comments given below in this table.  Some Workgroup Participants noted that all CWD based modifications are broadly cost reflective because they use the TAR NC drivers of capacity and distance.  Other Workgroup participants noted that for a network that is no longer expanding and has excess capacity, then locational signals are not relevant in which case, the recovery of sunk costs is best achieved using a uniform non-discriminatory charge which is achieved using Postage Stamp Model.  One Workgroup participant noted that the use of the system is changing and indeed in respect of Milford Haven there is an expectation that incremental capacity will be provided.  Some Workgroup participants suggested gas destined for Milford Haven is unlikely to go to a different terminal.  A Workgroup participant noted that neither the CWD or PS reserve prices are forwarding looking and do not represent the cost of incremental capacity therefore it is not reasonable to justify either of them as cost reflective in regards to incremental capacity investment. In fact, with the current regulatory framework, both CWD and PS could result in a user applying for incremental capacity paying in excess of the actual NTS investment costs, negatively impacting competition and providing increased barriers to entry. |
| **0678** | No additional comments. |
| **0678A** | No additional comments. |
| **0678B** | Some Workgroup Participants noted that effective competition relates to cost reflective charges.  Some Workgroup Participants noted that CWD and an optional charge is an improvement over CWD and no optional charge. |
| **0678C** | No additional comments. |
| **0678D** | No additional comments. |
| **0678E** | No additional comments. |
| **0678F** | No additional comments. |
| **0678G** | No additional comments. |
| **0678H** | No additional comments. |
| **0678I** | No additional comments. |
| **0678J** | No additional comments. |

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| **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).** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup participants agreed this was not relevant. |

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| **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.** | |
|  | **Workgroup comments** |
| **All Modifications** | Workgroup Participants noted that all 0678 Modifications under consideration are an improvement over the current charging methodology, i.e. they positively impact this Relevant Objective e).  Workgroup Participants wished to highlight to readers of the Workgroup Report, the UNC Modification Panel and Ofgem, that this Section of the Workgroup Report should be read in conjunction with **Section 4.9 of the Workgroup Report – Compliance.** In addition, readers should consult the individual compliance assessments contained as appendices to the Modifications or referenced in Part II of this report.  Workgroup Participants noted that it could be argued that 0678 and 0678A provide two foundational Modifications with, what could be argued as a minimum approach implementation of TAR NC. Other Modifications add in additional areas felt to be of importance to their Proposers, which can be justified separately under TAR NC.  Some Workgroup Participants noted that separate Modification 0670R (Review of the charging methodology to avoid the inefficient bypass of the NTS) could be argued to be along these lines too.  Workgroup Participants noted that in relation to the potential for non-01 October Effective Dates, that these could be non-compliant with TAR NC Article 6 (3) due to the IP charges being set for a year.  Workgroup Participants noted that Modifications 0678C and 0678I only allow for 01 October Effective Dates.  Workgroup Participants noted that Ofgem will take this issue into account and that Ofgem has indicated to Workgroup that Ofgem appreciates the flexibility to implement on a non-01 October Effective Date.  Workgroup Participants recognised that Ofgem will have to make their own assessment on Compliance. |

1. Ofgem Decision Letter on 0621 p.13 and 14 link. [↑](#footnote-ref-1)
2. National Grid Licence Standard Special Condition A5: <https://www.ofgem.gov.uk/licences-industry-codes-and-standards/licences/licence-conditions> [↑](#footnote-ref-2)
3. Vermillion’s 0678 analysis can be found here: <http://www.gasgovernance.co.uk/0678/Analysis> [↑](#footnote-ref-3)
4. See Figure 5 of the Final Modification Report 0645 (p.12) This can be found here:

   <https://gasgov-mst-files.s3.eu-west-1.amazonaws.com/s3fs-public/ggf/book/2018-05/Final%20Modification%20Report%200645S%20v3.0_0.pdf> [↑](#footnote-ref-4)
5. National Grid’s RIIO-T2 Playback Document: <https://www.nationalgridgas.com/document/125911/download> [↑](#footnote-ref-5)
6. Link for GSOG/WWA report justifying 80% storage discount: [↑](#footnote-ref-6)
7. Frontier Economics report on the future of gas regulation (UK Committee on Climate Change):

   <https://www.frontier-economics.com/uk/en/news-and-articles/news/news-article-i1784-uk-committee-on-climate-change-publishes-frontier-report-on-the-future-of-gas-regulation/> [↑](#footnote-ref-9)