

Response to Modification 0728/A/B/C/D

Introduction

This response has been delivered by Sisman Energy Consultancy Limited on behalf of a domestic customer. This ensures that the perspective of a domestic and smaller industrial and commercial consumer is included in the consultation responses which could be considered as part of the Modification 0728 decision process.

The implementation of Modification 0678A will remove the current Optional Commodity Charge (OCC) and introduce a Postage Stamp capacity reference price. The suitability of any of the Modification 0728 options needs to be assessed against the new tariff methodology that will be introduced from 1 October 2020.

It is clear that many NTS direct connects will face very substantial increases in tariff charges from 1 October 2020 compared with current prices when the cross subsidy to the expense of domestic and smaller industrial and commercial customers is withdrawn. However it is important to recognise that the increased prices, for a few sites at least, may have created a genuine commercial opportunity to bypass the NTS.

If loads are lost from the NTS then there would be a loss of contribution to overall NTS revenues and, given the revenue cap arrangement within National Grid's Licence, other customers would have to cover the lost revenue associated with the flows that would bypass the NTS. If possible, providing a discount to transportation costs to keep such loads on the system might confer a benefit for other users of the NTS. However great care is necessary in deciding what discount might be appropriate; providing a discount greater than might be necessary to retain the load will lead to higher prices to other loads. Furthermore it is important that unwarranted discounts are not applied to loads that would not bypass and that, overall, any discounts should not create undue cross-subsidy.

However any change in this area of the tariff arrangements introduced by Modification 0678A would need to be proven as lawful. Additionally contemplating a reform in this area raises considerable design challenges.

The legal challenge

The most obvious legal challenges arise in the context of the point-to-point nature of the proposals and that all proposals advocate that two different prices would apply to the same transmission service product.

- Point-to-point

It seems likely that the discounted charges to apply under any of the Modification 0728 options would be prohibited because they are calculated on the basis of "contract path" within the meaning of Article 13 of the Gas Regulation (715/2009) and "transport path" within Recital 19.

- Different prices for the same product

The law requires¹ that the standard products shall be charged at the relevant reference price save for explicit adjustments permitted². The idea was that a single price should apply for the same service to be received. Other European countries do have prices that are defined in respect of discounts that are defined relative to standard prices but in all circumstances these correspond to services other than the standard service.

This is a long held intent. The Commission published a Staff Working Document³ which defined how the access and tariff provisions should be interpreted. Specifically 2.1.3. states “The prohibition of discrimination requires that comparable situations are not treated differently, unless such treatment is objectively justified on the basis of differences in service levels and/or costs. The tariff (methodologies) for identical services offered by a TSO must be identical.”

The Commission therefore established a principle of a single price to apply to all relevant users for an individual service level.

Crucially Article 4.2 provides that “Transmission tariffs may be set in a manner as to take into account the conditions for firm capacity products.” This allows for “different” products to be priced differently to those associated with the standard service.

However the Modification 728 options do not define a different service to the standard firm capacity service, the options simply define a User election to opt for a different price to apply to the standard product which would appear to be unlawful.

The Proposers of all of the Modifications have all asserted compliance. However evidence to address compliance concerns, including those above, should be provided before a decision to implement any of the Modification 0728 options could be made.

The Modification 0678A tariff regime has been declared compliant following due process so great care needs to be taken with these proposals given the risks of prejudicing compliance.

Should the Modification 0728 options not be assessed as compliant then either alternative proposals, perhaps based upon defining a new and different service meeting legal requirements, or a revision to the law might be required.

The chances of delivering a needed solution to the challenge might, for example, be achieved via a new longer term service associated with multi-year booking and which might then be consistent with the commitments associated with building a pipeline rather than simply on-demand cheap service without longer term user commitment.

¹ Regulation (715/2009) Article 6

² Article 6 Clause 4 envisages discounts for Storage and LNG, and for benchmarking, common pricing to homogenous group of points or for scaling.

³ COMMISSION STAFF WORKING DOCUMENT on tariffs for access to the natural gas transmission networks regulated under Article 3 of Regulation 1775/2005 <http://ec.europa.eu/transparency/regdoc/rep/2/2007/EN/2-2007-535-EN-1-1.PDF>

Addressing the design challenge

The Modification presents the requirement as avoiding the risk of bypass.

However the explicit objective of each of the proposals is not clear. Whilst providing discounts is likely to decrease the likelihood of individual eligible loads bypassing the system it is not clear if the intent of each proposal is to retain all eligible loads or whether that outcome might necessarily reflect an efficient outcome.

