National Grid Gas – Transmission System Operator External Incentives 2007/8

Introduction

We welcome the opportunity to respond to Ofgem's preliminary views consultation on National Grid Gas NTS's System Operator Incentives from 1 April 2007.

This response is written on behalf of National Grid Gas plc in its capacity as the holder of a gas transporter licence in respect of the National Transmission System ("National Grid Gas NTS").

The overall structure of this response concentrates on:

i. the system balancing gas cost volumes;

ii. forecast volumes for gas system reserve for the period 2007/08; and

iii. areas requiring further consideration.

For each area we have highlighted the rationale behind National Grid's forecast and provided our views on the analysis provided by Ofgem's consultants TPA.

Summary comments

In advance of providing more detailed comments, we would make the following key comments:

Whilst we recognise the document is only a preliminary views consultation, we are of the view that the document lacks sufficient detail, explanation or analysis as to how TPA has arrived at its recommendations, whereas National Grid Gas NTS provided detailed analysis to underpin its forecasts of costs in the relevant areas. In order that all interested parties can reach an informed decision as to the appropriate levels of forecast costs, it is necessary to understand the rationale behind any analysis undertaken by Ofgem or its consultants.

The analysis currently presented by TPA is fundamentally flawed in the areas of Own Use Gas (OUG) and System Reserve (Operating Margins). In particular we would highlight that:

i. <u>In relation to OUG</u>:-

- The forecast volumes presented by TPA are based on simply averaging the actual OUG volumes for 2002/03 and 2003/04 and then simply reducing these volumes by 30% with little justification for this reduction. Although we have not seen the analysis behind the above volume reductions, using the assumptions mentioned in the TPA commentary, National Grid Gas NTS carried out an analysis using TPA's quoted Vesterled flows of 30mcm/d being switched to Easington. This analysis indicated that the reduction should be nearer to 20 % based on the supply scenarios adopted by TPA. Hence we

believe that the forecast 30% reduction is not supported by analysis and is therefore flawed.

- We also believe that TPA's forecasts understate likely throughput requirements, particularly at St. Fergus and therefore the appropriate shrinkage volume target. Our latest analysis, backed up by the TBE process, indicates a reduction of flows from St. Fergus of 13% rather than 21%, which would indicate a higher target than proposed by TPA.

ii. In relation to System Reserve:-

After consideration of TPA's data for system reserve we believe that TPA make a number of incorrect assertions regarding the methodology employed by National Grid Gas NTS to calculate the annual requirement. We refute the assertions put forward by TPA, as most are incorrect and we have provided our views on each of TPA's assertions in the appendix.

In particular, we are concerned by TPA's assertion that "in their view there is some overlap between OM categories e.g. Supply Losses and Orderly Rundown,"[1] which has led to TPA proposing a reduction of 356GWh in OM as a result of double provision. National Grid Gas NTS cannot accept TPA's assertion because to do so would:

i. Require changes to both the Safety Case and the UNC; and

ii. would increase the frequency of declaration of a gas supply emergency and the associated market disruption resulting from a major event that would otherwise be potentially avoided through the booking of OM at the levels proposed by National Grid Gas NTS.

Having said this, if the incorrect assertions made by TPA were corrected this would result in a proposed OM target of 1589 GWh for 2007/08 which is consistent with that proposed by National Grid Gas NTS.

In conclusion, we note that once the items highlighted above have been corrected then TPA are broadly supporting National Grid's central case scenarios for both shrinkage volumes and gas reserve volumes.

iii. Areas requiring further consideration

a. Market Information Incentives

[1] Office of Gas and Electricity Markets, "National Grid Electricity and National Grid Gas System Operator Incentives from 1 April 2007," page 40 September 2006

We note that Ofgem have proposed two potential schemes in relation to the market information incentives. We are of the firm view that financial incentives should provide an appropriate balance of risk and reward that aligns the interest of the transmission company with those of consumers and be consistent with our economic and efficient licence obligation and as such we believe that a continuation of the present scheme would be the most appropriate way forward.

