# **Review of electricity and gas arrangements** for winter 2004/05

### Conclusions

October 2004 243/04a

#### **Summary**

#### Ofgem's duties and security of supply

Ofgem<sup>1</sup> has important statutory duties relating to security of supply. In relation to wholesale energy markets, and in line with our statutory responsibilities, we can approve appropriate changes to the wholesale market rules and industry codes that improve security of supply. Ofgem relies on a combination of competitive wholesale and retail markets, effective regulation of network businesses and market monitoring (and where necessary enforcement) to maintain security of supply.

#### Background

Each year, Ofgem asks National Grid Transco (NGT)<sup>2</sup>, in its role as System Operator (SO) of the gas and electricity networks, to produce an assessment, known as the Winter Outlook report. This report sets out NGT's forecasts of available gas and electricity supplies and customer demand during average and very extreme weather conditions. The report uses these forecasts to identify any problems or operational issues ahead of the winter. The report currently covers any issues relating to Great Britain as a whole for gas, but only issues relating to England and Wales for electricity<sup>3</sup>.

This year, Ofgem brought forward the publication of the Winter Outlook Report from the autumn to May. At the same time, Ofgem published and consulted upon a review of the gas and electricity market arrangements ahead of the winter. This was based on NGT's analysis and set out areas where the current arrangements could be changed to improve the outlook for security of supply this winter. Ofgem's decision to publish these reports earlier than in previous years has given energy companies and customers more time to respond to the issues highlighted by Ofgem and NGT ahead of the winter. It has also allowed more time for potential changes to the energy market rules that would improve security of supply to be identified, assessed and implemented before the start of the winter.

NGT's final Winter Operation Report 2004/05, published with this document, updates the preliminary report and provides further analysis drawing on the additional

<sup>&</sup>lt;sup>1</sup> Ofgem is the Office of the Gas and Electricity Markets Authority (the Authority). Ofgem and the Authority are used interchangeably in this document.

<sup>&</sup>lt;sup>2</sup> National Grid Transco plc owns and operates the high-voltage electricity transmission network in England and Wales and Britain's natural gas transportation system.

<sup>&</sup>lt;sup>3</sup> Scottish Power Transmission Limited and Scottish Hydro Electric Transmission Limited are currently the relevant SOs in Scotland. They have not been asked to produce comparable Winter Outlook Reports. On the introduction of the British Electricity Trading and Transmission Arrangements, scheduled for 1 April

information now available as winter approaches. This short document sets out Ofgem's views on NGT's further analysis and areas for development for subsequent reports. The report also provides an update on the status of each of the issues highlighted by Ofgem and NGT in May where changes to existing arrangements ahead of this winter could improve the outlook for security of supply.

#### NGT's October Winter Outlook report

NGT's overall assessment is broadly the same as outlined in its preliminary winter outlook report in May. NGT's analysis suggests that security of supply can be maintained this winter in both electricity and gas under average and severe winter conditions.

In electricity, the margin of spare generation capacity over demand is healthy both in absolute terms (at just over 20.2%) and relative to where we stood at this point last year (16.2%). NGT's analysis shows that this could rise to 22.4% if available mothballed generation returned to the system for this winter. NGT's analysis shows that there is sufficient generation capacity to meet demand under average winter conditions. In the very unlikely event of a very severe winter, NGT's analysis suggests that there is sufficient generation unless this coincides with high levels of generator breakdown. NGT states that even if these low probability events coincide, security of supply can still be maintained by applying voltage reductions over short periods and with no discernable impact on domestic customers.

In gas, NGT forecasts that there is sufficient gas to meet demand in average winter conditions from a combination of UK gas supplies, imports from Norway and Continental Europe and GB gas storage. In the unlikely event of a very severe winter, NGT's analysis shows that security of supply can be maintained but that the large users of gas would have to reduce their gas demand (this is known as demand-side response). NGT's analysis suggests that about two thirds of the required response could be provided by gas-fired electricity generators either switching to back up fuels or only running for a few hours during periods of peak electricity demand. NGT's analysis shows that this would not threaten security of supply in electricity. The remaining demand-side response would need to be provided from other large industrial and commercial users.

