

Pricing Discussion Paper PD17

Setting of NTS Transportation Charges

1. Introduction

Under the present framework for restricting the level of NTS transportation charges, there is considerable uncertainty in both the maximum level allowed and in the level of actual revenue likely to be achieved, primarily due to the auctioning of entry capacity. This uncertainty makes setting the level of transportation charges for a prolonged period difficult since there is a considerable risk that the level of revenue achieved will either be substantially over or under the maximum allowed. Licence requirements relating to over-recovery, or business requirements to achieve the projected revenue, can then impose a need to change the level of transportation charges. Given the year-by-year Licence restrictions on revenue and the ongoing uncertainties, this framework could potentially lead to the need to change price levels relatively frequently and perhaps by large amounts. Such changes, or indeed the uncertainty of potential changes, would generally be undesirable to both Shippers and to Transco and would be unhelpful in the development of competitive gas supply markets. Transco has always aimed to minimise the number of such changes. However the Licence framework in effect since April 2002 has increased the uncertainties making it more difficult to achieve charging stability.

In this context, this paper sets out the present arrangements for setting both gas and electricity transmission charges and highlights the effects of each. It then looks at alternatives to the present procedure for gas transmission charges and seeks respondents' views on whether changes to the present framework for NTS transportation charge setting should be pursued.

These issues are much less significant for the setting of gas distribution charges since there is proportionally less uncertainty in the level of both the maximum allowed LDZ revenue and the actual LDZ revenue and less likelihood of significant divergence between the two. Although this paper concentrates on the setting of the NTS transportation charges, responses relating to the setting of LDZ transportation charges would be welcome.

2. Licence Requirements

Prior to April 2002, the Gas Transporter (GT) Licence under which Transco operates included a price control formula which established a single, Transco wide, maximum level of allowed revenue. This maximum allowed revenue set a ceiling on the aggregate level of income which Transco was permitted to collect through all of its transportation charges, and charges were set reflecting this maximum allowed revenue. Since April 2002 there have been separate Licence determined revenue restrictions on the NTS Transmission Owner (TO), NTS System Operator (SO) and LDZ parts of Transco's gas transportation activities. For each of these business areas, the Licence includes formulae which are used to

determine the maximum allowed revenue in any Formula Year, which runs from April to March. Transco is required by its Licence, when setting transportation charges for each business area, to endeavour not to recover more than the maximum allowed revenue for that particular area.

The Licence allows for the fact that actual revenue in any year will not precisely equal the maximum allowed. If there is over-recovery (collected income exceeds the maximum allowed revenue), then this plus interest (together known as “K”) is subtracted from the maximum allowed revenue in the following year, and vice-versa for under-recovery. However, the interest adjustment on over-recoveries (reducing the maximum allowable revenue) is base rate plus 3% whereas on under-recoveries it is base rate. This imbalance in the level of interest adjustment gives Transco a clear financial incentive against over-recovering and so provides a strong business case for making transportation charge adjustments towards the end of a Formula Year if there is a possibility of over-recovery occurring in any business area.

If Transco over-recovers against any price control formula in a single year by more than 4%, then it is required to provide an explanation of the over-recovery to Ofgem and may not increase NTS transportation charges in the following year unless it has satisfied Ofgem that the NTS revenue would not be likely to exceed the maximum allowed or unless Ofgem has consented to the increase. For the NTS TO, where the allowable revenue in a year is around £400m, 4% equates to £16m whilst for the NTS SO 4% is less than £8m.

If Transco over-recovers cumulatively in two successive years by more than 6% (of the maximum allowable in the second year) then the Licence provides that Ofgem may enforce an adjustment to transportation charges to ensure that the maximum allowable revenue is unlikely to be exceeded in the following year.

The Licence also imposes requirements on the methodology for determining the make-up of transportation charges, namely that it should:

1. Reflect the costs incurred by the licensee in its transportation business
2. So far as is consistent with i) properly take account of developments in the transportation business
3. So far as is consistent with i) and ii) facilitate effective competition between gas shippers and between gas suppliers.

Where prices are established by auction the first requirement does not apply. In such instances reserve prices, if used, should be set at levels best calculated to promote efficiency, avoid undue preference in the supply of transportation services and promote competition.

When Transco proposes to change the level of transportation charges, the Licence requires it, wherever practical, to publish the indicative level of the revised charges 150 days in advance of the change. Once the proposed revisions are finalised (as opposed to indicative charge levels), the Licence requires that one month's notice of the change is given to Shippers. However, the Network Code requires that two months' notice of revised transportation charges be given to Users.