In relation to Ofgem's suggestion for the introduction of standards of performance obligations with penalties for underperformance, we believe that a penal only scheme is unacceptable as it would not provide National Grid Gas NTS with an appropriate balance of risk and reward.

b. Residual Gas Balancing

We agree with Ofgem's proposals for residual balancing for 2007/08. However, we believe that the parameters of the scheme may need to be reviewed in the forthcoming months, in order to fully reflect the importance of the role.

c. Income Adjusting Events (IAE's)

We believe it is important that within our licence there is an appropriate mechanism to deal with unanticipated events, where there is a material departure from the anticipated level of costs beyond the control of National Grid Gas NTS. If IAE provisions were not in place, then we believe an alternative would be to include an ex-ante allowance in the agreed year ahead target which would, in National Grid Gas NTS's opinion, be a far less efficient way of managing the risk of such unexpected costs.

d.Duration of the incentive schemes

In terms of the duration of any incentive scheme, in theory we believe that incentive schemes longer than one year in duration are of greater benefit to the community. However, we appreciate that it is Ofgem's wish to set the incentives for just the one year period to only cover 2007/08. For the period post 2007/08, we believe it would be beneficial and more efficient to consider schemes that are longer than one year in duration and we look forward to discussing this area during the next review of the shallow incentives.

Finally, although we recognise that this is only a preliminary views consultation, we are also concerned as to the lack of proposals relating to the treatment of operational buybacks.

Given the importance of this incentive, we would welcome early clarification from Ofgem as to their conclusive decision as to how and when this important feature will appear for wider consultation.

i. National Grid Gas NTS's System Balancing Gas Cost (Shrinkage) forecasts

Over recent months, National Grid Gas NTS has provided Ofgem with its detailed submission of forecast volumes for all elements of shrinkage for 2007/08 to aid discussion around the suitable levels of targets for 2007/08.

This has included outlining for each of the shrinkage elements our assumptions and a range of forecast volumes based on low, central and high cases. These volumes were derived after analysing historical usage within the context of 2005/06 actual performance and 2006/07 actual/forecast performance.

We have also provided a number of detailed responses to TPA's questions in relation to shrinkage in respect of capital expenditure submitted as part of the main Transmission Price Control Review (TPCR).

After consideration of the assertions put forward by TPA, we note that to a considerable extent TPA have agreed with National Grid Gas NTS's views in relation to the central case levels of Unaccounted for Gas (UAG) and Unbilled Energy (CV Shrinkage). However, we have a number of serious concerns relating to the forecast volumes presented by TPA for the Own Use Gas (OUG) element of the system balancing gas cost incentive and note the significant variance between National Grid Gas NTS's forecast and that presented by TPA. National Grid Gas NTS's submission of 22nd August 2006 remains valid and better reflects the possible range of supplies and demands expected to be experienced by the NTS over the coming years. These data are derived using robust modelling of OUG usage with actual deliveries of gas to the NTS and gas offtaken from the NTS.

In arriving at their OUG forecast, TPA outlines three factors which would reduce OUG in 2007/08. These factors are:

- The Langeled pipeline is expected to flow from October 2006. If this displaces 25-30 mcm/day of flows via Vesterled into the Total sub-terminal at St Fergus, gas compressor requirements will drop, as the Total terminal is the only St Fergus sub-terminal that requires gas compression;
- St. Fergus flows from UKCS are significantly down in comparison to historical flows; and
- TPA considers that flows at Milford Haven will not need to use compression to get to centres of demand, reducing the requirement for compression at Peterstow.

National Grid Gas NTS has asked Ofgem to provide TPA's analysis that underpins and provides the rationale for the above statements, so that all interested parties can reach an informed decision as to the appropriate level of OUG volumes. At this time we have still not received this analysis. However, we are led to believe that TPA has based its analysis on two sets of data provided by National Grid Gas NTS to Ofgem in response to specific questions raised as part of the main TPCR concerning investment levels, albeit at two separate times in the price control review.

It would appear that the OUG forecast provided by TPA has been derived by simply averaging the actual OUG volumes for 2002/03 and 2003/04 and then reducing these volumes by 30% with little justification for this reduction. Although, we have not seen the analysis behind the above volume reductions, using the assumptions made by TPA National Grid Gas NTS believes that the corresponding OUG would be 5700 GWh if you were to use our own models (resulting from the switching of 30mcm/d of Vesterled gas to Easington). Therefore we believe that even in the absence of any challenge to TPA's assumptions their 30% proposed reduction for OUG should be no more than 20%.