#### Ofgem's views

NGT's analysis is broadly the same as that presented in May and confirms that under all credible scenarios, security of supply can be maintained this winter in both gas and electricity. NGT's analysis considers a range of scenarios and low probability events such as significant failures of generation or gas production and very severe winter conditions that would only be expected twice a century.

In electricity, the current margin is above the level at the same point last year and there is still an additional 1.2GW mothballed generation readily able to return to service for this winter if required. Last winter a significant amount of mothballed generation did return in response to rising wholesale prices. This shows that the market can be relied upon to provide the right commercial incentives for generators to return mothballed plant if they are required.

In gas, it is clear from NGT's analysis that UK gas supplies are declining faster than previously expected. This does not threaten security of supply in average or extreme winter conditions. But it does mean that other, more expensive, alternatives will be required to replace UK gas supplies. This is clearly having an impact on wholesale gas prices. Under extreme weather conditions, the market will be relied upon to deliver a significant volume of demand side response. In these unlikely circumstances, wholesale gas prices may have to rise significantly to levels where large customers are willing to sell back their gas to the market and reduce their own demand for gas. A significant part of this response is likely to come from gas-fired power stations. Ofgem welcomes the further analysis that NGT has undertaken on scope for gas-fired power stations to reduce their demand for gas without threatening security of supply on the electricity system.

Understanding the level and availability of UK gas supply is clearly very important. Ofgem notes that Transco, the DTI and the UK Offshore Operators Association (UKOOA) have recently put in place voluntary agreements that have yielded improvements in the quality and flow of information to Transco on offshore supply and availability.

On the issue of demand side response, NGT notes that the levels of demand response seen in recent winters is much lower than NGT estimate would be required in severe weather scenarios. However, to date there has not been prolonged period where weather conditions (or other exceptional events) have required such a response. Ofgem considers that the market would, if required, be able to deliver the level of response required. Even if suppliers do not have the rights to interrupt customers under their current contracts, they would be able to negotiate such arrangements at short notice. These contracts may involve significant payments to customers agreeing to them.

#### Update on issues identified in May

Ofgem published a companion document to NGT's May report that reviewed the current electricity and gas arrangements ahead of this winter. Ofgem's document identified a number of issues that should be assessed ahead of the winter to improve the resilience of the arrangements and the outlook for security of supply. Eight of these issues have now been resolved and, where appropriate, Ofgem has approved the necessary rule changes. The issues and the nature of the rule changes made are set out in more detail in this document. Ofgem has indicated that it is minded to accept a further rule change on one of the remaining issues later this week.

This leaves two other issues. The first relates to making sure that all surplus generation in Scotland can be made available to NGC in England and Wales when required. Scottish Power and Scottish and Southern have indicated that they are trying to resolve this issue through negotiation before the start of the winter. The final issue was Ofgem's review of 'cash out' arrangements. These arrangements create the commercial incentives on supply companies to contract with producers to meet their customers' demand and for producers to manage the risk of production failures. Ofgem decided that this area was not a priority for this winter and has established a working group to consider the issues over a longer time frame. This approach was supported by the majority of respondents to Ofgem's consultation in May.

#### Way forward

Ofgem continues to work to improve the ability of the market to deliver secure energy supplies and to develop the framework governing the monopoly network owners and system operators. It is not possible for any electricity or gas system in the world to provide absolute guarantees in relation to security of supply, but we are confident that there is sufficient resilience in the system to maintain security of supply this winter, even in the event of extreme weather conditions. A number of changes have, or will shortly be made to the existing arrangements to improve their flexibility and resilience to deal with extreme weather conditions.

