The Review of Top-up Arrangements in Gas –

A Consultation Document - May 2004

A National Grid Transco Response

Introduction

1. National Grid Transco (NGT) welcomes the opportunity to respond to "The review of Top up arrangements in gas" (the Consultation). In this response, we discuss the possible scenarios that Ofgem has presented, in addition to several further options, and also comment in an Appendix on other points of detail that Ofgem has raised within the Consultation.

2. Transco has a number of current obligations in relation to the provision of Top-up. Top-up is part of the Network Code regime and is part of the arrangements referred to in Transco's accepted Safety Case, alongside the OCM and Operating Margins as a balancing tool available to Transco. Transco's obligations to submit and comply with an accepted Safety Case arise from the Gas Safety (Management) Regulations 1996 made by the Secretary of State under the Health and Safety at Work etc Act 1974. This Safety Case, and all material revisions to it, requires the acceptance of the Health and Safety Executive (HSE.) Given Transco's 2001 approach to the HSE and ongoing discussions with them, we understand that Top-up may only be removed from or materially amended within the Safety Case when a revised Safety Case has been submitted and accepted, with a demonstration to the HSE that the level of System safety would not be degraded.

3. We would also note that, irrespective of the current obligations that NGT has in relation to Top-up, there is a broader question relating to the appropriate balance between protecting security of supply and accruing further efficiency by facilitating the development of the market. Commercial mechanisms tend to work well in managing risks with a high or medium probability of occurrence. The OCM is an example of a commercial tool available to Shippers to help them meet their daily balancing requirements on most days of the year. However, for a very low probability occurrence (such as a 1 in 50 requirement), even when this is associated with a very high cost, the rational commercial response might be to take the risk.

4. Thus in an efficient market environment, there might be a need for a supplementary mechanism in order to meet a regulatory requirement or other imperative, which by its nature is likely to introduce costs into the market. Top-up is clearly such a mechanism and whilst there might be scope to improve its efficiency, some impact on the efficient functioning of the market is to be expected.

Possible Ways Forward

5. We do, however, recognise the concerns expressed by Ofgem on the current gas Top-up arrangements. We agree that a number of alternative options should be considered, with a view to identifying a more efficient way of delivering security of supply, that could form part of a revised Safety Case submission. Our views on the alternatives are outlined within the body of this response and include both the options proposed by Ofgem and some further suggestions of our own regarding the progression from the existing Top-up arrangements. These are as follows:

Ofgem Option 1: The complete removal of Top-up from Transco's Network Code and Safety Case:

6. Ofgem suggested that Top-up be completely removed from both Transco's Network Code and Transco's Safety Case. It is the case that Top-up can directly give rise to considerable costs through the actions of the Top-up Manager, which impact on shippers through the mechanisms of Transco's price control. In addition, the actions of the Top-up Manager can indirectly result in costs for shippers through putting upwards pressure on prices in the gas market. It is likely that both of these cost elements would ultimately be passed though to end consumers.

7. Ofgem note, however, that any changes to the Transco Safety Case would require the acceptance of HSE, and are ultimately dependent on the HSE agreeing to the changes. Historically, HSE has maintained the principle that revisions to the Safety Case can only be accepted if they demonstrably maintain or increase the current safety level provided. There is an HSE standard of service for assessing revised Safety Cases, but particularly complex changes do have the potential for a lengthy demonstration and assessment process. In order to achieve this option the effectiveness of an alternative set of arrangements not involving Top-up would need to be successfully demonstrated.

Ofgem Option 2: Changes to the way Transco assesses the need for Top-Up gas:

8. Ofgem considered that "a more sophisticated approach to supply and demand forecasting on the part of Transco would reduce the potential for Top-up to introduce market distortions and would reduce the scope for inefficient costs to be incurred as a result of the Top-up arrangements".

9. Ofgem also suggested that factors such as a level of storage recycling and demand-side response, which could be expected in a severe winter, be factored into Transco's forecasts.