When setting discounts there are, of course, a number of objectives that could be contemplated including:

- ensuring all load stays on the system
- optimising the trade-off between discount size and the revenue losses from bypassers
- optimising the trade-offs between discount size, the revenue losses from bypassers and the costs associated with bypass pipelines.

Thus specifically the discounts could be set at levels sufficient to ensure the minimisation of costs of:

- ensuring that all load is retained on the system, or,
- the lost revenues arising from discounts to eligible loads retained on the NTS and losses at standard prices from bypassers, or,
- the additional costs (as above, i.e. discounts to remainers plus lost revenue from bypass) plus the alternative pipeline costs to bypassers⁴.

The objectives of each of the proposals, in respect of the above, are not explicit. The proposals seem to lack evidence for their own optimality from an aggregated perspective. Following National Grid's release of additional data all proposals are now supported by data that indicates "socialisation monies" which are suggested to be the increased costs that will be levied on the generality of users to offset the discounts offered to eligible loads⁵. However these socialisation sums represent those extra costs assuming that all of the eligible loads continue to offtake gas from the NTS. Unfortunately, based upon an assessment of National Grid's Likelihood of Bypass indicator and the discount charging function defined in National Grid's proposals some loads might be expected to bypass the system, under some of the options, even with the proposed discounts.

The Bypass risk section of this paper (below) further explores the Likelihood of Bypass indicator, National Grid's proposed discount function and how these might be used to assess whether a load might bypass.

Curiously there might be merit in offering smaller discounts and accepting that some loads might bypass (or rejecting all of the Modification 0728 variants and thereby leave the Modification 0678A

⁴ The reference to alternative pipeline costs reflects that an optimisation might need to look wider than simply a "gas regime" perspective. For example bypass, which is generally assumed to be associated with additional pipelines, would likely increase societal costs. Including a measure that reflects the costs outside of the NTS that bypassers pay might therefore be a worthy consideration in the design of an approach to address bypass risk.

⁵ On the afternoon of 24 June National Grid provided additional data so that these socialisation scenarios are available for all proposals. See <https://www.nationalgrid.com/uk/gas-transmission/charging/gas-charging-discussion-gcd-papers>

outcome unchanged in this area). Indeed while many, if not all actors, might have a view reform in this area is desirable an acceptable approach has not so far been delivered or duly justified.

To illustrate let's consider the Modification 0728D example using some of the limited data available⁶. Using the labelling included in National Grid's file we have:

	0728D - Original Modelling	0728D - 1 Oct 2020 Price Based
Contribution: TS Discounted Rate	£6,334,063	£9,650,300
Contribution: GNTS Discounted Rate	£1,315,340	£1,441,815
Sub-Total	£7,649,403	£11,092,115
Potential TS Socialisation	£57,006,570	£86,852,699
GNTS Socialisation	£20,606,992	£26,559,748
Sub-Total	£77,613,562	£113,412,447
Total	£85,262,966	£124,504,562

The data corresponds to the original case modelled in the consultation plus the new scenario based upon the pricing notification recently made by National Grid which will apply from 1 October 2020.

These can be interpreted as follows, with the first financial sum corresponding to the original modelling, and the second based on 1 October 2020 prices.

If the proposal were to be implemented and all potential shorthaul loads remained then the generality of users would have to pay £77,613,562 (£113,412,447) to compensate for the discounts offered to retain the eligible load. It is assumed that the eligible shorthaul loads will contribute £7,649,403 (£11,092,115). So effectively other users would pay £77,613,562 (£113,412,447) to subsidise discounts and in return secure the shorthaul contribution of £7,649,403 (£11,092,115)⁷.

The approach has merit (provided that the approach is legal and is assessed as not introducing too much cross subsidy) if all eligible loads would otherwise, without the discounts, bypass.

However, if all of the eligible loads were to bypass then the extra cost that the other users would pick up would be £85,262,965 (£124,504,562). If no shorthaul discount was offered and even a very modest proportion of eligible load remained then the generality of users would be better off in a no-shorthaul discount world. An optimum outcome, from the perspective of the generality of customers,

⁶ What follows is based upon the data included in the initial proposal documentation. On 24 June National Grid released additional information reflecting anticipated pricing to apply from 1 October 2020 and the corresponding data is included in parenthesis.

⁷ The situation could be even worse if other loads at greater than 5 km bypass as is indicated based on other data available within the consultation.

might even involve lower levels of discount; it would all depend upon the trade-off between load lost and extent of discount offered.

From the perspective of the parties that won't be eligible for discounted prices this simple analysis might indicate that the costs of securing modest contributions from eligible loads seem quite high. Indeed it might just be worth taking the risk, or at least to consider whether offering smaller discounts, or indeed not implementing any change in the form of the other currently proposed Modification 0728 variants, might have merit.