## Table of contents

1. Ofgem's views on NGT's Winter Outlook Report 2004/5	1
NGT's additional analysis	1
Ofgem's views	2
2. Update on actions for this winter	4
Background	4
Top up	4
Short term entry capacity	6
Maximum generation service	6
Gas interruption arrangements	7
Scottish electricity interconnector capacity	7
Improved information on generation availability	8
Offshore information and beach availability	8
Storage information	9
Belgium interconnector	
Cash-out review	11
Gas Quality	11

# 1. Ofgem's views on NGT's Winter Outlook **Report 2004/5**

1.1. In this chapter we provide a brief summary of the additional analysis carried out in NGT's October report. We also provide a short commentary setting out Ofgem's views on some of the issues raised and highlight areas for future development of the analysis set out in NGT's report.

### NGT's additional analysis

- In response to Ofgem's requests, NGT has further developed its analysis and 1.2. information published in this document. This includes:
  - Analysis on the interaction of gas and electricity markets in particular in ٠ the event of a need for significant demand-side response in gas;
  - return to service times (from the time that a commercial decision to return the plant to service has been made) for mothballed generating plant, and
  - the extent to which gas-fired generators can be operated using alternative fuels and details about the changeover between types of fuels.
- 1.3. NGT's report summarises the analysis that it has undertaken with respect to the potential for CCGT<sup>4</sup> demand-side response given gas/electricity interactions. Specifically in relation to the interaction of gas and electricity markets, this analysis involved assessments with respect to three main sets of inputs:
  - the forecast level of electricity demand in a severe, '1 in 50' winter
  - the availability of different types of generating plant and of distillate stocks, and
  - the ranking of generating plant to meet a given level of electricity demand based on their likely costs.

<sup>&</sup>lt;sup>4</sup> A CCGT (Combined Cycle Gas Turbine) is gas-fired generation technology, which results (via the additional use of heat through a "combined cycle" generation process) in higher generation efficiency. Winter Outlook 2004/05

- 1.4. NGT uses these inputs to estimate how much electricity would be generated by the CCGT fleet under a range of different scenarios. NGT then estimates the associated level of gas demand from the CCGT fleet based on assumed levels of distillate usage and CCGT thermal efficiency.
- 1.5. On the basis of this analysis, NGT indicates that it considers a central scenario for potential demand-side response from CCGT's of 1.6 bcm. In one scenario, NGT calculates that if all CCGT's on its system did not generate then the potential response from this sector would be around 2.0 bcm. NGT considers that this scenario is unrealistic, given various physical and contractual constraints. NGT also considers a downside scenario whereby less CCGT would be available to respond. In these circumstances there would need to be a significant reliance on the non-generation sector.

### Ofgem's views

- 1.6. Ofgem welcomes the further analysis NGT has undertaken, in particular to improve the market's understanding of the scope for response from gas-fired generation in the event of a severe winter. This analysis has helped to generate indicative results and give some indication of likely sensitivities. As this is a new area of work, the analysis and methodology are still evolving and will be developed and refined over time. Ofgem has, against this background, set out below some more detailed comments and highlighted potential areas for future development.
- 1.7. NGT's analysis is very sensitive to the methodology used to forecast demand. A key step in the analysis is the forecasting of levels of electricity demand in '1 in 50' weather conditions based on a methodology used in the gas market. Ofgem has previously highlighted concerns with respect to the approach used for generating 1 in 50 demand forecasts in gas<sup>5</sup>. These concerns will need to be addressed in developing the methodology for future years.
- Severe winter conditions would also lead to much higher prices in electricity.
  These prices may lead to a fall in demand for electricity. If electricity demand falls, generation from gas-fired power stations will also decrease reducing

demand for gas. Assuming efficiency of a typical gas-fired generation station is around 50%, a reduction in electricity demand this would potentially have a larger impact on gas demand (i.e. broadly speaking 1MW of electricity generated requires 2MW of gas to produce). NGT's analysis largely focuses on the interactions between gas and electricity for a given level of electricity demand. NGT's analysis makes some adjustment for demand side response in electricity based on experience in recent winters. However, recent winters have been mild and the level of response seen is unlikely to be a good indicator of the level of response that would be seen under more extreme conditions. This is another important area for further analysis.

