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1. Introduction

Gas interruption occurs when a customer with an interruptible contract is requested to cease temporarily its consumption of gas. Interruption plays a key role in balancing the supply and demand for gas and gas transportation in periods when supplies are constrained. Either shippers or Transco can call an interruption.

Shipper interruption allows shippers to manage the demands of their customers and remain in balance, ie. it is one of the tools available to a shipper to allow its inputs into the gas transportation system to match its outputs from the system. Transco interruption allows Transco to reduce consumption in parts of its network where a transportation constraint exists, that is where there is insufficient capacity to meet all the demands of customers located in that area. Interruption is also a tool used by Transco to ensure the efficient and safe operation of its system. Transco can only call interruption in narrowly defined circumstances as laid down in its network code. This document concentrates largely on Transco interruption and the relevant sections of the network code.

In the winter of 1997/98, Transco invoked some of its interruptible gas transportation contracts and gas shippers/suppliers also invoked their interruptible gas contracts. Ofgas had a number of concerns expressed to it by customers, shippers, Transco and others, regarding these interruptions. Due to the importance of interruption itself and the concerns expressed, Ofgas has reported regularly¹ on the operation of the interruption regime in Transco's network code. This report continues that tradition. This report also draws on significant work being undertaken in other areas of Transco's network code and follows Ofgas documents on the gas balancing regime^{2&3} and the interface between customers and Transco.⁴

¹ 'The gas interruptions regime for winter 1997/98', Ofgas, December 1997

² 'An on-the-day Commodity Market for the Gas Balancing Regime: A Conclusions Document', Ofgas, September 1998.

³ 'Reform of Gas Trading Arrangements: Proposals and Consultation', Ofgas, February 1999

⁴ 'Customer/Transco Issues in the Industrial and Commercial Gas Market: A Consultation, Ofgas, October 1998.

In this report we identify the concerns of customers, shippers, Transco and others, and in doing so we also explain what Ofgas and the relevant network code review group has done to address such concerns. Where appropriate, we conclude with Ofgas' views on the work carried out in 1998, as well as on possible ways forward to ensure that any outstanding issues are resolved.

Chapter 2 of this report describes the regulatory obligations on both Ofgas and Transco. In chapter 3 we describe the specific characteristics of interruption in winter 1997/98. Chapter 4 details the progress that has been made on issues highlighted in our last interruptions report (referred to above). Chapter 5 looks at issues that remain from our last interruptions report along with those concerns that have arisen from winter 1997/98. In chapter 6, we comment on the more fundamental interruptions review being undertaken currently by Transco and the review of Transco's capacity and balancing regime being undertaken by the Review of Gas Trading Arrangements (RGTA). Our summary and conclusions are in chapter 7.

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Respondents are free to mark their replies as confidential, although we would prefer that as far as possible, we were able to put replies to this paper in the Ofgas library. If you wish to discuss any aspect of this paper, please call Amrik Bal on 0171-932-1674.

2. Background

2.1 *The Gas Act*

The Gas Act 1986 (as amended by the Gas Act 1995) puts certain obligations on public gas transporters (PGTs). The largest PGT is Transco. The Gas Act requires Transco to ensure that it develops and maintains an efficient and economical pipeline system and to avoid any undue preference or undue discrimination in the conveyance of gas through, and connection to, its system. It must secure that all reasonable demands for gas conveyed through its pipes are met.

The Director General of Gas Supply (DGGs) has, amongst his duties, a duty to protect the interests of consumers of gas conveyed through pipes in respect of terms of supply, the continuity of supply and the quality of the gas supply services provided. In addition the DGGs has a duty to promote efficiency and economy on the part of Transco, the efficient use of gas conveyed through pipes, and to secure effective competition between relevant shippers and relevant suppliers by ensuring that Transco meets the objectives of its licence.

2.2 *Transco's Public Gas Transporters Licence*

Transco's PGT licence requires it to plan and develop its pipeline system in order that pre-defined security standards are met.⁵ These standards are presently set so that:

"the licensee's pipeline system... meets the peak aggregate daily demand for the conveyance of gas for supply to premises which the licensee expects to be supplied with gas conveyed by it....having regard to historical weather data derived from at least the previous 50 years and other relevant factors, is likely to be exceeded (whether on one or more days) only in 1 year out of 20 years..."

Transco is also required by its licence to develop a network code. This must facilitate the achievement of four 'relevant objectives':⁶

- a) the efficient and economic operation by the licensee of its pipe-line system;

⁵ Condition 13, paragraph 2 of Transco's PGT licence.

⁶ See Condition 7, paragraph 1 of Transco's PGT licence.

- b) so far as is consistent with sub-paragraph (a), the efficient discharge of its obligations under this licence;
- c) so far as is consistent with sub-paragraphs (a) and (b), the securing of effective competition between relevant shippers and between relevant suppliers, and
- d) so far as is so consistent, the provision of reasonable economic incentives for relevant suppliers to secure that the domestic supply security standards...are satisfied as respects the availability of gas to their domestic customers..."

In developing its system to meet these standards, and to achieve the relevant objectives of its network code, Transco takes into account the amount of interruption that might be expected to occur at certain times of the year. The way in which such interruptions are defined is set out in Transco's network code.⁷

2.3 *Interruptions and Transco's Network Code*

Gas interruption occurs when a customer with an interruptible contract is requested to cease temporarily its consumption of gas. Interruption can be called by either Transco or a shipper. Shipper initiated interruption is usually for commercial reasons, for instance to trade on the spot market the gas normally provided to the interrupted site, or to ensure that a shipper remains in balance, ie. a shipper's inputs of gas into the gas transmission system and off-takes from the system match. Transco initiated interruption occurs when Transco considers it necessary either due to a transportation constraint, or for the safety and security of gas for those customers with firm transportation contracts. Under the Network Code,⁸ Transco may require interruption:

- i) on any day on which there is or Transco anticipates there would otherwise be a Transportation Constraint that would be relieved (in whole or in part) by the discontinuance or suspension of off-take at the interruptible supply point;
- ii) on no more than 3 days in any Gas Year for testing purposes; and

⁷ See section G of the Network Code.