Of course it all depends on the likelihood of bypass risk and how much bypass might actually occur given the NTS pricing. NTS pricing may indeed be critical for a small set of customers which, however, represent significant volumes on the NTS.

Furthermore without an assessment of what load might bypass under the "status quo" (1 October 2020 tariff pricing) it is not possible to make an assessment about whether any of the options within Modification Proposal 0728/A/B/C/D offer an improvement compared with the counterfactual.

Understanding the effects of discounts on pricing to non-eligible customers

It is often stated, correctly, that offering discounts to keep loads on the system has a beneficial effect in respect of average price of transportation. That this leads to a benefit to all gas consumers however is not necessarily the case.

The Modification Proposals are based on an assumption that if prices remain unchanged then some load will bypass the system. However the level of discounts that might be offered will be crucial in determining the cross-subsidies that exist in the regime.

Furthermore it is important to realise that any approach that is not based on an individual consideration of site specific circumstances is likely to lead to some "unwarranted discounts" that will push non-eligible consumer prices higher than might be optimal.

For example the Likelihood of Bypass indicator indicates that some, even zero distance, eligible routes might not need very high discounts to remain and use the NTS.

An illustrative numerical example is offered here to demonstrate that there is likely to be scope to optimise the discount function if the best outcome is to be achieved from the perspective of non-eligible consumers.

Whilst it might not be appropriate to only consider the non-eligible consumers average price for transportation (i.e. the standard tariff) in the decision making process it is likely that it should at least be a consideration.

Example to indicate Bypass implication assessment

Consider a case with 2 "bypass risk" sites, a genuine opportunity for bypass exists and the sites would need transportation prices of .08 and .01 respectively to continue on the NTS.

Assume overall revenue requirement of 9

Consider three scenarios:

Base	No discounts offered	So both at risk sites would bypass
Small discount	Discounted price of 0.08	Only one of the at risk sites would bypass
Larger discount	Discounted price of 0.01	All potential load would use the NTS

The following describe how the outcome would translate into the charge rate applicable to Non-Eligible Volumes.

		Pricing			Revenues		
	Volumes	Base payable	Small discount	Large discount	Base payable	Small discount	Large discount
Non Eligible Volume	90	0.100	0.0911	0.0978	9	8.2	8.8
At-risk site 1	10		0.0800	0.0100		0.8	0.1
At-risk site 2	10			0.0100			0.1
Allowed revenue entitlement	9				9	9	9

Shadings indicate where loads elect to bypass

Boxed area indicates impact of pricing choice given genuine bypass risks exist

The best outcome to Non-eligible volumes from a pricing perspective is achieved with a limited discount that will not ensure that all loads remain connected to, and utilise, the NTS.

The above illustrates that an appropriate consideration of the options requires an assessment of load that would be lost in the base scenario. It also indicates that offering discounts that are large may lead to substantial cross-subsidisation. The optimum outcome from the perspective of the non-eligible customers is to offer some discounts to retain some at risk load but that the optimum outcome might involve some loss.

Designing an approach to address the risk of bypass issue may hence require some estimates of the likely loads that would be lost in the pricing scenarios that are considered. The sums of money involved in making a sub-optimal decision might be quite large and hence care should be taken so that the considerations are based on a broader consideration that simply the benefits to those that might avail of the discounts that might be offered to encourage loads to stay on the system.

Bypass risk

The National Grid approach involves deriving a metric designed to provide an indication of the bypass risk for each load. National Grid then defines a discount function that could be applied on request of, and in respect of, eligible sites.

The metric is defined for each point as $(\text{cost of using the NTS})/(\text{cost of alternative pipeline})$. The annual cost reflects a ten year payback of the cost of the alternative pipeline cost (rather than using a return and depreciation based approach).

The principles that define the method of calculation are illustrated in the proposal although it is not clear the extent to which the logic has been validated and the robustness of the resulting numbers accepted by relevant actors. National Grid has subsequently used the data to define the discount function. The discount function is also used in three of the alternative proposals so it is important to understand:

- the inherent strengths and weaknesses of both the Likelihood of Bypass indicator
- how this indicator has been translated into the discount function and
- what this function might indicate in respect of loads that might likely bypass.

The Likelihood of Bypass indicator is an estimate and may be overstated should:

- the distances of alternative pipelines be too low, perhaps particularly for those loads associated with zero distances
- the costs of alternative pipeline build recovered over a 10 year period be too low since this does not reflect any return on what might be substantial investments
- the NTS transportation costs be too high being based upon MNEPOR levels whereas given the nature of the capacity booking regime much lower bookings might be experienced.