Furthermore it transpires that TPA's assertion was informed by selective use of data provided by NGG to Ofgem. NGG provided to Ofgem a copy of an internal working document that sought to demonstrate, to the environment agencies, the inefficiency of implementing a variety of pieces of environmental legislation at the site level rather than at the fleet level. The level demonstrated the interactions that exist between the locations of supply delivery relative to the location of consumption. Inevitably, the closer to the centres of demand gas is supplied the lower the number of running hours for our fleet of compressors. This internal document in no way reflects NGG forecast of future expected supplies and that to use the supply numbers included in this document would be inconsistent with the supply forecast used elsewhere in the TPCR.

We are deeply concerned by such an approach for a number of reasons:

I. We stressed that the documentation was a work in progress and had received no formal agreement either internally or with the environmental regulator;
II. The data within the Network Review does not reflect National Grid Gas NTS's most upto date supply assumption;
III. The relationship between NOx emissions and OUG is not a linear relationship; and
IV. The Network Review was used to consider long term investment decisions and is therefore inappropriate for detailed, single year analysis of OUG.

In addition to the concerns identified above we are also concerned by the assertions made by TPA in relation to the future supply patterns. We are of the firm view that TPA's forecasts understate likely throughput requirements particularly at St. Fergus. TPA suggests that St. Fergus flows will reduce by 21% to those proposed in 2007/08. However, our latest analysis indicates that St. Fergus flows will see a reduction to only 13%

Therefore, from the limited data made available to National Grid Gas NTS we are of the firm view that the forecasts presented by TPA in relation to OUG do not present a reasonable assessment of future requirements. Correcting for TPA's incorrect assertions would result in an OUG volume that agrees with that proposed by National Grid Gas NTS.

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ii. System Reserve (Operating Margins)

For clarification, National Grid Gas NTS purchases Operating Margins ("OM") on an annual basis in line with both the requirements of Section K of the Uniform Network Code ("UNC") and obligations described in the National Grid Gas Safety Case ("the Safety Case"). The Safety Case places an obligation on National Grid Gas to maintain OM at levels and locations determined throughout the year.

OM gas is used to maintain system pressures in the period before other balancing measures become effective. Primarily OM will be used in the immediate period following a supply failure, a pipeline/compressor failure or the identification of a demand forecast change. However the use of OM in the aforementioned contexts will be the minimum associated with operational requirements. A quantity of OM will be kept in reserve to manage the orderly run-down of the System following the exhaustion of all other storage gas and during periods of high demand or, in other words, a Gas Supply Emergency.

In response to a formal information request from Ofgem, National Grid Gas NTS provided its best view at the time of the expected volumes of gas system reserve for formula year 2007/08. We presented a number of forecasts based on low, central and high cases. The forecasts we presented were based on a range of scenarios as OM is crucially dependent on the supply and demand assumptions employed. The assumptions adopted are consistent with those adopted for target setting throughout the suite of shallow incentives. We also highlighted a number of other assumptions which need to be made such as recent operational performance, any TO investment and price uncertainty. These forecasts and the assumptions that underpin them continue to represent our best view at this time.

Further as part of the main TPCR, National Grid Gas NTS has also provided a number of detailed responses to TPA's questions in relation to OM in respect of capital expenditure.

Following submission of our OM forecasts for the period 2007/08, TPA on behalf of Ofgem, carried out a review of our forecast OM requirement and concluded that our OM forecasts were overstated because of:-

I. A perceived double provision of reserve between major and multiple events;
II. Lower demands through higher gas prices; and
III. Other reserve reductions through greater reliability of
    a. New import facilities and associated supplies; and
    b. New electric compression.
    c. Greater shipper focus (respond to supply shortfalls more quickly)

We refute the assertions put forward by TPA, as most are simply incorrect, and have provided our views on each of these assertions made. We note that correcting for these incorrect assertions TPA's proposed reductions are reversed resulting in a proposed OM target of 1589 GWh for 2007/08 which is entirely consistent with that proposed by National Grid Gas NTS.

