Shippers, Transco and other
interested parties

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Dear Colleague,

Network code modification proposal 0606 "Reform of the cash out arrangements and the inclusion of costs of OM gas used for end of day balancing purposes using a stack process"

and

Network code modification proposal 0607 "Change to the cash-out arrangements where Transco defines operating margins (OM) gas usage for end of day balancing purposes"

Ofgem has carefully considered the issues raised in network code modification proposal 0606 "Reform of the cash out arrangements and the inclusion of costs of OM gas used for end of day balancing purposes using a stack process" and modification proposal 0607 "Change to the cash-out arrangements where Transco defines operating margins (OM) gas usage for end of day balancing purposes".

Ofgem has decided to direct Transco not to implement modification proposal 0606 because we do not believe that this proposal will better facilitate the relevant objectives of Transco's network code under standard condition 9 of Transco's Gas Transporters (GT) licence.

Ofgem has decided to direct Transco not to implement modification proposal 0607 because we do not believe that this proposal will better facilitate the relevant objectives of Transco's network code under standard condition 9 of Transco's GT licence.

In this letter, we explain the background to the modification proposals and give the reasons for making our decision.

Background to the proposals

The cash out regime

The gas balancing regime provides shippers with incentives to balance demand and supply at the end of the gas day through the cash out mechanism. Shippers who are long (short) gas are cashed out at the lowest (highest) prices at which Transco has sold (bought) gas on the on the day commodity market (OCM)[1]. These cash out prices are the system marginal sell price (SMP sell) and the system marginal buy (SMP buy) price respectively. In the event that Transco has not taken any balancing actions, cash out prices are determined using fixed differentials that are added to the system average price (SAP) which is the weighted average price of gas traded on the OCM. The fixed differentials are based on the cost of storage.

Operating margins

As part of its safety case established under the Gas Safety (Management) Regulations 1996, Transco is required to hold gas in store in circumstances where it is necessary to provide prompt support to maintain system pressure within safe parameters when market balancing actions are unable to give a timely response. This is known as operating margins (OM) gas. Specifically, OM gas is used to deal with the effects of:

- a sudden change in within day demand;
- an offshore failure;
- an onshore plant failure; and
- the orderly rundown of the system under firm load-shedding conditions.

The costs associated with OM gas can be split into two categories, storage capacity costs and commodity costs.

Under Transco’s NTS system operator (SO) incentives, Transco receives a fixed allowance or target for OM storage capacity costs. Under these incentives, Transco is fully exposed to OM storage costs that exceed this target. Equally, if Transco’s OM storage costs are lower than target, Transco receives the full benefits of these cost savings.

Commodity costs are incurred when OM gas is used. On days when OM gas is employed, Transco recovers the commodity charge from shippers through balancing neutrality charges.

[1] System buy or sell actions taken by Transco to alleviate a locational constraint on the NTS are not included in cash out prices.

Modification proposal 0575 "Revision to cash out pricing and the methodology for recovery of OM costs"

Modification proposal 0575 was originally put forward by AEP Energy Services Ltd on 7 August 2002. It proposed to better target the costs of OM gas usage to those shippers causing the costs to be incurred. It was also proposed that criteria should be set out in the network code to determine whether Transco's use of OM gas was for "system" or "gas balancing" purposes[2].

Following discussion in workstream, two approaches to OM cost targeting were developed. Consequently, modification proposal 0575 was withdrawn on 24 January 2003 and modifications 0606 and 0607 were proposed by AEP Energy Services Ltd to reflect each of the two approaches.

The electricity cash out regime

In electricity, under the rules of the balancing and settlement code (BSC), energy imbalance volumes are cashed out separately for production and consumption accounts. They are calculated as the difference between a trading party's notified contracted volume for their production or consumption account and their metered volume. The price paid for energy imbalances depends on whether the trading parties have long or short positions. Production (consumption) accounts which are under (over) contracted are long and receive a system sell price (SSP) for the electricity they have spilled onto the system. Consumption (production) accounts which have under (over) contracted are charged the system buy price (SBP) for the electricity they are short of. The SBP is calculated as the volume weighted average of the offers accepted in the balancing mechanism (BM). The SSP is the volume weighted average of the bids accepted in the BM.

Bids and offers which are accepted in the BM but have a duration of less than fifteen minutes are assumed to be for system balancing purposes. Therefore these bids and offers are excluded from the calculation of energy imbalance charges.

The proposals

Both proposals were raised with the purpose of improving cost reflectivity in imbalance charges and provide improved incentives for shippers to balance on days when Transco is forced to use OM gas for end of day balancing reasons.