10. We note Ofgem's comments on the Demand and Supply Forecasting methodologies used in assessing Top-up requirements. Whilst the methodology was not originally designed to reflect the possibility of firm demands being voluntarily curtailed to take advantage of very high prices it is recognised, within the Industry, as achieving a high degree

of accuracy when assessed against actual demands (temperature corrected). We are working on further improvements for assessing the potential for demand response, particularly in the power generation sector and have actively requested information from market participants in these areas. We are also evaluating suggestions such as allowing for storage cycling.

11. We have no objection to publishing further information to explain our methodology for calculating Top-up requirements. We view this as desirable in prompting other appropriate measures that would enhance efficiency and transparency. Indeed, we would welcome the views of the industry on this issue, as part of this Consultation.

Ofgem Option 3: Transco to develop alternative ways of contracting to address supply/demand shortfalls:

12. Ofgem has included for consideration alternative methods of meeting supplies in a 1 in 50 winter rather than relying solely on storage in the current Top-up regime. Ofgem, however, considered this less favourable than removing Top-up.

13. Whereas Top-up was designed to provide a back-stop mechanism, our understanding is that this option would require us playing a more direct role in contracting for and controlling storage and demand-side products. This option would therefore seem to limit a wider range of market-based solutions. This seems at odds with the present market structure in which we are the residual balancer, providing incentives to shippers through the Network Code and taking actions where necessary to maintain a physical balance on the System. We would agree with Ofgem that this approach is not favoured in particular because of questions relating to the volume to be procured, and the fact that costs would be incurred every year, potentially inefficiently. We also believe that such an approach could be unduly complex.

Ofgem Option 4: Modify the Existing Top-up arrangements

14. Ofgem highlighted three potential ways in which the existing Top-up arrangements could be modified. These were:

    a) **Changing storage use it or lose it (UIOLI) rules such that Top-up counter nominations result in firm gas delivery.**

15. Ofgem notes the concerns raised in respect of UIOLI arrangements particularly that “the effect of any top up counter nomination could be offset by additional withdrawal”. However, it considered that removing the availability of UIOLI capacity “could increase the likelihood of top up actions resulting in less efficient patterns of storage utilisation.” We agree that UIOLI arrangements are generally beneficial in contributing to efficient storage utilisation. In this case, however, we do not believe that Winter Injection was intentionally designed to give rise to further withdrawals under UIOLI terms.

16. In our view, it cannot be considered to be efficient for the Top-up Manager to make total Winter Injection Nominations of several times

the extent of the initially identified monitor breach nor to cause by doing so additional volatility in the gas market. The availability of UIOLI capacity also incentivises gaming on the part of Storage Users without any benefit to Security of Supply. It would be useful to explore further solutions that kept the benefits but mitigated gaming opportunities, and discussions on this point are ongoing in the relevant industry work stream.

b) **Publish Storage Stocks**

17. We agree with Ofgem's view that greater transparency can be beneficial in efficient markets. We also agree with Ofgem that in this case it might not be appropriate as it could increase the potential for gaming. On the other hand, publication of storage stocks at an aggregate level would alert market participants to the possibility of a Network Gas Supply Emergency which would lead to a less satisfactory return for Shippers with interruptible arrangements than normal market operation. This should lead to higher demand-side participation, which would reduce the probability of an emergency occurring.

c) The calculation of TMOP

18. Ofgem has outlined our previously stated views on the current inefficiencies of the TMOP. As Ofgem also points out, we have raised Network Code Modification Proposal 0671, which we believe addresses the immediate issue of low TMOPs in a gas supply shortage situation and which would be resolved if Ofgem determined in favour of this Modification Proposal. Additionally, we would like to clarify that the range stated in 3.2.4 in the Consultation would be narrowed if Modification Proposal 0671 were implemented and believe that as a result, prices of at least £2 per therm would prevail. We do, however, agree that it would be preferable for TMOP to reflect market prices at times of very high demand and a pre-determined price cannot be relied upon to do that. In fact it has the effect of setting rather than reflecting prices in the market. We would, therefore wish to consider any suggestions for pricing that reflected the market but would ensure that other supply sources and demand flexibility were first fully utilised.

d) Other incremental changes

19. There may be incremental ways in which Top-up could be augmented in the short-term without fundamentally changing the regime or requiring a material change to Transco's Safety Case. However, Network Code Modifications would be required to facilitate these. These would include allowing Transco greater discretion in determining whether a counter-nomination is required (after taking account of weather forecasts and the ability of a storage facility to refill). This option is primarily presented as a possible means to manage or mitigate potential costs. In the longer term, such a strategy may make little difference to costs should the market price move in anticipation of counter-nominations and related gas purchases.