3. Present Procedure for Setting Gas NTS Transportation Charges

For both the TO and SO, the initial step undertaken by Transco when considering the appropriate level at which to set transportation charges is to project the maximum allowable revenue for the business area in question. The projected level of revenue for the year from the existing charges is then considered. There is generally considerable uncertainty in the level of both allowed and collected revenue, and so a range of possible outcomes may be taken into account. If there is a significant likelihood that the level of collected revenue will be significantly different from the maximum allowable for the year then a possible change to the level of transportation charges is considered. In deciding on whether to change the level of charges, consideration is given to a number of factors, including:

- forecast revenue levels within the year;
- forecast ongoing levels of transportation charges beyond the end of the year;
- the desire to avoid frequent changes to transportation charge levels where possible;
- avoiding very large changes in within-year charge levels where possible, especially if it is likely the change will subsequently be reversed.

3.1 NTS TO Revenue

For the NTS TO there is relatively little uncertainty in the level of maximum allowable revenue. The items determining this level are an amount varying only with changes to inflation (less 2%), the cost of NTS prescribed rates incurred and an adjustment for previous over- or under-recovery. The uncertainty in the first two of these items is relatively small. The main uncertainty is likely to be level the level of under- or over-recovery passed through from the preceding year.

However, there is considerable uncertainty in the level of actual revenue likely to be achieved, primarily since entry capacity is sold through auctions with both the quantity of capacity sold and the prices paid for that capacity being uncertain. There is much less uncertainty in the level of revenue relating to NTS exit capacity charges, since this is determined on the basis of administered charges.

At present, Transco's Transportation Charging Methodology provides for the NTS TO target revenue to be split equally into targets for revenue to be recovered through entry capacity sales and exit capacity charges. The initial means of handling high levels of entry capacity revenue, more than 10% above the target level, is to apply the methodology first established following publication of Pricing Consultation Paper 65 (PC65) whereby, for each month covered by the entry auction, entry charge credits are allocated to Shippers in relation to their firm NTS entry capacity holdings. The aggregate value of these credits is limited by the lower of the excess revenue amount apportioned to the month or the level of entry capacity buy-back costs in the relevant month. This mechanism itself introduces another uncertainty into projections of potential over-recovery since the level of capacity buy-back costs is uncertain and highly variable, and hence the level of credits in any particular month and across any formula year is uncertain. The implementation of the PC65 mechanism, and determination of when it applies, is further complicated by the move to multiple auctions for entry capacity (long term, monthly, rolling monthly, daily) with potentially many auctions of each type within a particular Formula Year period. The potential multiplicity of auctions for entry capacity will itself also lead to uncertainty over the level of entry revenue likely to be

obtained within a period – which can only be known for certain once the final relevant auction has been held, which is likely to be on the penultimate day of any formula year.

Where the PC65 mechanism does not lead to sufficient credits to cover all the entry revenue above target – for example if aggregate buy-back costs are less than the excess above target - there is likely to be an over-recovery in the level of NTS TO revenue relative to the maximum allowed level. In these circumstances, the only way Transco can reduce the expected level of TO revenue, given the present arrangements, is by reducing the level of NTS exit charges. Since the target level of exit charges is the same as the target entry level, and any change to the level may need to be made part way through the formula year in which it was to affect revenue (since the impact of the PC65 mechanism would not be clear until towards the end of the formula year), then it is likely that a significant change to the exit charge level, for a particular period, could be needed in order to fully offset the potential over-recovery. An example to illustrate this issue is provided below.

3.2 NTS TO Revenue 2002/03

The above situation has materialised within the present formula year. As a result of the auction of summer entry capacity (April to September 2002), there was entry revenue in excess of the target for the six-month period. The PC65 mechanism was therefore implemented. Given the uncertainty in the level of buy-back costs and in the level of revenue that would be obtained from the second six-monthly MSEC auction (and with the regulatory framework within Transco's Licence still not finalised), it was uncertain whether this would be likely to lead to TO over-recovery by the end of the formula period, at March 2003. By October Transco's Licence had been modified to include the new price control formulae, and it was known that there was still around £16m of the auction excess from the auction of Summer capacity which had not be credited back to shippers. In addition, a further excess had materialised, also of around £16m, following completion of the MSEC auction for the winter (October 2002-March 2003) period.