Perceived double provision of reserve between major and multiple events

TPA states that "in their view there is some overlap between OM categories e.g. Supply Losses and Orderly Rundown." going on to state that "in their view it would be possible to eliminate all the provision of OM for Major Events as any of these events would be so severe that if they occurred in winter there is a very high probability that a Gas Supply Emergency would have to be declared. The impact of removing this double provision is a reduction in OM of 356GWh."[2]

National Grid Gas NTS cannot accept this assertion by TPA because to do so would:

- Require changes to both the Safety Case and the UNC; and
- Would increase the frequency of declaration of a gas supply emergency and the associated market disruption resulting from a major event that would otherwise be potentially avoided through the booking of OM at the levels proposed by National Grid Gas NTS.

In order to illustrate our concerns, consider a scenario which sees a major supply failure such as the loss of a major offshore pipeline with the consequential loss of significant beach gas or the loss of a sub-terminal. Under the above conditions, National Grid Gas NTS could readily lose in excess of 50 mscm/d of gas at relatively short notice (major events are short term occurrences rather than prolonged failures).

Furthermore, if the loss of supply were to coincide with winter demands outside of normal office hours, then we are of the firm view that OM could provide essential breathing space before the market could react to the shock to supplies described thereby avoiding the need to resort to the orderly rundown of the system. Under TPA's proposal there would be an immediate declaration of a National Gas Supply Emergency that would result in the suspension of market balancing arrangements and the consequential use of gas for orderly rundown of the system that may no longer be available for use again under more serious failures of the system.

Drivers for change in the level of OM Booking

Within its review, TPA has identified a number of factors that they believe will impact the level of OM bookings. We consider each of these in turn below:-

New import facilities and associated supplies

TPA states that a reduction in OM requirement of 25GWh could result from new import projects going ahead, thus providing additional supply and that, in their view, National Grid Gas NTS has been "overly conservative" in its approach. We strongly disagree with this assertion. In the first instance, capacity provision does not mean that gas molecules will necessarily be available. For instance, during winter 2005, National Grid Gas NTS

[2] Office of Gas and Electricity Markets, "National Grid Electricity and National Grid Gas System Operator Incentives from 1 April 2007," page 40, September 2006.

observed that the continental interconnector did not flow at full rate even when UK gas prices were above European levels. Also, on numerous occasions during winter last year Ofgem publicly raised their concerns about the levels of gas supplies. In a letter from Sir John Mogg to the European Commission dated 25 November 2005, Ofgem made clear their concerns about the levels of gas supplies from Britain's offshore fields, the Isle of Grain terminal and through the interconnector pipeline with Belgium. Ofgem stated:

> *"Although the weather has led to high levels of demand, the level of prices both in absolute terms and relative to reported prices in the Netherlands and Germany would suggest that all or at least the vast majority of available gas supplies from the North Sea, Norway and NW Europe should flow into the UK. It would also suggest that LNG should be diverted. The reverse is true. The Zeebrugge interconnector has been operating at between 60% and 75% of capacity and there have been only three shipments of gas to the new LNG terminal at the Isle of Grain since July."*[3]

A further important point to note is that world LNG prices may result in LNG import facilities flowing at levels well below that indicated by their available capacity as evidenced by LNG deliveries to the UK at the time of Hurricanes Katrina and Rita last year. The global market for LNG is flexible and, in a situation where the NBP is trading at a discount to another hub, this price arbitrage could be exploited at the expense of delivering gas to the UK.

It should also be noted that whilst imports from Europe are also liable to the same supply failure as UKCS gas, they also suffer from political instability as evidence by the Russia/Ukraine supply interruption last year.

We note that TPA states that "modern LNG importation facilities (with redundancy, no gas processing and no gas compression) are highly reliable, much more so than offshore facilities or onshore gas processing plants."[4] We believe that contrary to TPA's statement, gas processing activities in the form of enrichment and nitrogen ballasting do take place at UK LNG import facilities and that such activities are essential to ensure a wide variety of source supplies can enter the UK. National Grid Gas NTS's experience with LNG imports to date has shown that proven reliability is no greater than that for UKCS supplies. For example, last winter for the highest 100 days of demand, beach availability was 90% compared to just 70% for LNG imports (this being a measure of actual deliveries forecast that forecast to occur)

Therefore, given the above arguments, we cannot see a firm or reliable basis for an OM reduction of 25GWh proposed by TPA as the data for new importation facilities does not support this.