However, applying a balanced perspective, other components of the calculation might contribute to reduce the metric to appropriate level. For example only Entry and Exit reserve prices are included in the derivation of NTS prices and it could be argued that at least part of the non-Transmission charges should be included.

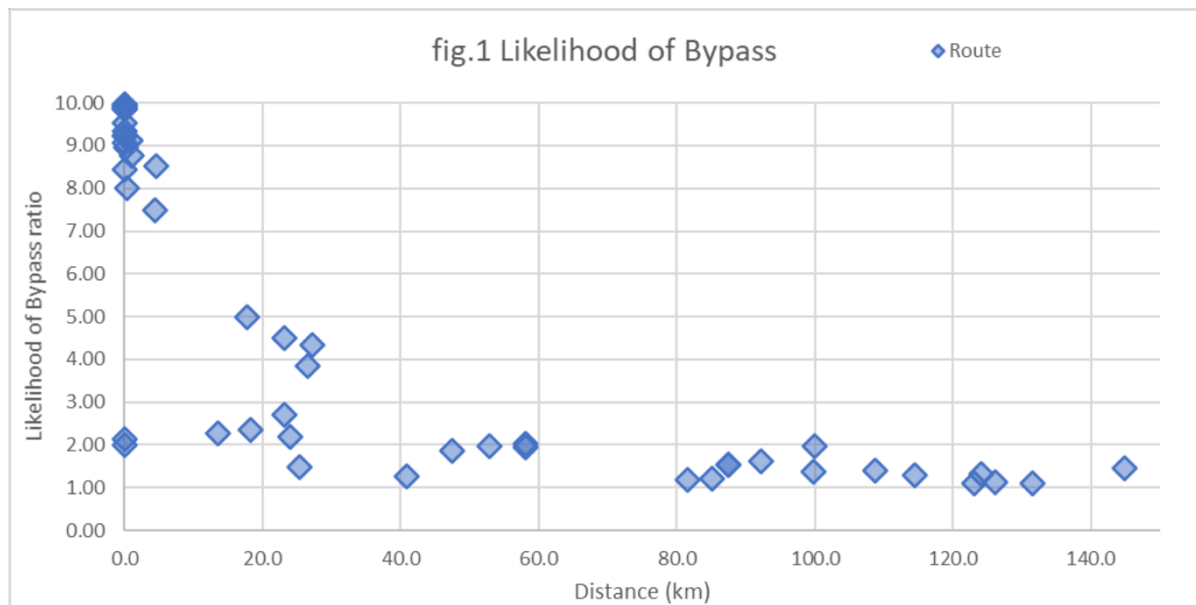
National Grid has used the Bypass Indicator to inform its selection of the discount function.

In the absence of further information and assuming the derivation of the Likelihood of Bypass indicator is sufficiently robust it should provide an indication of the likelihood of a user bypassing the NTS.

The higher the number the more likely the bypass. Furthermore any Likelihood of Bypass indicator greater than 1 might be considered to indicate a risk of bypass although in practice points with indicators close to 1 might be expected to remain given the ease of remaining on the NTS and wider benefits that might not be recognised in the indicator's calculation.

Perhaps surprisingly National Grid has indicated in the attached graphic that loads further than 100 km from an Entry point might bypass. This feels unlikely and hence it might suggest that the underlying methodology or data might require some scrutiny.

However National Grid has indicated it has used the attached graphic in defining both the shape of the discount function and its precise numeric formulation.



National Grid have proposed a discount function of the form:

$$\text{Discount (\%)} = A + e^{(-B \cdot \text{distance})}$$

It is not clear why National Grid chose to use that form although this did enable National Grid to fit the curve using only two points. Thus the curve appears not to have set with regard to all data points available, nor what the intent of the resulting curve was designed to achieve.

To inform one of the two points National Grid has indicated that the highest ratio of bypass costs against NTS usage costs (i.e. NTS usage costs/bypass costs) at 0km is 9.973 which implies a 89.97% discount is necessary to avoid the bypass. The calculation inferred from para 3.31 of the 728 Modification Proposal documentation seems to be:

Likelihood of Bypass indicator	Reciprocal	Equivalent NTS charge discount
9.973	0.10027073	89.97
x	1/x	$(1 - 1/x) \cdot 100$

National Grid therefore chose to select one of its points as (0,90). (0,90) represents a point defining zero distance to be associated with a 90% discount. Given that the most extreme Likelihood of Bypass indicator is at zero distance setting the charging discount function to pass through the (0,90) point might be expected to secure all zero distance load is retained.