Although there is considerable uncertainty in the aggregate level of buy-back costs for the period until March 2003, and hence in the level of credits that may be payable under the PC65 mechanism in this period, and also some expected under-recovery against target for the TO exit charges, there is now a high likelihood that without any other change there will be an over-recovery against the maximum TO allowed revenue for this formula year. This is because it appears likely that buy-back costs will be below the target level of £35m set by Ofgem. Given these circumstances, Transco considered proposing a reduction in the level of TO exit charges for a few months leading up to April 2003. Given the Network Code requirement to give two months' notice of any change, the period of effect of the reduction would have been for no more than three or four months and so a considerable reduction in the level of exit charges would have been required – potentially of the order of 45%.

However, the existing level of TO exit charges is already slightly below the estimated ongoing level required for the next formula year (2003/04). Hence an increase in the level of exit charges from April 2003 is expected, which Transco highlighted when indicative charges were published on 1 November 2002. In these circumstances, a large reduction in the level of the TO exit charges for a few months up to April 2003, followed by a reversal of the change plus an additional increase in April 2003, would clearly be going against the aim of avoiding frequent and large price changes and could be considered to be detrimental to facilitating effective competition between gas shippers and suppliers.

3.3 NTS SO Revenue

For the SO there is considerable uncertainty in the level of both maximum allowed and actually collected revenue. The uncertainty in the level of maximum allowable revenue arises in both the level of cost pass-through items and the impact of Transco's performance in relation to the SO incentive schemes specified in its Licence. In the latter case, the uncertainty is particularly acute due to the varying treatment for sharing incentive performance depending on caps and collars. These, and performance targets, are in general defined for the year as a whole and hence the outturn cannot be known with certainty until after the end of the formula year.

The large majority of SO actual revenue is collected through the NTS SO commodity charge. The level of revenue generated at a particular charge rate is related directly to system throughput. In any year there are considerable uncertainties in this, due primarily to the sensitivity of demand to weather but also to economic conditions impacting on commercial and industrial gas usage, uncertainty in the usage of interconnectors, etc. The majority of throughput occurs in the winter six-months, which is the latter six months of the formula year, and so most of the uncertainty due to varying throughput levels is unclear until a long way through the formula year.

As with the NTS TO, the present formula year provides an example of these issues.

3.4 NTS SO Revenue Level for 2002/03

The SO commodity charge level was initially set early in 2002 for implementation from April 2002 onwards. This was based upon an early Transco estimate of the level of SO allowable revenue, at a time when the NTS SO price control had not been finalised. Once the framework for the SO price control had been clarified by publication of draft Licence modification proposals, in particular with a different treatment of deemed interruptible rebates from that assumed when the commodity rate was first set, Transco announced a revised SO commodity charge level (and TO exit charge level) for implementation from July 2002. By the Autumn, it was clear that, although there was still considerable uncertainty in the forecast level of both the allowable and collected SO revenue, there was a high likelihood of significant under-recovery against the maximum SO allowed revenue for this formula year and for the following formula year.

This forecast under-recovery is due to two main factors, firstly that the commodity charge has not been applied to all throughput to storage exit points whereas this application was assumed in setting the charge rate and secondly that the forecast allowable SO revenue has increased since the commodity charge rate was set. This latter impact is partly due to further work undertaken by Transco to estimate allowed revenues implied by the Licence modifications which were implemented in September 2002, and an assessment of the potential outcome of the SO incentive schemes. In order to reduce the forecast level of under-recovery for the present year and to set the charge level at a rate expected, on present forecasts, to be sustainable through 2003, an increase in the level of the SO commodity charge was announced for implementation from 1 January 2003. Had this increase been delayed until April 2003, so as to be implemented at the same time as the proposed TO exit charge change, then the forecast level of over-recovery carried forward into the next formula

year would have been greater, and consequently a larger increase in the charge level would have been required. Such a higher charge level would be less likely to be sustainable through 2003 and onwards. This is particularly the case because throughput in the three months January to March is relatively high, generating more than a quarter of annual revenue. Also the general effect of deferring an increase is to require a higher subsequent increase since the underlying level needs to be adjusted to sustainable levels, and previous under-recovery recouped in addition. For example, had the 18% increase in the SO commodity charge at January 2003 been delayed until April then a 24% increase would have been required to achieve the same forecast revenue position by March 2004.