[3] Sir John Mogg letter to Philip Lowe, Competition Directorate, European Commission entitled "European Gas Market," dated 25 November 2005.

[4] Office of Gas and Electricity Markets, "National Grid Electricity and National Grid Gas System Operator Incentives from 1 April 2007," page 96, September 2006.

New electric compression

TPA states that "the multiple event provision contains a large proportion of reserve requirement to cover for compression trips and the introduction of new electric compressors should improve reliability and so reduces the reserve requirement," and therefore this should lead to a reduction of 57GWh.

We would like to point out that as stated within our capex submission as part of the TPCR, we are not proposing the introduction of additional electric compressors for the period 2007/08. Therefore, we are adamant that TPA's assertion is irrelevant for the purposes of setting the 2007/8 target volume and as such the reduction of 57GWh is totally without justification.

Also, at this stage it can only be a matter of conjecture and speculation whether new electric drives when installed in the future will improve reliability. In the long term, post 2007/08, National Grid Gas NTS will ensure that improved reliability would be reflected in the OM booking by the continued inclusion of the latest operational data within the regression model used to determine the OM forecast.

Greater Shipper Focus

TPA state the increased Shipper focus could lead to a reduction in reserve requirements of 14GWh."[5] OM gas is used to maintain system pressures in the period before other balancing measures become effective. Primarily OM will be used in the immediate period following a supply failure, a pipeline/compressor failure or the identification of a demand forecast change and has a significant locational element. Typically this will result in a large change in the flow rate that reduces later once the market has reacted to the unforeseen event.

TPA asserts that with the publication of real time flow data at entry points Shippers will be able to re-source new supplies at short notice or reduce demands, effectively performing the role of OM. National Grid Gas NTS does not believe this necessarily follows given that the incentive is on Shippers to achieve a balance between their inputs and outputs by the end of a gas day, whereas National Grid Gas NTS's obligation is to maintain a safe system throughout the day. Even though real time data at entry points will show when a supply failure occurs it does not communicate the duration of any likely failure or any flow constraints that may be imposed once a supply is restored. Therefore, if Shippers were relied upon to immediately modify its supplies and demands the information available is not sufficiently reliable and complacency may result in the window of opportunity to manage such supply failures, without declaring a National Gas Supply Emergency (and therefore suspension of market balancing arrangements), being lost.

In addition, at high system demands, Shippers may not be able to access other sources of supply, or reduce demands in the right locations needed for the integrity of the system to be maintained

[5] Office of Gas and Electricity Markets, "National Grid Electricity and National Grid Gas System Operator Incentives from 1 April 2007," page 96, September 2006.

Dismissal of National Grid Gas NTS's high case

TPA are of the opinion that National Grid Gas NTS have provided insufficient justification for the High Case OM forecast based on the belief that an improved UK supply/demand position exerts downward pressure on the OM requirement.

In responding to this assertion, National Grid Gas NTS largely reiterates many of the arguments that may be found elsewhere in this document. A simple dismissal of National Grid Gas NTS's High Case for OM makes the assumption that most of the planned new infrastructure will deliver at relatively high load factors in spite of our experience to date with:-

I. continental imports and to a lesser extent LNG imports.
II. The construction / timing risk associated with major projects
III. the development of a global market for LNG where LNG planned for the UK could readily be transported to other markets
IV. other supply risks that could materialise - notably within Europe as experienced last winter with the Ukraine / Russia dispute
V. an increase in gas demand, which could materialise if gas prices decreased or for unforeseen circumstances such as a major problem with the UK's remaining available nuclear power stations

Whereas National Grid Gas NTS's approach was to define a most likely case and examine factors that could move this up or down, a simple dismissal of our High Case by TPA does not capture the full spectrum of an OM range based around existing and future supply/demand uncertainties.

Pricing System Reserve

As part of the Transmission Price Control Review, we are aware that discussions are taking place in relation to the future funding of LNG. We believe that there are a number of fundamental issues surrounding the topic of LNG which need careful consideration as part of the price control process.