National Grid chose a second point (18, 10) (representing an 18 km distance to be associated with a 10% discount) to locate its charging function. It is not entirely clear why this point was chosen. Despite the data in the Likelihood of Bypass indicator graphic the record of development discussions confirms that it was chosen based upon the assumption that economic bypass would not occur beyond 18km despite the apparently conflicting evidence from the Likelihood of Bypass graphic.

Thus the curve was fitted through two points. However its consequences are not immediately apparent in the proposal documentation.

For example in the context of National Grid's proposal, if we assume that the costs used in establishing the Likelihood of Bypass indicator are accurate then all loads at zero distance would be likely to be retained on the system⁸. However in relation to longer distances the position is far less clear and, whilst accurate assessment cannot be made on the basis of information available, Sisman Energy Consultancy Limited has used the approximation illustrated in the above table to evaluate whether other eligible load might bypass. Whilst these calculations cannot be considered to be accurate they seem to imply that many would choose to bypass.

There is therefore a risk that proposals using the NG derived discount function might be considered to be unduly preferable to very short (very close to zero) routes. For others, including perhaps some that are less than 5km distant the discount curve might appear to imply a significant risk of bypass with that risk still credible for sites more distant. If the charging function has this effect then the deleterious effect on the generality of users may be larger than illustrated by the socialisation levels included in the consultation documentation.

Of course relevant users and the sites themselves should be able to assess the impacts of the proposals. A lot is at stake for a few sites. Indeed this may explain why four alternative proposals are on the table. However both bypass losses and the extent of discounts received by those that remain will influence prices paid by the generality of customers and these impacts should not be dismissed just because they amount to a "small increase" to other consumers; there are more than 22,000,000 of those other consumers and this needs to be appropriately reflected in the consideration of these proposals.

However the information needed to assess the consequential impacts on the generality of gas customers is not available within the proposals or publicly accessible. This remains the case despite the most recent data release, made by National Grid on afternoon of 24 June, available only 2 days before this consultation closes. It is impossible, based on information currently available, to accurately assess the overall redistributions that implementation of any of these proposals might create. This is important given that the information provided about socialisation is potentially misleading; it assumes that all loads will remain on the system and it is by no means clear which of these proposals might have that intention, or indeed whether that effect is desirable or the most appropriate outcome as was considered above in the context of Modification 0728D.

Conclusion

Given the absence of any assessment of potential load lost under each of the proposals it is impossible to ascertain whether any of the proposals strike the right balance to reduce risk of bypass while also minimising the reduction in revenues arising from the application of the discount and the further detrimental impact of the loss of bypassing load.

Ultimately any "lost" revenues will be recovered from other users and it is important that other users' interests are considered. This is broader than simply making the decision in the context of eligible sites or those that might narrowly miss out on qualifying for discounts depending upon the options.

Should any of the proposals be considered lawful then further information beyond that available is likely to be needed to inform the decision.

⁸ No breakdown of information is provided to understand the zero distance eligible routes. The documentation does however suggest that substantial socialization monies are associated with zero distance routes. It would be helpful if, for example, an understanding of the split between gas going to genuine customer offtakes, as opposed to within terminal interconnection flows, was known. Indeed such information might be relevant to finding an appropriate solution to the bypass problem.

However, not having an approach to appropriately mitigate risk of bypass has implications for both potential bypassers and for the generality of customers and could be sub-optimal.

It is most unfortunate to reach this position given that the “Optional Commodity Charge problem” was identified more than six years ago and a solution should have been found far earlier. Indeed it is that delay that has contributed to the price shock that some users face as tariff reform progresses towards ensuring a more equitable apportionment of costs over user classes.

Bypass could happen, although bypass would not be an easy or straightforward commercial decision for network users. However, an optimum outcome does not necessarily involve setting large discounts to all eligible loads simply to retain them.

For many years some consumers and/or their shippers have enjoyed unduly preferable transportation charges, including but not limited to the availability of the Optional Commodity Charge (OCC). Unravelling this will inevitably have consequences but it is important that proposals are developed that fairly take account of the interests of all those that might pay for NTS services and transparently and convincingly reveal the redistributions expected to arise.

It is not clear that any of the proposals provide an appropriate solution or satisfy the relevant objectives. However Modification 0678A provides an impetus and incentive for some parties to deliver a proposal that is lawful and which fairly balances the interests of the diverse stakeholders.

Even if a 1 October 2020 solution cannot be achieved it might be possible with appropriate leadership, pragmatism and good process to deliver a “fair to all” approach deliverable shortly thereafter.

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Attachment: Standard Template Document