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[2] System balancing actions are associated with within-day balancing requirements, including onshore plant failures (e.g. NTS pipelines and compressors failures). Gas balancing actions are taken for end-of-day purposes, including beach supply failures and changes in demand forecasts.

Network code modification proposal 0606 "Reform of the cash out arrangements and the inclusion of costs of OM gas used for end of day balancing purposes using a stack process"

Network code modification proposal 0606 proposes the following methodology to account for OM gas costs in the determination of cash out prices on days when OM gas is used for end of day balancing purposes.

When the system finishes the day short of gas (Transco is a net buyer on the day), the SMP buy price will be set at that point in an ordered net stack of system buy actions as determined by comparing the stacked volumes against the aggregate net system imbalance[3] for the gas day. The resulting SMP buy price may not necessarily be the most expensive buy action on the day.

Under this option, any use of OM gas will be deemed to be a market balancing action, thus it would not require any determination by Transco as to whether the OM use was for energy or system balancing. All of Transco balancing actions on a day (including OM volumes) would be sorted in price order and stacked to create a buy and sell stack. The highest priced buy actions would be netted off with volumes of the lowest priced sell actions to create a net buy stack. All the volumes netted off the stack would be deemed to be system balancing actions, while the volumes remaining in the net buy stack would be deemed to be energy balancing actions.

A symmetric net sell stack would be created when the system is long of gas (Transco is a net seller on the day) to determine the SMP sell price.

The existing fixed price differentials would remain, so the prices determined by the process explained above would only apply if they were higher (for SMP buy) or lower (for SMP sell) than the existing fixed differential.

OM gas costs would be included in full in the form of a unit price calculated by Transco and reflecting storage space, gas, financing, injection and withdrawal costs. For Rough and Hornsea (or any other non-Transco LNG storage site) prices will be based on the weighted average auction prices if available. Transco would derive unit prices based on its assessment of the market value of each storage service procured for OM usage and with unbundled cost elements apportioned at Transco's discretion.

[3] The net system imbalance would be the difference between aggregate user daily inputs and offtakes net of any volumes sold to or bought from Transco as system operator.

OM costs would continue to be recovered from users by the existing cost recovery mechanisms. However, additional revenue would flow into balancing neutrality on days in which OM gas is employed.

Network code modification 0607 "Changes to the cash out arrangements where Transco defines OM gas usage for end of day balancing purposes"

Network code modification proposal 0607 proposes that when an OM action is deemed by Transco to be a market balancing action for end of day energy balancing reasons (e.g. beach gas supply failure, step increases in demand) a unit price for OM usage would be calculated to contribute to the determination of the SMP buy price.

Specifically, if OM gas is used for energy balancing purposes and is greater than the highest priced buy action taken by Transco on the day, the OM unit rate would set the SMPbuy price. Similarly, if the OM unit cost was lower than the lowest priced sell action taken by Transco it would be used to determine the SMPsell price.

OM gas costs would be included in full in the form of a unit price calculated by Transco and reflecting storage space, gas, financing, injection and withdrawal costs. For Rough and Hornsea (or any other non-Transco LNG storage site) prices will be based on the weighted average auction prices if available. Transco would derive unit prices based on its assessment of the market value of each storage service procured for OM usage and with unbundled cost elements apportioned at Transco's discretion. In particular, the OM gas costs would be determined by SAP (the gas component) plus an increment reflecting an average cost of the non-gas element of OM.

OM costs would continue to be recovered from users by the existing cost recovery mechanisms. However, additional revenue would flow into balancing neutrality on days in which OM gas is employed.

Respondents' views

Network code modification proposal 0606 "Reform of the cash out arrangements and the inclusion of costs of OM gas used for end of day balancing purposes using a stack process"

There were eleven responses to the consultation. Ten respondents opposed implementation of modification proposal 606 and one respondent offered qualified support.

The one respondent offering qualified support said that OM actions should be included in cash out prices in order to facilitate more cost reflective cash out prices.

Other respondents disagreed with this view. In particular one respondent noted that as a result of the netting-off approach, the unit price for OM gas usage could be excluded from the net stack, thus weakening shippers' incentives to balance. Moreover, a number of respondents stated that the incentives to balance on days when OM gas has not been used would be reduced. One respondent noted that, as a consequence of this modification, on most days cash out prices would be set by SAP plus the relevant fixed price differential, i.e. not set by market actions.

Many respondents noted the infrequency of use of OM gas for end of day balancing purposes. In view of this they believed that the additional complexity to the cash out regime and the costs of implementing the modification proposal were not justified.