- 1.9. In relation to NGT's presentation of possible back-up fuels, NGC states that of the total stock of 22GW of CCGT's, 6GW have back-up fuels in terms of distillate. However, other forms of back-up exist, for example 3.3GW of CCGT has access to gas not supplied through Transco's network. In the context of NGT's analysis of gas/electricity interaction, it appears logical to consider backfuels only in terms of alternatives to gas. This is because, even where CCGT's have access to gas from more than one source, in a severe winter supplies are already assumed to be at maximum, and this might imply that no further gas could be sourced from the United Kingdom continental shelf (UKCS). However, where interruption is for locational purposes such as a network constraint, it is important to note that not all CCGT's would need to switch to distillate to continue generating.
- 1.10. Finally, Ofgem considers that these areas for development highlight a more general issue of transparency. Ofgem would urge NGT to improve the level of transparency both in terms of the underlying methodologies and the detailed data inputs to them. This will allow more detailed and effective review and comment by energy customers and companies. This should lead to better methodologies, more assumptions, forecasts and analysis being presented.
- 1.11. Ofgem welcomes the level of information provided by NGT in the current report with respect to its CCGT analysis, and would hope that further details are made available to market participants as this analysis develops. In this respect, NGT are already planning to publish a paper on the 1 in 50 demand forecasting process in gas as part of its "Transporting Britain's Energy" forecasts.

# 2. Update on actions for this winter

### Background

- 2.1. Ofgem published a consultation document in May that reviewed the electricity and gas arrangements for winter 2004/05, identifying a number of actions that could potentially be taken ahead of winter to improve market operation, efficiency and the outlook for security of supply. This review was based on the analysis set out in NGT's report and the issues that NGT had highlighted. This chapter provides an update on what progress has been made on each of the issues for action identified in May.
- 2.2. In summary, these relate to:
  - improved information flows: relating to the release of certain offshore gas production information to the market and improved information flows on electricity generator availability
  - changes to market arrangements and rules: including the removal of the 'top up' arrangements in gas, short-term transmission capacity for generators, a maximum generation service and partial interruption for gas-fired generators, and
  - **gas quality entry specifications:** relating to widening the gas quality entry specifications at specific sub-terminals where gas enters Transco's network to allow more gas to flow.

#### Тор ир

2.3. Top up is gas that is held in store by Transco in response to a shortfall identified by Transco between the level of demand that it forecasts would be observed if the forthcoming winter – or what remains of it – turned out to be 'severe', and its assessment of the level of available gas supplies over that period. When a top up provision is made, the gas is subsequently made available to market participants (including Transco in its role as system operator) at times of high system demand at a price determined by rules set out in Transco's network code.

- 2.4. Ofgem's preliminary analysis of the top up rules in May suggested that there were significant direct and indirect costs associated with top up and it was not clear that the actions taken by Transco would not otherwise be taken by market participants. Moreover, Ofgem considered that the operation of top up in practice does not result in increased security of supply and could distort competition in the provision of storage and other flexibility services.
- 2.5. Ofgem published its conclusions document in respect of the top up review in August of this year<sup>6</sup>. This document included an impact assessment on the replacement of top up with the 'safety monitor' – a concept which was developed by Transco to facilitate removal of top up whilst ensuring that the risk of a supply emergency was minimised. Ofgem's analysis suggested that direct and indirect costs associated with top up counter nomination actions could be over £200m. In addition, given Ofgem's view that top up counter nomination actions are unlikely to be effective in maintaining gas in store and its concerns over the mechanism by which top up gas is made available to the market, Ofgem was of the view that the removal of top up in the context of the safety monitor would be likely to be neutral, and at best slightly positive, for security of supply. Further, Ofgem was of the view that the removal of top up in the context of the safety monitor would be likely to lead to a lower level of interruption for customers than would otherwise be the case, particularly in mild conditions.
- 2.6. Ofgem considered that retaining top up would be a significant problem for this winter. The potential for the current top up rules to lead to substantial direct costs to Transco, and substantial indirect costs to customers (through higher gas prices), has not been a significant issue in recent winters. This is because Transco's forecast levels of supply and demand in each year since 1998 have not required it to book significant storage capacity for top up gas or buy significant volumes of top up gas over the winter. For 2004/05, however, given its forecast of a tightening of the supply/demand position<sup>7</sup>, Transco indicated that the initial top up monitor levels would be very high, with the LNG and Medium Range Storage (MRS) initial monitors set at 100%, and the Rough monitor set at about 80%. These monitor levels would be likely to give rise to substantial Transco

<sup>&</sup>lt;sup>6</sup> The existing MRS facilities are Hornsea, Hatfield Moors and Hole House Farm.