⁸ For full text see paragraph G6.7.3 et al. of the Network Code.

- iii) on any day in respect of which, at any time, Forecast Total System Demand exceeds 85% of System 1-in-20 peak day demand.

Transco has explained that it identifies all areas that have limited transportation at 1-in-20 conditions or less and defines a trigger level of demand for the affected areas. If forecast demand is above those trigger levels, it then invokes interruption. Once the affected area is identified then Transco must identify the sites affected by the constraint. This list of sites is then communicated to shippers who may, if the interruption is not mandatory, propose alternative sites for Transco to interrupt as long as the required volumes of interruption are achieved. A mandatory interruption offers shippers no such choice; the sites on the list circulated by Transco are the ones that must be interrupted.

The standard Transco interruptible contract allows for up to 45 days of Transco interruption per year. This figure is reflected in the gas transportation and supply contract between the customer and shipper.

If sites are network sensitive loads (NSLs)⁹ or Transco nominated interruptions (TNIs),¹⁰ a mandatory interruption may take place. That is, the shipper cannot choose an alternative site. NSLs, TNIs, the numbers of each, their respective roles within the interruptions regime, and customers concerns are dealt with in greater detail later in this review (chapters 3 and 5).

For not consuming gas at peak times, a site with an interruptible gas transportation contract from Transco pays reduced transportation charges, ie. it does not have to pay capacity charges. However, should a site not interrupt correctly when called upon to do so by Transco, it faces failure to interrupt (FTI) charges under Transco's network code of twice the annual capacity charge. Further charges are levied on subsequent days of failure to interrupt.

⁹ NSLs are loads whose location makes interruption of that site for up to 45 days essential to the safe and efficient operation of Transco's system. They are not currently defined within the network code.

¹⁰ TNIs are loads whose location makes interruption of that site, in a 1-in-50 winter, for more than 45 days essential to the safe and efficient operation of Transco's system.

The number of days of interruption available to a shipper for commercial interruption will vary from contract to contract. This figure is in addition to the 45 days of interruption rights available to Transco. Should a site fail to interrupt when called upon to do so by a shipper (as opposed to Transco interruption) it faces no network code FTI charges, although its supply contract may include a charge for failing to interrupt.

3. Report on Winter 1997/98

Interruption is difficult to measure as Transco rarely knows what a site would have otherwise consumed. The figures quoted in this report come from Transco's Interruption Report, 1997/98 and, unless otherwise stated, assume that 60% of a sites declared peak consumption would have been consumed.¹¹

Transco reports that the winter of 1997/98 was notable for being the mildest on record in the 69 years of data available to Transco. This had an effect on the level of interruption that was required by Transco.

Winter 1997/98 also included for the first time the operation of new services discussed in last year's Ofgas report.¹² These were:

- ◆ **Shutdown tolerance.** A daily shutdown tolerance of 2930 kWh (100 therms) has been introduced. A site will not be deemed to have failed to interrupt if the recorded off-take is less than the tolerance. If in exceptional circumstances the Registered User can demonstrate to Transco's reasonable satisfaction that all gas burning equipment was shutdown, off-takes greater than 100 therms will not be classed as a failure to interrupt.

- ◆ **Interruptible Firm Allowance (IFA) contracts.** This allows an interruptible supply point to contract for a daily maximum quantity of firm gas up to 500 therms. Where the system permits, Transco will also facilitate the firm off-take of quantities of gas in excess of 500 therms. A total of ten shippers signed up for 129 Interruptible Firm Allowance (IFA) contracts. Of the nine supply points with an IFA that were called upon to interrupt last winter, one offtook gas during the period of interruption; without an IFA agreement it would have faced failure to interrupt charges.

¹¹ This is also referred to as a site's Supply Point Offtake Quantity (SOQ).

¹² 'The gas interruptions regime for winter 1997/98', Ofgas, December 1997

- ◆ ***Partial Interruption contracts.*** These allow for a reduction in gas demand at a supply point, rather than full interruption. The amount of reduction is agreed to in a series of tranches in order to arrive at a gas supply profile which best serves the individual needs of the site. Eight shippers signed a total of 15 Partial Interruption Agreements. None of these were interrupted over winter 1997/98.

- ◆ ***Swap Option contracts.*** These allow equivalent supply points, one or more firm and one or more interruptible, to trade their supply status on a permanent basis, thus enabling the interruptible customer to gain firm gas supply. The firm site would correspondingly benefit from lower transportation charges. No shippers signed up for this service.

- ◆ ***Inter-Supply Point Transfer of Firm to Interruptible.*** This allows a shipper to release capacity allocated to a firm supply point and where the configuration of the system permits, allow it to be re-allocated to an interruptible supply point. This would result in an interruptible supply point continuing to consume gas in periods of interruption, in exchange for its firm partner interrupting instead. No shippers signed up for this service.

The following sections describe total interruption (Transco and shipper combined), Transco interruption, and shipper interruption.

3.1 Total Interruption (Transco and Shipper)

In winter 1997/98, total interruption amounted to 1500 GWh¹³ (140.6 MCM).¹⁴ This is significantly lower than the figure for 1996/97 - 5884 GWh (541.78 MCM).¹⁵ The mildness of the winter was an obvious factor in this reduction.

Figure 1 illustrates the total daily volume of interruption (Transco plus shipper) in winter 1997/98 compared with winter 1996/97. In 1997/98 the level of interruption was lower, began later and finished earlier than in 1996/97. Figure 2 charts the total (Transco and Shipper) cumulative volume of interruption, demonstrating again much lower levels of interruption in 1997/98 than 1996/97.

¹³ Gigawatt Hours (GWh).

¹⁴ Million Cubic Meters (MCM). To convert into therms, multiply by 0.364.