This example illustrates how there can be a conflict between the aims of setting the SO charge level so as to recover all the allowable revenue within the same formula year and having a stable SO charge level, with this conflict made particularly problematic this year by the level of uncertainty in both the allowable and collected SO revenue for 2002/03. The approach adopted through the adjustment to the SO commodity charge with effect from 1 January 2003 seeks to establish a stable level for the charge, which Transco believes will be sustainable throughout the forthcoming formula year.

4. Present Procedure for Setting NGC Transmission Charges

NGC electricity transmission charges are split into separate charges recovering the TO and SO revenue, as for Transco's NTS charges. The TO charges are capacity based and are split into entry (generation) and exit (demand) charges. These charges are all administered since there is at present no market mechanism for determining entry or exit charges, unlike those for NTS entry capacity. Since all the TO charges are administered there is far less uncertainty in the level of collected NGC TO revenue than for Transco, and the charges are revised annually.

NGC has an SO incentive mechanism similar to the Transco SO incentive mechanism, but without the entry and exit investment components and with fewer individual incentive components. The SO allowed revenue is recovered through a use of system charge (BSUoS – Balancing Services Use of System), again similar in concept to the gas SO commodity charge. However the method of determining the NGC SO charge level is different from that employed by Transco.

The NGC SO charge is calculated on a half-hourly basis since this is the balancing period. The rationale in determining the charge for each half-hour period is to recover the target revenue for the period since the start of the formula year (April). This target revenue is made up of costs directly apportionable to each half-hour period, the proportionate part of costs not directly apportionable to each period, and the proportionate part of the forecast incentive outcome based on the costs to date. This last element is determined by linear extrapolation of the costs incurred to date to give an extrapolated end-of-year incentive position (since the incentive outcome is defined only on an annual basis) and then the proportionate part of this extrapolated outcome is determined for the period to date. The revenue to be recovered within the particular day is then determined by subtracting the cumulative revenue recovered within the formula year up to the previous day from the target revenue to be recovered by the end of that day. This revenue for the day is then apportioned between the 48 half-hour balancing periods within the day and the charging rate is determined after the event by dividing by the actual usage (throughput) for each half-hour period.

The determination of the NGC SO charge on an ex-post basis enables the level of revenue collected within a period to be matched exactly to the target level but means that the unit charging rate within a half-hourly charging period can vary considerably depending on the costs incurred in each period, and the level of usage within the period. In addition, the outturn level for the whole year may itself change considerably if there are large uncertainties in its level (as there are for gas SO) leading to large variations in the level of the ex-post unit charge for different periods within the year

5. Possible Changes to the Procedure for Setting Gas NTS Transportation Charges

Possible changes to the procedure for setting the NTS transportation charges may be split into two broad types: variations to the present ex-ante charge setting process or a move to ex-post charging.

5.1 Possible Variations to the Present Ex-Ante Charge Setting Process

The present process for setting the level of both the TO exit charges and SO commodity charge is related largely to the Licence requirement and incentive not to aim to over-recover within a formula year whilst meeting the business requirement of recovering the maximum allowable revenue. As identified previously, given the uncertainties in both forecast allowed and collected revenues, this can lead to a clear incentive to make changes to the charge levels within a year, and especially towards the end of each formula year.

One way of over-coming this would be for charges to be changed no more than once each year. To achieve this, Transco believes it would be necessary for the Licence requirement not to aim to over-recover within a formula year to be relaxed so that if, for example due to changes in within-year forecasts of the allowed or collected revenues, it was forecast that there was likely to be an over-recovery against the allowed revenue for the year then there would be no requirement or incentive to adjust the level of charges within the year. Instead, the over-recovery within the year would feed through to an adjustment in the allowed revenue level for the following year, through the “K mechanism” as at present but without any penal interest rate adjustment. This could be strengthened by modifying the requirements to give notice of any proposed change in charges, such that, for example, there would be additional barriers to overcome if there was to be more than one price change in any given year. It might, however, be worthwhile setting limits on the level of over-recovery that could be handled automatically through this mechanism in order that the level of revenue recovered from one year to the next is not excessive – such as might have been seen had excess auction revenue from MSEC auctions held to date simply been carried forward to the following year rather than being returned to Shippers through some form of adjustment mechanism. Very large movements in the allowed revenue from one year to the next may, in some circumstances, be considered to be unduly discriminatory where the level of activity for a shipper is potentially very different in one year to the next.