<sup>&</sup>lt;sup>7</sup> Transco's preliminary forecasts for this winter are published in NGT's Preliminary Winter Outlook Report 2004/05.

counter-nomination actions aimed at ensuring that monitor levels are not breached, even under average winter conditions. Indeed, as the LNG and MRS levels are 100%, any early winter withdrawal from these storage sites would result in Transco intervention. This highlights the prospect of substantial direct and indirect costs being generated by the top up arrangements in 2004.

2.7. Ofgem has now approved modification proposal 710 (Removal of top up arrangements) to remove top up from its network code consistent with its proposed revision to its safety case in time for this winter. This followed the HSE approval on 1 October of Transco's safety case. Therefore, the top up arrangements have been removed and replaced with safety monitors ahead of this winter.

#### Short term entry capacity

- 2.8. Transmission Entry Capacity (TEC) determines a generator's annual payments for use of the transmission system (TNUoS) to NGC. Generators wishing to operate or return their plant to the system for just a small part of the year would face the full annual network TNUoS charge for doing so.
- 2.9. NGT proposed an amendment to charging proposal CAP070 in January 2004 to allow generators to apply and pay for short term firm network access. This would make it easier for generators who only wanted to generate during the winter to return their plant to the system. Following review by the relevant industry panels over the summer, Ofgem approved the proposal and effective from 1 November 2004 generators will be able to procure short-term transmission capacity for part of the year.

#### Maximum generation service

2.10. Generators declare maximum outputs based on their normal operating range. Ofgem agreed to NGC trialling an interim MaxGen service in 2003/04 as a transitional measure, enabling the system operator to gain access (at times of system emergency) to additional generation that some generators can provide temporarily over and above their normal operating range. Given the mild winter the transitional service was not actually required. 2.11. Since then the Balancing Services Standing Group has considered a connection use of system code (CUSC) amendment proposal in relation to the MaxGen service (CAP071: Development of a Maximum Generation Service). There were some potential concerns that generators might seek to abuse the arrangements by artificially lowering their declared maximum output (known as their maximum export limit), in order to gain higher MaxGen payments. NGC submitted a report to the Ofgem recommending approval of an alternative proposal, which aimed at better defining the upper limit of normal generation. This alternative amendment to the MaxGen proposal was approved by the Ofgem on 20 September 2004, effective from 4 October 2004.

#### Gas interruption arrangements

- 2.12. Current arrangements allow Transco to interrupt certain customers (including some gas fired generation) for a defined number of days over the year. Certain customers with appropriate metering arrangements are able to utilise a partial interruption service. Rather than a full cessation of flows to their site, when interrupted, the partial interruption arrangements require customers to limit their offtake to certain levels over relevant period of the day. This enables gas-fired generators to continue to generate at peak electricity demand periods, typically no more than eight hours split between morning and evening periods, and still interrupt to provide demand-side response for the remaining two thirds of the day in gas. As the gas system is currently able to cope with within-day fluctuations and is balanced daily, this means that the required a reduction in gas demand can be provided, while continuing to meet peak demands in electricity.
- 2.13. Ofgem is due to issue a decision on Network code modification proposal 702: "Partial volume interruption" which would amend the way that the partial interruption service is applied and therefore extend the availability of the partial interruption service to a wider set of customers. Ofgem is currently minded to approve this proposal and expects to announce its decision within the next week.