¹⁵ Source Transco.

Figure 1 – Total Daily Volume of Interruption (Transco and Shipper) During Winters 1996/97 and 1997/98 Based on 60% SOQ

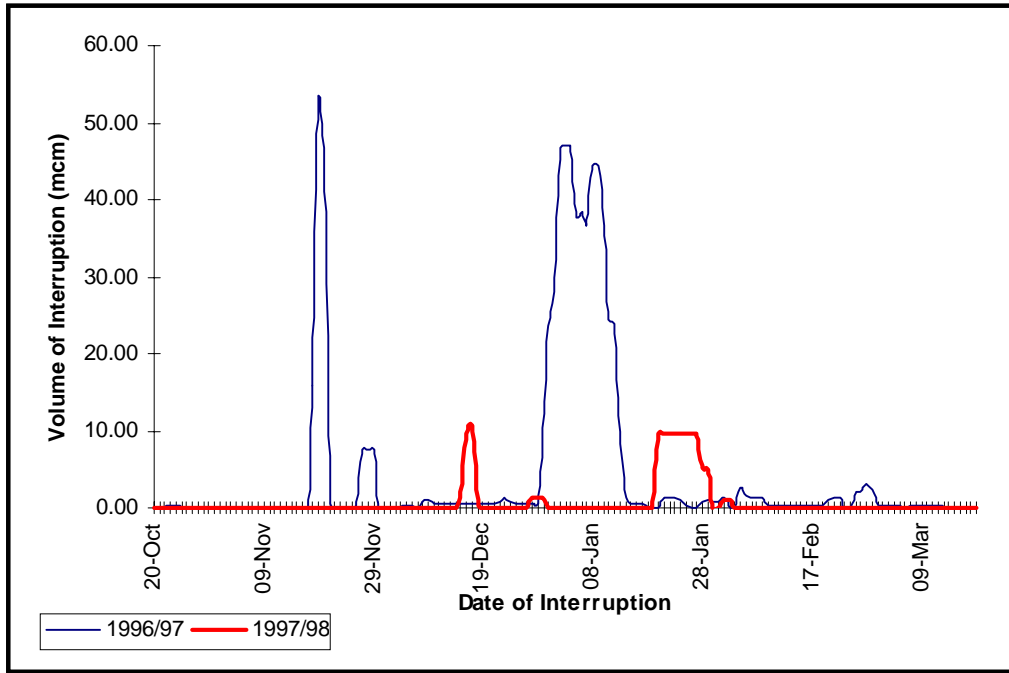
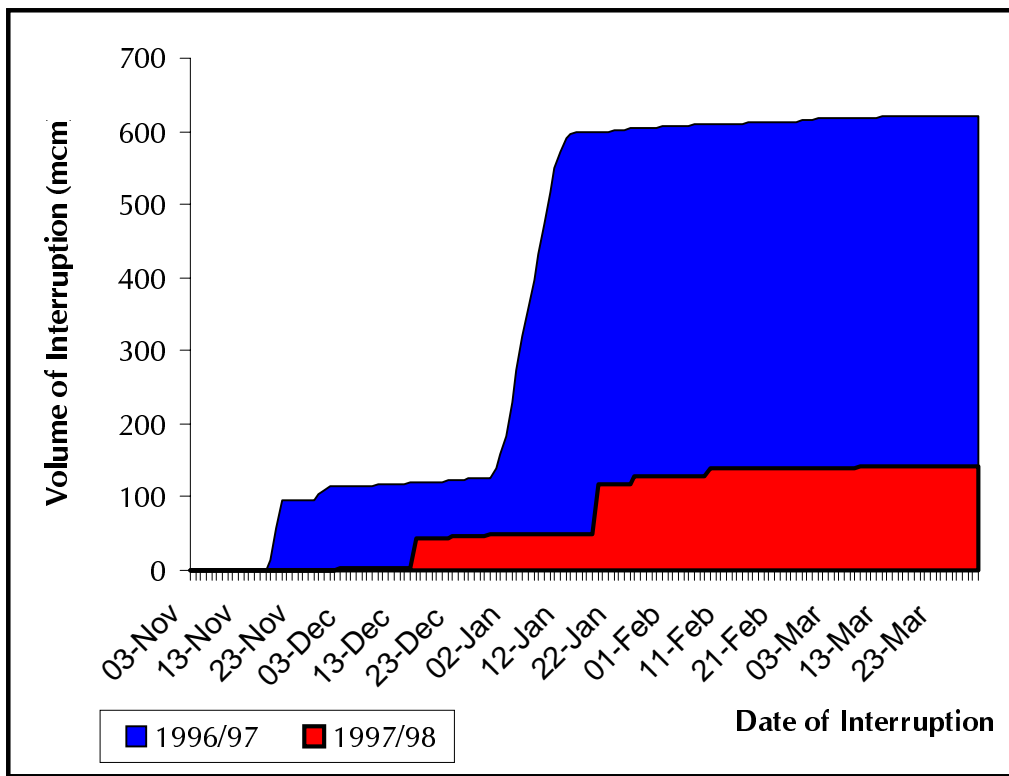


Figure 2 – Total Cumulative Volume of Interruption During Winters 1996/97 and 1997/98, Based on 60% SOQ*



* The figures for 1996/97 in fig 2 were not based on 60% SOQ. They were based on a combination of 50% SOQ and shipper notification of volumes interrupted. The graph, however, still indicates the higher volumes of interruption in 1996/97.

Summary of Main Points

- ◆ Overall interruption was significantly lower in winter 1997/98 than in 1996/97 due to the milder weather.

- ◆ In 1997/98 interruption started later and finished earlier than in 1996/97.