20. We are also looking at aspects of our current Top-up calculation methodology including assumptions on interruption at LDZ Supply Points, simulation of CCGT response, evidence of NTS non-power response, the effect of climate change and assumptions on storage stock cycling.

Ofgem Option 5: Redefine Top-up such that it focuses only on the domestic customer supply security standards:

21. Ofgem suggested that the existing Top-up methodology employed by Transco be modified such that instead of Transco booking sufficient Top-up to ensure that all firm demand can be met in a 1 in 50 winter, only the domestic customer demand would be met. Ofgem also noted that a similar proposal was put forward in February 2001. Discussions at that time between Transco and the HSE, which also involved Ofgem, were ultimately resolved by the HSE's legal advice, which clarified that the obligation applied in respect of both domestic and non-domestic firm demand. As a result Transco withdrew the proposed revision to the Safety Case.

22. We agree with Ofgem that due to the historic precedents set around this Proposal it is unlikely that this option would be able to be implemented for this winter (if at all) and as such would not realistically offer a way to improve the efficiency of the existing Top-up regime. We would also wish to point out that any practical means of retaining 1 in 50 security exclusively for domestic customers must take into account the fact that isolation of adjacent non-domestic customers may be neither practicable, nor in the case of Priority[1] Consumers, desirable.

Ofgem Option 6: No significant changes to the current Top-up arrangements:

23. Ofgem stated its belief that, given Transco's initial supply and demand forecasts for this winter, continuing with the existing arrangements would result in significant market distortion with the potential that Security of Supply could be undermined. Ofgem also stated that the preliminary figures put forward by Transco suggest that the opening Top-up monitor levels for LNG and medium duration facilities should be set at 100%, and its initial view is that such levels would be inconsistent with Transco's Licence condition to operate the "pipeline system in an efficient and economic manner".

24. We would note that relatively high monitor levels are symptomatic of reduced levels of beach gas and trends in the market towards Transco-only interruption rights. We agree that protecting these monitors would give rise to undesirable market volatility but do not agree that this would constitute a breach of our GT licence.

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[1] Priority consumers include hospitals, convalescent and nursing homes with no alternative fuel supply and those continuous processes that cannot be shut down instantaneously without causing severe damage.

Possible Further Options

25. We have given further thought as to other ways forward and have identified the following options:

    - Extending Suppliers Obligations
    - Demand-side Market Participation

    We see a benefit in pursuing debate on these further options.

Extending Suppliers Obligations

26. Standard Condition 32A of the Gas Suppliers Licence establishes, in respect of availability of gas supplies, a 1 in 50 supply security criteria for domestic customers (domestic customers for these purposes meaning supply points consuming less that 2500 therms per annum).

27. Supplier Licence condition 32A part four defines the Domestic Security Standards in terms of the 1 in 20 and 1 in 50 standards. However, these obligations only apply to domestic customers and for transportation outside of Network Code terms. These obligations are also reflected in the Gas Shippers Licence Standard Condition 6 but again, only in relation to gas transported outside of Network Code terms.

28. During the development of the Network Code it was considered that the default of one party to secure the necessary supplies to meet the security standards would affect all other players regardless of whether or not they had met their requirement and as such, a central co-ordinated role was considered to be appropriate for the security of all. Since the introduction of these licences the market conditions have changed considerably.

29. For example, there is now a diversity of storage operators that, to an extent, compete in providing services to Shippers. In addition the profile of beach gas deliveries has evolved and more recently gas supplies have become available through the Continental Interconnector. Finally, there has been considerable development of trading arrangements not least the OCM. All this now provides the individual Shipper with a wide range of gas supply/storage services by which it can maintain its own gas balance over the whole range of weather conditions.