A number of respondents were concerned that the proposal would prevent EnMO from calculating system marginal prices in real time. Although, under the current arrangements, the relevant system marginal prices can only be confirmed at the end of the gas day, Transco's balancing actions earlier in the day provide an idea of the expected level of cash-out prices, thereby informing shippers' decision to balance. Under this proposal, there would be no such within-day information as to the potential level of cash-out prices, because this would depend on the net system imbalance as calculated after the gas day. These respondents argued that given the lack of real time information shippers may refrain from balancing earlier in the gas day, thus making Transco's residual balancing role more difficult.

Some respondents noted that the proposal would bring consistency with the electricity market. However, one respondent stated that there would be no system benefit in bringing about this consistency given that they did not support the arrangements in electricity.

Some shippers noted that the modification proposal would result in a fundamental change to the cash out regime. These and other shippers considered that such changes should be taken forward once Ofgem's conclusions on energy balancing were issued[4]

Network code modification 0607 "Changes to the cash out arrangements where Transco defines OM gas usage for end of day balancing purposes"

There were eleven responses to this consultation. Two respondents supported the modification proposal and two provided qualified support. Seven respondents opposed the modification proposal.

[4] These conclusions were contained in "The gas trading arrangements, reform of the gas balancing regime, next steps", Ofgem, April 2003

A number of comments made by respondents on modification proposal 0606 were also valid for modification proposal 0607. Some respondents suggested that modification proposal 0607 offered a more pragmatic and less complex alternative to modification proposal 0606.

Several respondents believed that the modification proposal would better target the costs of OM gas. Most respondents believed that it would improve incentives to balance on days when Transco uses OM gas for end of day balancing purposes.

However, some respondents thought that the proposal would give rise to unnecessary cost reflectivity as market prices already reflect system imbalances without the need for the inclusion of OM gas in cash-out prices. Also, some respondents believed that cash out prices would become penal on days when OM gas is used.

Some respondents were concerned about allowing Transco to determine whether OM gas had been used for system or energy balancing purposes. A few thought that this determination should be made through a transparent and clearly defined process and that OM unit gas cost should be known ex ante to give shippers the opportunity to mitigate their imbalance exposure.

Transco's view

Network code modification proposal 0606 "Reform of the cash out arrangements and the inclusion of costs of OM gas used for end of day balancing purposes using a stack process"

Transco did not support the implementation of network code modification proposal 0606.

Transco stated that the proposal could increase incentives to balance on occasions when OM gas is used. However, Transco's noted not only that such events are rare, but also that there was a significant risk for such OM gas actions to be excluded from system marginal price determination because of the proposed netting process.

Transco argued that on most days when OM gas is not used the netting approach will actually weaken shippers' incentives to balance. Decreasing incentives on shippers to balance could lead to greater within-day mismatches between inputs and offtakes, thus increasing within-day linepack variation. For this reason, Transco believed that the proposal would be inappropriate at this time given its concerns about within day performance in the gas balancing regime.

Transco also stated that the proposal would not support within day cash out price information provision. It believed that the lack of within day price signals could reduce incentives on shippers to address their imbalance positions until later in the gas day.

Transco stated that the proposal would result in a fundamental change to the cash out regime. It noted that although these changes to cash out prices will bring about greater consistency with the electricity regime, they would weaken shippers' incentives to balance.

Network code modification 0607 "Changes to the cash out arrangements where Transco defines OM gas usage for end of day balancing purposes"

Transco did not support implementation of network code modification proposal 0607.

Transco believed that the modification proposal could strengthen incentives to balance on days when OM gas is used for end of day balancing purposes but noted that such incidents are very infrequent.

Transco also noted that the proposal could create greater uncertainty regarding cash-out prices which will no longer be solely based on transactions taking place on the EnMO trading system. Transco went on explaining that it would define a unit price for the non-gas components of OM costs at the beginning of the gas year to be added to SAP on days when OM gas is employed.

Transco believed that there was a risk that OM gas usage, on some occasions, may be inappropriately assigned to end of day balancing purposes when its usage was for system balancing purposes instead. Furthermore, Transco stated that OM gas utilisation for end of day purposes tended to happen later on the gas day which meant that shippers may not have sufficient time to respond to changes in cash out prices.

Transco was of the view that on days in which OM gas is used this proposal could have the effect of unduly inflating the SMP buy price when market prices already fairly reflect the shortage in gas.

Transco concluded that the benefit of improved cost reflectivity, taking into account the infrequent use of OM gas would be outweighed by the costs of implementing an automated IT system for feeding OM costs into cash out prices and of the increased risk to shippers.