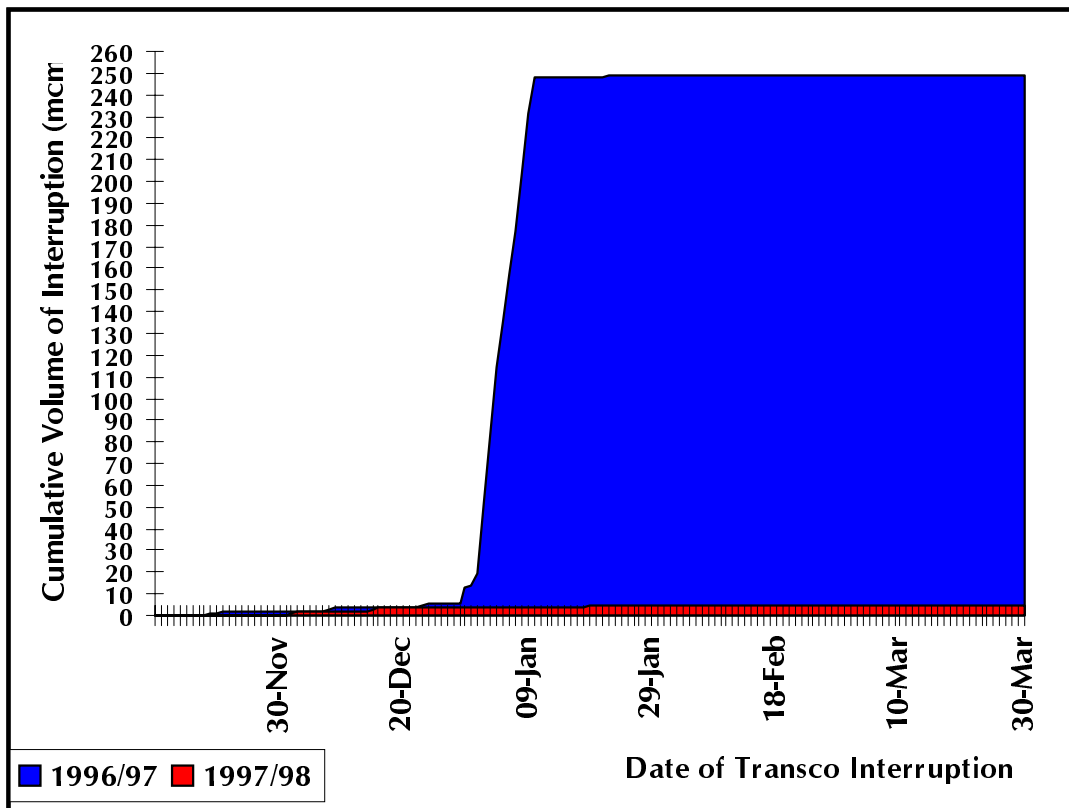
3.2 Transco Interruption

Total Transco interruption during the winter was significantly lower than that during 1996/97; 52 GWh (4.80 MCM), as compared with 2001.5 GWh (184.24 MCM) last winter. Interruption occurred on the Local Distribution Zones (LDZs); there was no Transco invoked interruption of National Transmission System (NTS) loads.

Figure 3 compares the cumulative levels of Transco interruption over the two years. It illustrates that the volume of Transco interruption was much lower in 1997/98 than in 1996/97.

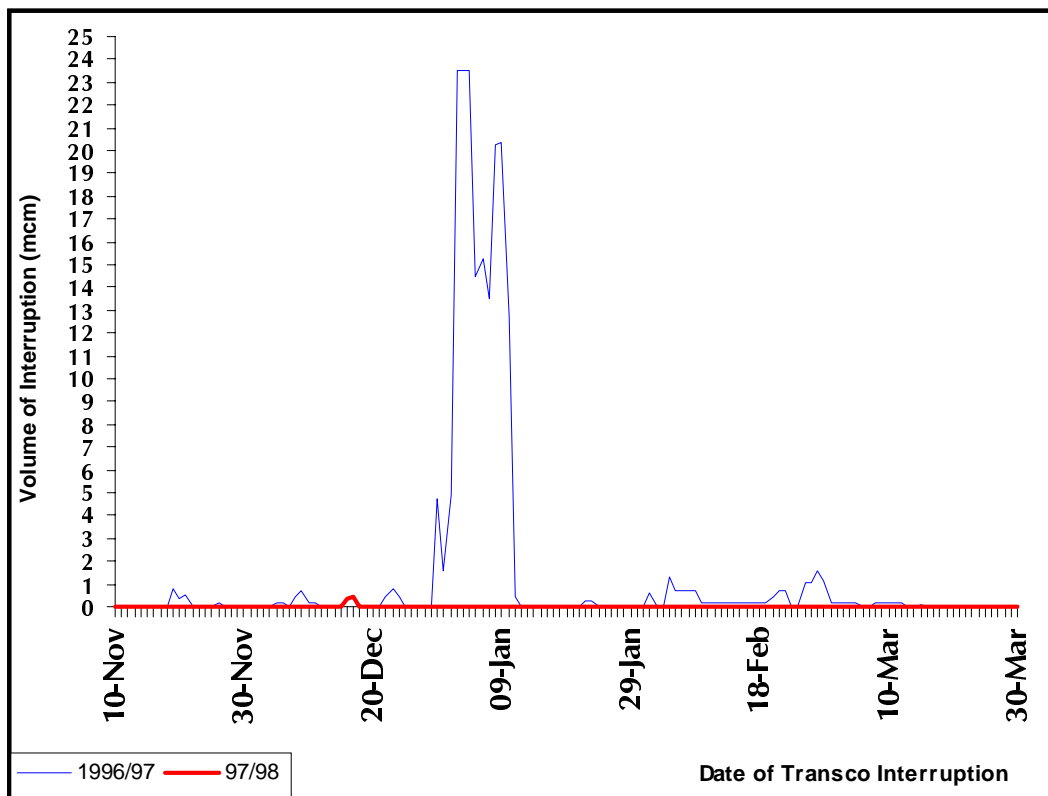
Such low levels of Transco interruption make it difficult to draw many conclusions from winter 1997/98 about the operation of Transco's interruptions regime as described in its network code.