30. It should be recognised that these types of commercial arrangements were either non-existent or at a fledgling stage in 1995 and this lay behind the concept of the Top-up Manager which was adopted particularly in order to support of the launch of domestic competition. We therefore consider it appropriate, at this time, to consider a wider application of the fundamental principles set out by the Health and Safety Commission[2] that “prime responsibility for ensuring safety within

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[2] **Britain's Gas Supply: A Safety Framework 1995**

the gas supply industry must rest with those who create the risks and have control over them".

31. The development of competition and of the daily balancing regime leads us to the conclusion that Suppliers should have the primary Security of Supply obligation, even where their gas is transported under the Network Code. We do, however, recognise that if obligations on Suppliers were extended some assurance mechanism would be desirable in order that the industry as a whole was seen to meet any enduring security of supply criteria. There is a range of methods that could be applied to monitor and enforce assurance, which would need to be worked up in more detail.

Demand-side Market Participation

32. We believe it is worth exploring practical ways of encouraging further demand-side participation without having to introduce direct contracts between the SO and the relevant Shipper/End-user. We would stress that more work would need to be undertaken in assessing the impact on systems and other aspects of this suggestion, before a definitive view could be taken on the viability of such an approach.

33. A service could potentially be developed whereby Shippers were invited or required to offer on the OCM an amount of turn-down at each of a defined set of large loads (eg interruptibles, NTS direct connections, large firm LDZ loads). If this service were mandatory (if not to all, to a defined portion of each Shipper's portfolio) certainty of participation could be assured and this could be part of any Safety Case submission. Though mandatory, Shippers/ End-users would have discretion to set their own prices. In this way, the End-user/ Shipper would be able to derive the appropriate economic benefit from the service and real market values for load reduction could be established.

34. Transco, in its role as residual balancer, would be able to take offers made from the demand-side in price order, taking into account their potential effect (eg reliability and materiality.) Transco's Residual Balancing Incentive and market liquidity would ensure the offers were only accepted when it was efficient and economic to do so.

35. If there were a system of mandatory participation from certain loads it is likely that this would stimulate competitive offers from non-mandatory loads. If this resulted in a sufficient level of demand side-side offers on the OCM every day, this should enable Top-up to be removed from the Network Code and Safety Case, or at the very least, the monitors to be set at such low levels that they would very rarely be triggered. This latter point may present a short-term opportunity to manage the coming winter (04/05).

36. Whilst a mandatory approach has potential benefits from a security of supply perspective, it is possible to consider other regime enhancements that would incentivise further demand–side participation on a non-mandatory basis. For example, increasing awareness of

Shippers that a Network Gas Emergency was imminent, might encourage greater participation on the OCM.

Conclusions

37. In reviewing the options, we have a preference for those options that enhance the role of the market in providing security of supply. Both Supplier obligations and demand-side market participation have this merit, which the existing Top-up regime does not.

38. Whilst we recognise that changes to Suppliers' obligations could not become effective in time for the 2004/5 winter, some demand-side approaches could be considered in the short-term. Looking to the longer term, high price signals from demand side service providers could stimulate new-build of gas storage or other solutions in a way that the present Top-up mechanism may not.

39. We also believe that if it is not possible to fundamentally change the Top-up regime for Winter 2004/05, there may be incremental ways in which Top-up could be augmented in the short-term without fundamentally changing the regime or requiring a material change to Transco's Safety Case. However, Network Code Modifications would be required to facilitate these. These would include allowing Transco greater discretion in determining whether a counter-nomination is required (after taking account of weather forecasts and the ability of a storage facility to refill). This option is primarily presented as a possible means to manage or mitigate potential costs. In the longer term, such a strategy may make little difference to costs should the market price move in anticipation of counter-nominations and related gas purchases.