Indeed, the future funding of LNG will be of relevance to both the system balancing and the system reserve incentive due to the price element of the incentives. Therefore, we would welcome early clarification from Ofgem as to the future pricing arrangements for the system reserve incentive.

In addition, we note that the difference between the volumes proposed by National Grid Gas NTS and those proposed by TPA would represent a modest change to present transportation charges; a small premium to avoid declaring a gas supply emergency and with it market disruption more often than necessary.

In conclusion, we continue to believe that the forecast volumes presented by National Grid Gas NTS represent our best view at this time.

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iii. Further points for consideration

a. Operational Entry Capacity Buybacks

After consideration of Ofgem's preliminary views consultation, we are concerned as to the lack of proposals relating to the treatment of operational buybacks. At this stage, it appears Ofgem is confused as to whether the buyback incentive is treated as part of the main TPCR or as part of the negotiation of the gas shallow incentives for 2007/08. Ofgem's central TPCR team have stated to National Grid Gas NTS, that operational buyback is likely to be dealt with as part of the gas shallow incentives negotiations. However, within Ofgem's preliminary views consultation on National Grid's Electricity and Gas System Operator incentives, Ofgem states;

> "NGG's roles in relation to capacity/constraint management are not considered further in this document. These areas are being progressed separately as part of work transmission price control process under which investment revenue drivers and investment buyback incentives are being developed."[6]

Given the importance of this incentive, we would welcome early clarification from Ofgem as to their conclusive decision as to how and when this important feature will appear for wider consultation.

b. Market Information Incentives

We note that Ofgem have proposed two potential schemes in relation to the market information incentives. We are of the firm view that financial incentives should provide an appropriate balance of risk and reward that aligns the interest of the transmission company with those of consumers and be consistent with our economic and efficient licence obligation and as such we believe that a continuation of the present scheme would be the most appropriate way forward.

In relation to Ofgem's suggestion for the introduction of standards of performance obligations with penalties for underperformance, we believe that a penal only scheme is unacceptable as it would not provide National Grid Gas NTS with an appropriate balance of risk and reward.

c. Residual Gas Balancing

We agree with Ofgem's proposals for residual balancing for 2007/08. However, we believe that the parameters of the scheme may need to be reviewed in the forthcoming months, in order to fully reflect the importance of the role.

[6] Office of Gas and Electricity Markets, "National Grid Electricity and National Grid Gas System Operator Incentives from 1 April 2007, footnote on page 7," September 2006.

d.Income Adjusting Events (IAE's)

We believe it is important that within our licence there is an appropriate mechanism to deal with unanticipated events, where there is a material departure from the anticipated level of costs beyond the control of National Grid Gas NTSIf IAE provisions were not in place, then we believe an alternative would be to include an ex-ante allowance in the agreed year ahead target which would, in National Grid Gas NTS's opinion, be a far less efficient way of managing the risk of such unexpected costs.

National Grid Gas NTS would also like to suggest some potential improvements to the IAE process. Firstly, the timeframe over which IAE's can be assessed by the Authority is a maximum of three months, however by their very nature; IAE claims can be very complex. National Grid Gas NTS believes that the period over which an IAE can be assessed should be extended. Secondly, at the present time if the claimant disagrees with Ofgem's determination there is no formal appeals process for IAEs. National Grid Gas NTS believes that the claimant should have the right to formally appeal an IAE decision and this revision would ensure consistency with the appeals process presently adopted by Ofgem in relation to industry code decisions.

e.Duration of the incentive schemes

In terms of the duration of any incentive scheme, in theory we believe that incentive schemes longer than one year in duration are of greater benefit to the community. However, we appreciate that it is Ofgem's wish to set the incentives for just the one year period to only cover 2007/08. For the period post 2007/08, we believe it would be beneficial and more efficient to consider schemes that are longer than one year in duration and we look forward to discussing this area during the next review of the shallow incentives.

Conclusion

In conclusion, we hope that you will find the above comments useful and we look forward to working with Ofgem to ensure the successful delivery of the Gas Transmission System System Operator incentives for 2007/08.