Figure 3 – Comparison of Cumulative Volume of Transco Interruption During Winters 1996/97 and 1997/98, Based on 60% SOQ



The low volume of interruption called by Transco during winter 1997/1998 can also be demonstrated by comparing the volumes interrupted on a daily basis with those for the previous winter (see fig 4). The 1997/1998 levels barely register on the chart.

Figure 4 - Comparison of Daily Volume of Transco Interruption During Winters 1996/97 and 1997/98, Based on 60% SOQ



In winter 1996/97, Transco had 1524 supply points available for interruption. By winter 1997/98 this had increased to 1656. Their distribution by LDZ is shown in table 1. The table also shows the volume of interruption available to Transco per LDZ and the actual level of interruption that was called by Transco during winter 1997/98.

There were 30 interruptible supply points connected directly to the NTS. Although none were interrupted, the potential volume of daily interruption they offered to Transco was 60.683 mcm.

The overall potential daily volume of interruption available to Transco was 103.785 mcm. The actual level called by Transco was 4.79625 mcm.

Table 1 – Transco Interruptible Supply Points by LDZ

LDZ	No of supply points	Total SOQ (mcm) available for interruption (daily)	Vol. of interruption called (mcm)
East Midlands	200	6.532	0.01563
Eastern	116	2.966	0
North Eastern	185	2.240	0.01235
North Thames	103	2.870	0
North Western	258	6.100	1.75444
Northern	92	4.010	0.55902
Scottish	199	4.310	1.07947
South Eastern	96	2.760	0
Southern	78	1.500	0.18366
South Western	116	2.090	0.63002
Wales South	69	4.750	0.063
Wales North	18	0.484	0
West Midlands	126	2.490	0.49866
Sub total for LDZs	1656	43.102	4.79625
NTS	30	60.683	0
TOTAL	1686	103.785	4.79625

A total of 66 individual supply points were affected by Transco interruption, and the total number of supply point days interrupted amounted to 159. Since Transco interruption was invoked almost exclusively as a result of localised capacity constraints and as such was site specific, this affected mainly Network Sensitive Loads (NSL).

The current distribution of NSLs per LDZ is shown in table 2.¹⁶

Table 2 - NSLs by LDZ

LDZ	No of NSL	LDZ	No of NSL
East Midlands	42	Scottish	24
Eastern	3	South Eastern	1
North Eastern	22	Southern	4
North Thames	1	South Western	13
North Western	27	West Midlands	2
Northern LDZ	6	South Wales	0
Total			145

Transco can also re-designate interruptible supply points as TNIs. Such supply points will receive a reduction in the applicable NTS and LDZ commodity rates. The distribution of TNIs per LDZ and the NTS is indicated in table 3.

Table 3 - TNIs per LDZ and NTS

LDZ / NTS	No of TNIs	LDZ / NTS	No of TNIs
East Midlands	5	Northern	2
Scotland	2	South East	3
South Wales	1	Loads supplied from the NTS	2
Total			15

The only exception to the site specific nature of Transco nominated interruptions was on 17 December 1997 when interruption occurred because of an NTS capacity constraint (this is not same as an interruption of an NTS load). This interruption accounted for 1.2% (0.063 MCM) of total Transco interruption. It was also on this day during winter 1997/98 that the highest daily volume of interruption was called by Transco, 1.14 MCM. No high system demand interruption, ie. when forecast total demand exceeds 85% of system 1-in-20 peak day demand, was invoked.

¹⁶ Source Transco

Of the 66 individual supply points that were interrupted by Transco, 2 were deemed as failing to interrupt their gas supply when requested to do so. The FTI charges associated with failures to interrupt in 1997/98 amounted to £96,226.23. This represented 3% of supply points interrupted by Transco during winter 1997/98. By way of comparison, in winter 1996/97 14% of sites failed to interrupt when called upon to do so.

Summary of Main Points:

- ◆ The volume of Transco interruption decreased.
- ◆ The number of supply points and volume of gas available to Transco for interruption increased.
- ◆ Interruptions were almost exclusively site specific.
- ◆ It is difficult to draw many conclusions from such a low level of interruption, although last winter demonstrated the lower service experienced by NSLs in such a warm winter.
- ◆ The number of failures to interrupt decreased significantly.