Ofgem's view

Modification proposals 0606 and 0607 set out two different approaches to incorporating OM gas costs into cash out prices. As these two modification proposals are related and mutually exclusive

Ofgem has carefully considered which one, if any, would better facilitate the relevant objectives of Transco’s network code under standard condition 9 of Transco’s licence.

Ofgem considers that the principle behind the modification proposals has considerable merit. In particular, Ofgem believes that the inclusion - into cash out prices - of OM costs incurred by Transco for energy balancing reasons could improve the cash-out regime, by making it more cost-reflective. If shippers are more accurately exposed to balancing costs, they will have better incentive to balance, thereby facilitating more efficient and economic system operations.
However, both modification proposals have some detriments.

With respect to modification proposal 0606,

- Ofgem considers that the proposal could sharpen incentives on days when Transco uses OM gas. However, the proposed methodology would also increase the number of instances were the cash-out prices would be determined by the existing fixed price differentials. Replacing market derived prices by fixed price differentials does not seem beneficial. As such, this would not seem to be a welcome development.

- In addition, Transco has provided evidence that on the five days from December 1999 to October 2001 in which Transco used OM gas for end of day balancing purposes, the SMP price would have been determined by the stack methodology only on two occasions, whilst the remaining three days would have seen the application of the fixed price differentials.

- Ofgem notes that the use of OM gas by Transco is rather infrequent. As such, the greater cost-reflectivity on one or two days a year would come at the cost of less cost reflectivity on significantly more days a year. The benefit achieved from this modification proposal is therefore outweighed by its detriments.

- Ofgem believes that an important feature of the current gas trading arrangements is that shippers are able to respond to within day price signals. This proposal would weaken this feature since the level of cash out prices could be finalised only after the completion of the stack process at the end of the gas day.

With respect to modification proposal 0607,

- The proposal could achieve a sharpening of incentives to balance on days of tight demand and supply conditions without undermining the existing incentives on most days. In particular, we note that modification proposal 0607 does not change substantially the calculation of cash out prices thereby ensuring that the cash out prices are not undermined on the majority of days when OM gas is not used or when it is used for within day purposes.

- However, the inclusion of the costs of OM usage introduces non market-related costs into cash-out prices. That is, the non-gas costs included in the unit rate are derived from the regulated prices of Transco's LNG assets. The funding for Transco's LNG assets is being reviewed as part of Transco's SO incentives. Until this review is complete, we are reluctant to introduce further non market-related elements into cash-out prices.

- It seems difficult, in some situations, to determine whether OM utilisation is for system or energy balancing purposes. This could lead to errors in the attribution as to the actual reason of an OM action, thus introducing distortions in the signals and incentives provided to shippers through cash out prices.

With respect to both modification proposals,

- We agree that the complexity introduced by these proposals does not seem to be merited by the very few occasions when OM gas is used.

- Any proposal regarding cash-out prices can be seen as altering the imbalance risk profile between Transco and shippers. We note that with respect to both modification proposals, the majority of shippers and Transco oppose these modification proposals. In that light, Ofgem would have to be particularly sure that approving either proposal was better facilitating the relevant objectives. We are not in that position at this stage.

- In particular, we note that Transco does not support a change to cash-out prices in the way proposed. Given its duties to keep the system in balance, its opposition to these particular modifications is relevant. This is in contrast to similar modification proposals in the electricity industry where NGT as electricity system operator is supporting changes to cash-out prices for this coming winter. NGT as gas system operator has confirmed that at this stage that it does not intend to propose changes to cash-out prices for this coming winter.

- We have considered these proposals alongside similar modification proposals made in the electricity industry. While there would be much merit in approving modification proposals that bring cash-out prices in the two industries together, we must also be aware that, at this point, there is a significant difference between the two cash-out regimes. That is, the gas industry uses marginal price calculations, whereas the electricity industry uses average price calculations. With this difference in place, we do not consider it necessary to bring other aspects of cash-out pricing into line.

Ofgem's decision

For the reasons outlined above, Ofgem has decided not to direct Transco to implement network code modification proposal 0606 or modification proposal 0607 as we consider that these proposals do not better facilitate the achievement of the relevant objectives as outlined under standard condition 9 of Transco's GT licence. We have indicated that we support the principles underlying these proposals. However, given the uncertainties as to the methodology and the view of NGT as gas system operator, we are not in a position to approve these particular modification proposals at this stage.

If you have any queries in relation to the issues raised in this letter, please feel free to contact me on the above number or Samanta Padalino on 020-7901-7033.

Yours sincerely,

Kyran Hanks
Director, Gas Trading Arrangements