#### Scottish electricity interconnector capacity

- 2.14. The current rules governing access to the electricity interconnector linking England & Wales and Scotland can make it difficult for spare generation in one region to be made available in the other. Under the British Electricity Transmission and Trading arrangements (BETTA), which are due to Go Live from 1 April 2005, this issue will be removed as the interconnector will no longer be treated separately and will be operated as part of the wider network. Ahead of this winter, however, minor changes can be made to the access rules to make sure that surplus generation capacity can be made available to either system to the maximum extent possible given the physical capacity of the interconnector.
- 2.15. ScottishPower and Scottish and Southern Energy have been discussing improvements to the arrangements for interconnector access and trading. The principal aim is to improve the efficiency with which the Scottish generators provide support to NGC through additional interconnector exports at times where this would contribute to improved security of supply. The Scottish companies are hopeful that those discussions will be concluded shortly so that the improved arrangements will be in place for this winter.

#### Improved information on generation availability

- 2.16. Changes were made to NGC's Grid Code on 6 May 2004 following Ofgem's approval of L/03 "Proposed Grid Cod Modifications to incorporate new Provisions Relating to the Flow of Information on Mothballed Plant and Alternative Fuels". This required generators to provide NGC:
  - data on estimated return to service times for mothballed generation plant (i.e. how long it would take from the time that a commercial decision to return plant to service to actually being capable of generating)
  - details of the capability of gas-fired generators to be able to switch to alternative back-up fuels
- 2.17. At a less detailed level, to preserve commercial confidentiality of the parties concerned, NGC has included information on these in its Winter Outlook report.

### Offshore information and beach availability

- 2.18. The DTI has negotiated a voluntary agreement between offshore producers, terminal operators and Transco to improve and standardise information provided to Transco on available gas supplies, planned and unplanned outages and for the release of sufficiently detailed information to market. The improved information has helped Transco in preparing this year's winter outlook report.
- On 1 October, Transco began publishing some of the data that it now receives 2.19. on its website. The information relates to forecast gas deliverability based on planned maintenance. This data is aggregated showing the data the total forecast deliverability of beach, interconnectors and storage facilities split between a Northern and Southern zone. Transco also started publishing data on gas flows through each of the sub-terminal flows where gas flows onto its network at thee same time. This data was previously only available to shippers. Transco plans to release more information when the necessary IT systems are complete. In Q1 2005, Transco will publish data on forecast gas flows. In Q3 2005 Transco will publish real time gas flows onto the network on an aggregate basis.
- 2.20. Ofgem issued a temporary, informal derogation to certain licence obligations to enable Transco to sign agreements with the producers and terminal operators that would allow this information to flow. Ofgem has recently extended the temporary informal derogation<sup>8</sup>. Ofgem intends to issue a consultation document shortly to set out possible options for a more enduring regulatory framework governing information provision and release.

#### Storage information

Information about storage capabilities and inventory levels would improve the 2.21. ability of market participants to efficiently manage supply and demand and aid Transco's system operation activities, in particular in relation to safety monitors introduced as part of the removal of top up. Storage operators will be required

<sup>&</sup>lt;sup>8</sup> "Extending the derogation to Paragraph 5 of Amended Standard Condition 4E of Transco's Gas Transporters Licence", Ofgem, 14 October 2004 Winter Outlook 2004/05 9 Office of Gas and Electricity Markets

to provide this information to Transco through the connection agreement they sign with it. As part of changes to top up mentioned above, Transco will also release information to the market on gas stocks in store aggregated into the following three groups:

- Long Duration: Rough
- Medium Duration: Hornsea, Holehouse Farm and Hatfield Moors
- Short Duration: Glenmavis, Partington, Avonmouth and Dynevor Arms LNG Facilities.
- 2.22. Such information will be updated on a regular weekly basis with updates where storage stocks approach the safety monitors. Some storage operators consider that it would be appropriate to review the operation of the provisions relating to publication of storage information following this winter and Ofgem would support such a review.