3.3 Shipper Interruption

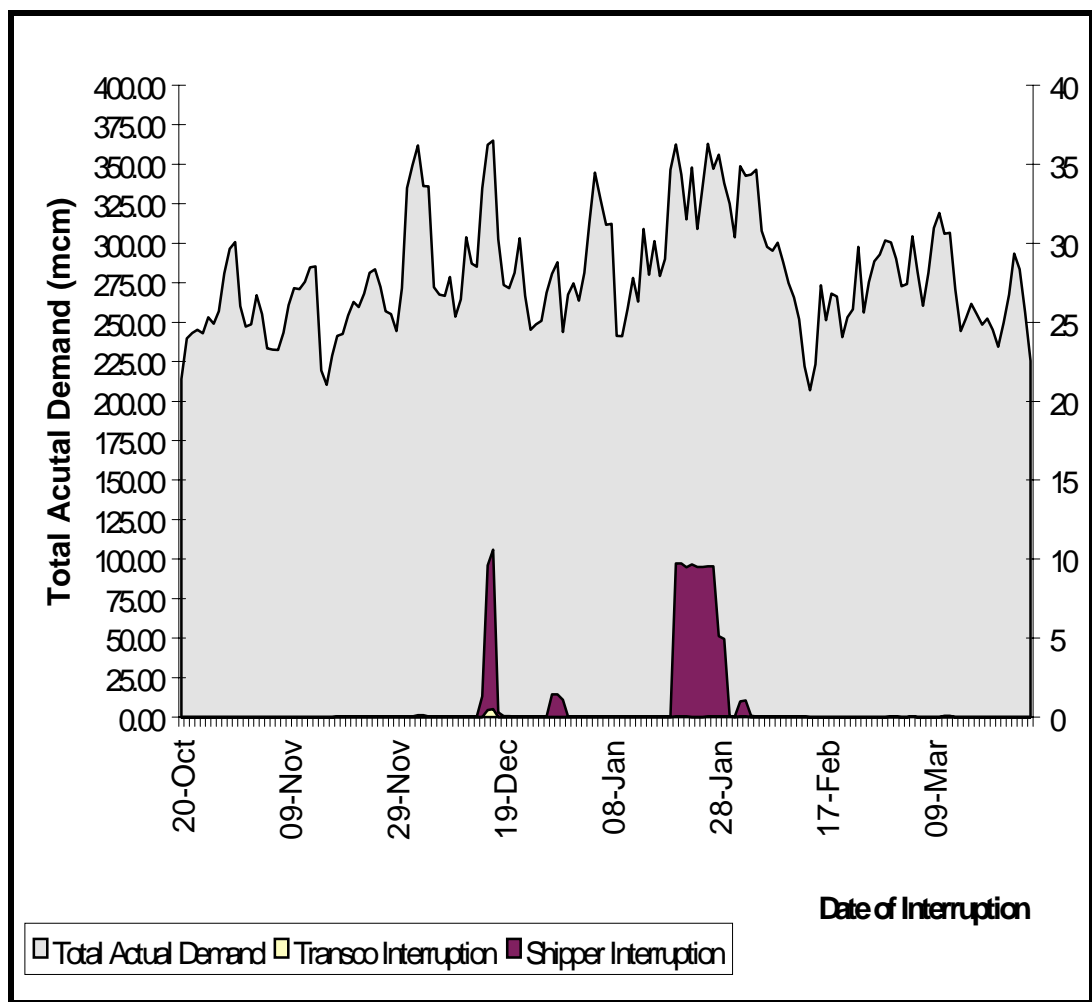
Shipper interruption accounted for a far greater share of total interruption; 98% in winter 1997/98 as compared to 55% in winter 1996/97. Figure 5 compares both Shipper and Transco interruption with the total volume of actual demand, and shows clearly the much higher shipper proportion of interruption compared with Transco interruption.

However, the actual volume of shipper interruption declined. Last winter, network code modification 119 required shippers to inform Transco of the volume a site would have consumed had it not interrupted. Based on such shipper notification of estimated interruption quantity, the volume of shipper interruption in 1997/98 was 1500 Gwh. The comparable figure for 1996/97 was 3236 Gwh. This represents a reduction of 53.64%.

Shipper interruption affected 708 individual supply points for a total of 3668 supply days. Additionally, 18 supply points were shipper interrupted after 31 March 1998 and totalled a further 29 supply days of interruption. The greatest number of days of shipper interruption for an individual supply point during winter 1997/98 was 88; the average was 5.1 days.

Of the 708 supply points that were interrupted 180 (25%) offtook gas during that time. 134 of these consumed more than the Transco threshold of 2930 kWh (100 therms) which was introduced under modification 167.

Figure 5 - Transco and Shipper Daily Volume of Interruption During Winter of 1997/98, Based on 60% SOQ, Compared to Total Volume Actual Demand*



* The very low level of Transco interruption makes it difficult to illustrate in comparison with total actual demand and shipper interruption.

Summary of Main Points

- ◆ Shipper interruption accounted for a far high proportion of interruption in 1997/98 than in 1996/97.

- ◆ The actual volume of shipper interruption, however, declined.

- ◆ Of the 708 supply points that were interrupted by shippers, 134 continued to off-take gas in excess of the 2930 kWh threshold associated with Transco interruption.

4. Issues from Last Year's Ofgas Report: Update

Ofgas' last review¹⁷ raised a number of issues. This section describes those areas that continued to be relevant, those that have seen improvements and those that are still a cause for concern.

Given the mildness of winter 1997/98, two issues that were discussed in the previous Ofgas report were not of relevance. These were the level of interruption and failure to interrupt charges.¹⁸

The areas where matters have improved or where the concern is not as great as had been expressed previously are: data accuracy; new services; determining the demand for transferring from interruptible to firm transportation; better estimating methods; and the provision of information regarding the likelihood of interruption for the National Grid Company (NGC). These are described below.

4.1 Data Accuracy

Last year's report highlighted the shortcomings in the accuracy of data held by Transco for the purpose of communicating a call for interruption. Shippers are obliged under the network code to hold accurate information for the purpose of communicating a call for interruption. To help in this area, Transco has an ongoing exercise called the 'validation of interruption capability' (VIC) in which it attempts to keep its database of contact names, phone and fax numbers up to date. Following the winter 1997/98 VIC exercise, the number of sites failing the network code requirements for site contacts fell from 43.5% to 29.7%.¹⁹ A more recent VIC exercise (Jan 1999) showed that only 4.1% of sites failed.

4.2 New Services

A number of new, more flexible interruption services were introduced last year. These have already been discussed in Chapter 3, along with their impact on the interruptions regime.

¹⁷ 'The Gas Interruptions Regime for Winter 1997/98' Ofgas, December 1997.

¹⁸ The more specific issue of FTI charges at interconnectors is discussed in Chapter 5

¹⁹ Source Transco.

4.3 Demand for Transferring from Interruptible to Firm Transportation

Following winter 1997/98, Transco undertook market research to ascertain the likely level of demand for firm gas transportation contracts from those sites that are currently interruptible.²⁰ Transco had promised to circulate the results of this exercise to the community but failed to do so. Transco has subsequently indicated that the quality of their report was poor and added little to the debate. Ofgas would, however, like to see some indication of the respondents' views.