40. We are also looking at aspects of our current Top-up calculation methodology including assumptions on interruption at LDZ Supply Points, simulation of CCGT response, evidence of NTS non-power response, the effect of climate change and assumptions on storage stock cycling.

Appendix 1 - Other Issues

Regulatory Framework & Background

41. We have already set out our comments in relation to the existing Regulatory background, and would broadly agree with Ofgem's comments on the history of Top-up. However, as a point of clarification in relation to Ofgem's observation in Section 2.20 of the Consultation, we would comment that whilst Transco's Safety Case does not require it to ensure that 1 in 20 peak day demand and 1 in 50 severe winter demand can be met by Top-up or any other sources of gas, its Licence requires it to plan and develop its network such that it meets the 1 in 20 network planning standard and to incentivise the relevant suppliers to secure that 1 in 50 domestic customer supply security criteria are met. Whilst the domestic supply security standard relates only to demand from domestic customers, Transco's Safety Case requires it to meet any deficits identified between its forecasts of available gas supplies compared with its forecast of firm demand in a 1 in 50 severe winter.

Ofgem's view of Transco's forecasting of supply and demand

42. We have set out our broader views on our forecasting methodology above, however we take this opportunity to comment on some of the specific areas relating to the Transco's forecasting of supply and demand that Ofgem has highlighted within the Consultation document.

a) Beach Gas

43. We have detailed our rationale for deriving our present beach gas forecast in the preliminary Winter Outlook Report. Much of this data has been obtained under confidentiality arrangements as part of our Transporting Britain's Energy (TBE) consultation process. Subsequently, we have discussed this data with DTI and believe that our conclusions are consistent with theirs. However, we do not wish to prevent further analysis and would welcome any additional views from offshore operators not included within the recent TBE consultation.

b) Storage

44. We are conducting, and would be willing to share with the industry, our analysis of actual severe winters and our conclusions on the degree to which storage cycling might impact upon the monitor calculations.

c) Isle of Grain

45. During the Modification Proposal discussions we believe that we demonstrated that if conversion of the Isle of Grain LNG Facility to an importation terminal is achieved it would be beneficial to Security of Supply and we can confirm the intention to commence importation within the first quarter of 2005. However, we do not believe that it is prudent to assume in this context that completion of the commissioning process will take place in advance of the severest part of the winter. If commissioning of Isle of Grain were completed a higher level of Beach

Gas would be set for the purpose of the storage monitor calculations. If this happens within the Winter Period, the monitor levels could then be lowered.

d) Absence of 1 in 20 Cap

46. We agree with Ofgem's substantive point that use of an undiversified day 1 in the Severe Winter load duration curve is inappropriate. However, whilst an undiversified basis has been used by us in the past, we changed to the use of a diversified load duration curve in 2002 and intend to continue this practice. The reason that the 1 in 50 diversified curve is not capped at the level of the 1 in 20 diversified peak is that in order to accurately calculate the "Storage Space Requirement" for the duration of a 1 in 50 Winter, all the days, including day 1 need to be considered. In any event, the effect of applying such a cap to the 1 in 50 load duration curve would be very small relative to the total Storage Space Requirement.

e) Basis of 1 in 50 Load Duration Curve forecasts for Non-Daily metered loads.

47. We have indicated our readiness to discuss the methodologies we use to calculate this information and will produce a paper on this subject.

f) Assumed Levels of Interruption

48. Ofgem refers to the "2bcm requirement" presented in our Preliminary Winter Outlook Report – 2004/05. This figure was our estimate of the total level of demand-side response and/or interruption required in a 1 in 50 winter in 2004/05. However, in calculation of Top-up monitors we do assume that NTS interruptible customers will be interrupted, and hence do not make provision, within the monitors, for these customers to be supported by storage. However, we do not assume that LDZ interruptible customers will be interrupted at total demand levels below 85% of national peak day demand. This reflects the trend towards "Transco-only" interruption contracts, implying that Suppliers do not generally have rights to interrupt these customers for their own supply and demand balancing reasons. Whilst occasional interruption of Supply Points below 85% of peak demand can be encountered we would generally expect transportation constraints to apply above 85%.