### **Belgium interconnector**

- 2.23. The interconnector was built to transport gas between Belgium and UK. There have been occasional incidents, for example in 2002 when the pipe was in export mode, where gas containing solids or wet gas caused water ingress in the interconnector forcing unplanned shutdowns often for prolonged periods. If this occurred in early winter (when the pipe could be exporting) this could lead to a situation where the interconnector would be unavailable for import later in the winter.
- 2.24. On 6 August 2004 Ofgem wrote to industry participants following a 35 per cent reduction in gas flows through the Bacton-Zeebrugge interconnector following from the discovery of solids in the interconnector. In response to these concerns, Ofgem hosted seminar on 8 September to discuss whether further actions were necessary. The main conclusion of the seminar was that a number of changes had been made to commercial and operational procedures since the earlier incidents by Transco, IUK and the terminal operators to manage the risk more effectively. Terminal operators agreed to consider producing a more detailed risk assessment to demonstrate that the risks are being effectively

managed. The conclusion of the seminar was that no further action was necessary on this issue ahead of the winter.

#### Cash-out review

2.25. Cash-out relates to the payments that suppliers, gas producers and electricity generators must make if they do not balance the energy they deliver and the energy their customers take from the system. The rules provide the commercial incentives on companies to maintain security of supply by contracting to meet their customers' demand. Some companies, including NGT, have highlighted concerns about whether the current rules provide appropriate commercial incentives on companies to do so. Following consideration of responses to the consultation document issued in May 2004, Ofgem published an open letter on 18 August 2004, which established a working group to enable wider consideration of these issues. Ofgem agreed with the majority of respondents that this issue was not a priority for winter 2004/5 but that the workgroup should consider whether changes to the current arrangements should be made for the following winter.

#### **Gas Quality**

2.26. These existing UK gas quality specifications were adopted in the Gas Safety (Management) Regulation GS(M)R 1996, and were geared towards the historical reliance on domestic production from the UKCS. The UK will become progressively more reliant on imported gas and some of this gas may be outside existing UK gas quality specifications. In addition to these national gas quality specifications that are primarily based on meeting safety requirements, there may be additional gas quality requirements specific to particular entry or exit points to Transco's network set down in various agreements between Transco and shippers.

- 2.27. Ofgem is participating in a longer-term review of gas quality that will consider the implications of greater gas import dependency and Ofgem has established a new gas quality Review Group to be chaired by Transco<sup>9</sup>.
- 2.28. Ofgem has approved two modifications proposals<sup>10</sup> to Transco's network code so that the gas quality specifications at ConocoPhillip's sub-terminal at Theddlethorpe and Total Gas and Power's sub-terminal at St Fergus could be widened (closer to GS(M)R limits). These changes will allow more gas to flow this winter and beyond and will improve security of supply.
- 2.29. Three further network code modifications have recently been raised proposing changes to entry provisions at the respective network entry points at Dimlington, Hornsea and Rough<sup>11</sup>.

<sup>&</sup>lt;sup>9</sup> The long-term review is being progressed by the DTI, Ofgem, the Heath and Safety Executive (HSE) and the Department of Environment, Food and Rural Affairs (DEFRA) in three phases, and considers gas quality issues relating to new gas sources covering all aspects of gas quality issues relating to new gas sources. In parallel, Ofgem wrote to industry on 20 September 2004 establishing a gas quality review group to be chaired by Transco. The terms of reference for this group are not to discuss changes of any gas quality specifications, but to improve existing transportation arrangements in relation to gas quality, in particular to align existing entry specifications within the existing gas quality specifications.

<sup>&</sup>lt;sup>10</sup> Network code modifications 681: "Amendment of Network Entry Provisions at ConocoPhillips sub terminal at Theddlethorpe" and 707: "Amendment to the Network Entry Provisions at Total E&P sub-terminal at St Fergus".

<sup>&</sup>lt;sup>11</sup> Network code modifications 711: "Amendment to the Network Entry Provisions at BP sub-terminal at Dimlington"; 720: "Amendment of Network Entry Provisions at Rough Entry Point"; and 722: "Amendment of Network Entry Provisions at Hornsea Entry Point"