4.4 Better Estimating Methods

For Transco to estimate correctly the load that would result from an interruption, it is important that its assumptions about sites' SOQs are accurate. Concerns have been expressed that inaccurate SOQ levels could result in over interruption. In response to such concerns, Transco has changed the way it uses percentage SOQs. Previously, it had used a single percentage SOQ across all LDZs. It has now moved to a more flexible position of a percentage SOQ per LDZ. Additionally, Transco also uses gas flow nominations for certain individual sites to improve off-take estimation during winter 1997/98. Given that 98.8% of interruptions in winter 1997/98 were site specific, these changes were of limited immediate value. In short, the important aspect of Transco interruption in winter 1997/98 was not the overall load that was interrupted but that specific sites were called upon to interrupt.

For winter 1998/99, Transco proposed further improvements. These involve the potential application of daily SOQ values for each LDZ and the use of consumption profiles for those sites whose activities are non weather dependent.

Last year's Ofgas report detailed the role of the *Interruption Manager* system. This is a system that has been developed by Transco to analyse datalogger information for interruptible supply points, to allow Transco to assess more accurately the available interruptible load for the day and the day ahead. Information Technology constraints, due to year 2000 compliance work, meant this could not be trialed in 1997/98. Trials of the system did, however, begin in January 1999. Transco have indicated that they will be in a position to make a statement by the end of March regarding the system's use for the forthcoming winter (1999/2000).

²⁰ page 22, 'The gas interruptions regime for winter 1997/98', Ofgas, December 1997

4.5 Provision of Information for NGC

Previously, the NGC had sought information under Transco's network code about the likelihood of interruption which could affect the electricity transmission system. This matter was of less concern during winter 1997/98. There are a number of reasons for this, including:

- ◆ Ofgas understands that the NGC has already prepared a number of Grid Code modifications to deal with its concerns regarding the provision of interruption information about gas fired stations. This concurs with the view expressed by Ofgas that this was essentially a matter between the NGC and the generators.
- ◆ We understand that some 90% or more of interruption is shipper interruption; the commercial agreement between a shipper and a power station is confidential and outside the remit of the network code. As such, a network code modification would not deliver significant additional benefit to the NGC.
- ◆ The low levels of interruption over winter 1997/98 reduced the concerns the NGC had in this area.

Communication of interruption between Transco, Shippers and Customers; Transco discriminating between shippers and customers when calling for interruption; and identifying shipper interruption are other issues that were raised in last year's report. They continued to be issues in winter 1997/98 and are included in the next section.

5. Concerns Arising from Winter 1997/98

This chapter deals with those areas which continue to remain areas of concern from our last report (those highlighted in Section 4) and those which we have identified since our last report. The latter are: Transco's ability to redesignate sites as NSL or TNI; Transco trumping shipper interruption; and FTI charges at interconnectors.

5.1 Communication of Interruption

Issue

An issue that was highlighted in last year's Ofgas report was that of concern over the communications between shippers, Transco and customers for the purpose of interruptions. The communication chain from Transco to customers via shippers is not always reliable.

Discussion

Currently, the transportation of gas is based upon a direct relationship between Transco and shippers. Customers have a contractual relationship with their shipper, and so are dependent upon it for their information. The ability of the customer to interrupt successfully is thus based upon the reliability of the shipper in relaying a Transco call to interrupt.

Problems in shippers' communication to their customers of the need to interrupt may lead to failure to interrupt by some customers. In extreme circumstances this may endanger the supply of gas to firm customers. In such instances, Transco can isolate an interruptible site, ie. Transco can physically disconnect that supply.

Ofgas' View

Given the less than perfect workings of the current system, alternative arrangements to strengthen the communications chain and provide for a more direct relationship between Transco and the end customer should be considered.

A *connection* type agreement, similar to those in the electricity industry, could help to solve the current shortcomings in this area. The merits of such an agreement were discussed in greater detail in the Ofgas document on Customer/Transco Issues.²¹ In short, a direct relationship between the customer and Transco would improve the lines

of communication between the two parties, thus reducing the possibility of not being notified of the request to interrupt. If a customer did not interrupt, any charges for failure to interrupt would be between the customer and Transco, although they could continue to be levied via shippers.

5.2 Discrimination - Shipper v Customer

Issue

Customers have become concerned that those sites which form part of a small or inflexible portfolio may be called upon to interrupt disproportionately more than another equivalent site in the same area which is served by another shipper with a larger portfolio.

Discussion

Transco has a duty not to discriminate in its terms of conveyance. Transco's current contractual relationship is with shippers not customers, and so Transco ensures that a call for interruption is fair and equitable amongst shippers. Transco does so by applying its 'equitability algorithm' and indicating to shippers which sites in their respective portfolios are next due to interrupt. However, if it is not a mandatory or full interruption, a shipper can elect to redesignate the sites for interruption from its portfolio.

If a shipper has an inflexible portfolio, ie. it is either a small portfolio or has large non-divisible (they do not have partial service) loads, then to deliver the interruption required by Transco, it may have to call one site disproportionately more than another equivalent site in the same area served by another larger shipper with a more flexible portfolio. Even though Transco is treating shippers equitably, its actions may lead to inequitable treatment of similar sites facing interruption.

Ofgas' View

Ofgas would be concerned at any discrimination suffered by those loads that form part of a small portfolio. Transco has been made aware of this by Ofgas and was asked to report on how the equitability algorithm works.

In response to the concerns expressed by Ofgas, Transco clarified the way in which its computer system (SC95) generates the list of sites due for interruption and how it avoids

²¹ 'Customer/Transco Issues in the Industrial and Commercial Gas Market', Ofgas, October 1998

the discrimination outlined above.²² According to Transco “SC95 does not generate automatically a candidate list which exceeds each shipper’s target for interruption, which means that some manual intervention is sometimes required to ensure that sufficient interruption is invoked. If a shipper’s actual interruption exceeds their target, the system automatically adjusts the allocation of interruption the next time interruption is called to compensate for this. The net result of this functionality is that consumers whose shippers have only a small number of sites in any LDZ should not suffer any more interruption than those whose shippers have larger portfolios.”