The key area where there is considerable and continuing uncertainty is the level of collected TO revenue arising from the auction of entry capacity. Although the level of potential over-recovery arising from these auctions has declined in the most recent auctions from the highest levels experienced, there is still considerable uncertainty and the potential for significant levels of either over- or under-recovery to arise from their outcome. At present the initial means of avoiding over-recovery arising from the auctions (in excess of 10% over

target) is through implementation of the PC65 mechanism whereby rebates are paid to shippers holding entry capacity each month, up to the minimum of the level of the pro-rated over-recovery for the month and the level of buy-back costs for the month, so as to offset shippers' exposure under the capacity neutrality mechanism. This methodology has been developed in part so as to reduce the need to make changes to the levels of other transportation charges (which within the present price controls would be TO exit charges) as a result of entry auction outcomes. Transco would be interested in the views of respondents on whether, were Transco's GT Licence to be relaxed in respect of over-recovery and restrictions on the frequency of changing charges, it would still be appropriate to retain the PC65 methodology.

Transco has previously, in PC75, proposed that a NTS TO commodity charge be introduced as a means of adjusting for variations in the level of collected revenue from that allowed. This proposal was vetoed by Ofgem, in part on the grounds of the lack of transparency and certainty with regard to how such a charge would be set and adjusted. Were the general methodology for the setting of charges to be changed as outlined above then it may be appropriate to introduce an NTS TO commodity charge, rather than TO exit charges and auction reserve prices, as a means of handling variation in the level of the TO revenue. Transco would be interested in the views of respondents on whether in such circumstances it would be beneficial to introduce a TO commodity charge and, if so, at what frequency it should be set. Transco considers, for example, that there would be merit in this approach such that all NTS TO charges were set at the same time – say two months before implementation - and covered a whole formula year, including a TO Commodity charge which reflected the level of anticipated over or under-recovery carried forward to that formula year.

5.2 Possible Move to Ex-Post Charging for the SO Commodity Charge

At present, by setting the SO commodity charge rate in advance, the target SO revenue is recovered through the year in proportion to the throughput each day. If there is a need to recover more or less revenue due to changes in the forecast level of either the allowed or actual revenue, then the charge rate may be changed within the year.

Were the SO commodity revenue to be recovered through an ex-post charge, similar to NGC's BSUoS charge, then it would be possible to ensure that the level of revenue recovered within a period matched the target level of revenue. However, there might still be changes to the target level of revenue due to changes in the forecasts within year. Possible drawbacks of such a regime are that, whilst the precise methodology for determining the charge would be known, the applicable charging rate itself would not be known in advance, potentially impacting adversely on shippers' commercial decision making; that the effective level of the unit charge might vary considerably from period to period; and that with a mechanism for determining the charge each day the ongoing billing costs would potentially be higher for both Transco and Shippers. Given that the present forecast level of NTS SO revenue to be recovered through the charge is only around a third of the NGC BSUoS revenue level this additional billing complexity and cost may possibly not be justified.

6. Questions for Consultation

Transco is interested in the views of respondents on the issues outlined above and, in particular:

- **Whether a change to the Licence under which Transco operates would be beneficial so as to enable charges to be set normally only once a year even if within the year there were forecast to be likely over-recovery and so as also to eliminate the interest rate difference within the “K mechanism” between over- and under-recovery;**
- **If such a change were introduced whether there should be limits on the level of over-recovery that might automatically be carried forward from one year to the next under this methodology;**
- **Whether, in the event of a change enabling transportation charges to be set normally only once a year, it would be appropriate to retain or to change the present methodology introduced by PC65 for handling excess auction revenue;**
- **Whether, in the event of a change enabling transportation charges to be set normally only once a year, it would be appropriate to introduce a TO commodity charge as a means of handling variations in the level of TO revenue and, if this were to be done, in what circumstances and at what frequency, should such a charge be set;**
- **Whether, especially for the SO commodity charges, Transco should move to setting transportation charges on an ex-post basis so as to give greater certainty regarding the level of revenue recovered within a period but with more variability in the level of unit commodity charge applied each day.**
- **Whether alternative means of providing greater stability and forecastability in the level of NTS transportation charges should be considered.**

In order to introduce any change to the Licence under which Transco operates, Ofgem would need to consult on the change prior to its introduction. If, following responses to this discussion paper, Transco intends to propose a change to its methodology for setting NTS transportation charges, it will similarly issue a Pricing Consultation paper on the proposed change.