Transco has said that it will monitor the way in which the system works this winter to ensure that sites are being treated equitably. Ofgas looks forward to the results of this exercise being made available at the earliest opportunity.

5.3 Identifying Shipper Interruption

Issue

Customers with interruptible contracts have continued to be concerned about the potential confusion over whether interruption was instigated by Transco or by a shipper for commercial reasons. Customers remain concerned that shippers can call interruption for commercial reasons, for instance to ensure the shipper remains in balance, and claim it as a Transco initiated interruption.

Discussion

The majority of commercial interruption contracts contain a fixed number of days for both Transco and shipper interruption. To maximise the number of days available to them for commercial interruption, it is possible that shippers may have represented commercial interruption as Transco nominated.

Ofgas’ View

A customer’s ability to identify Transco interruption as opposed to shipper interruption may be aided by better information concerning Transco’s calls to interrupt. One suggestion was for Transco to confirm to customers after the day whether interruption had been called by Transco. This should enable customers to identify shipper interruption.

²² Energy and Capacity Workstream 7 January 1999.

From 1 November 1998, customers have been able to contact the Transco Interruption Confirmation Line (ICL). This is an after the day service that allows a customer to confirm that they were the subject of a Transco interruption. It will be in operation 09:45am - 17:00pm, Monday to Thursday, and 09:45 - 16:30 on Friday. By supplying the post-code and meter point reference number for the relevant site, Transco will confirm whether the site had been interrupted by Transco. Customers will not, however, be able to find out if the site was selected as mandatory or proposed as an alternative site, in the way outlined in chapter 2.

Customers have written to Ofgas to ask that Transco's confirmation service be provided on a 24 hour basis. They have also requested that the service be provided within day. Ofgas believes that this new service should be allowed to become established and evaluated before further change is made. However, Ofgas is keen to see Transco develop its present service, if required, after this winter and to investigate the need for a within day service. Transco has confirmed that it will report to the industry at the network code capacity workstream on the use of the ICL after this winter.

5.4 Transco's Ability to Redesignate a Site as NSL and TNI

Issue

Under its network code, Transco can unilaterally redesignate an interruptible supply point as a TNI. Transco can also unilaterally change the operational status of a site to NSL, a term not recognised currently by its network code. Customers have become concerned that they are subject to such supply point redesignation without either sufficient consultation or an appropriate notice period. Some have also objected to Transco's ability to redesignate their sites in any circumstances without their agreement. Moreover, there is no commensurate reduction in transportation charges.

Discussion

By giving at least 12 months notice, the network code allows Transco to unilaterally designate an interruptible supply point as TNI. Subsequently, in a year of 1-in-50 severe annual demand, after taking into account its ability to interrupt at other interruptible supply points, Transco may require the site to interrupt for more than 45 days. Such a redesignation is accompanied by reductions in the applicable commodity rates of the NTS and LDZ commodity charges.

NSLs are currently not defined within the Transco's network code. They are interruptible loads whose location makes interruption of that site for up to 45 days essential to the safe and efficient operation of Transco's system. These sites must be interrupted when requested to do so in order to maintain security of supplies to firm loads. While the constraints that affect NSLs can happen on any pressure tier, they can only be resolved by site specific interruption. Even though Transco interruption will not exceed 45 days, customers have remarked that they feel NSLs receive an inferior service. This is because in a mild winter NSLs are more likely to be called upon to interrupt.

The use of NSLs and TNIs has brought criticism from both customers and others in the industry that it may also be evidence of a lack of investment on Transco's part.

Ofgas' View

Ofgas' view has already been stated in the document "Customer / Transco Issues in the Industrial and Commercial Gas Market" (published last October and referred to earlier in this chapter).

We are concerned at Transco's unilateral ability to alter the transportation status of a site to either NSL or TNI. A connection type agreement between Transco and the customer would ensure that Transco could not change unilaterally any of the terms. In this way, customers could not, without their consent, be redesigned as TNI or NSL.

In any event, it remains our view that it is not right for a monopoly transporter to have the unilateral right to change the terms of transportation to a particular site. We do not believe Transco should redesignate any more sites as NSL or TNI without the explicit agreement of the customers concerned. We recognise that this may have practical implications for Transco and we would wish to consider any such implications. Nonetheless, we would, in principle, support a modification to Transco's network code that limits or removes Transco's ability to change unilaterally the status of a site to TNI or NSL.

We also believe that where the service offered by Transco differs from the standard service, eg. NSLs, Transco should make a commensurate adjustment in its charges.

Transco is in the process of introducing a network code modification to provide for the definition of NSLs, the level of service such sites can expect to receive and the procedures for changing the status of a site. Once made, it would provide an opportunity for shippers and customers to amend Transco's use of NSLs. It also provides an opportunity for Transco to offer tariff reductions to NSLs.

5.5 The 'Trumping' of Shipper Interruption by Transco

Issue

Some shippers believe that Transco's current method of demand estimation means that they, as the shippers, are effectively subsidising Transco's need to use one of the 45 days of interruption available to it. Shippers argue that Transco interruption should replace, or "trump" shipper interruption.

Discussion

Transco forecasts the likely level of demand and uses this estimate to determine the level of interruption, if any, it will need to call. In its forecast, Transco assumes that any shipper interruption which may have been called will continue to remain in place unless told otherwise. Thus, by assuming that the quantity not offtaken due to shipper interruption will remain interrupted, Transco's estimate of demand is lower than it would otherwise have been. Consequently, Transco's need to use one of the 45 days of interruption available to it is reduced. If that site had not been interrupted by its shipper, it is possible that Transco would have had to interrupt.

Transco have put forward the case that its need to invoke interruption is based upon the system demands as they actually exist, not as they may exist. Any commercial interruptions which may exist will be presumed to remain effective. Thus, Transco does not assume anything about the possibility of a shipper interrupted site resuming its gas consumption. Some shippers, however, have argued that by taking this attitude, Transco is effectively saving itself from using one of its own 45 days of potential interruption. If a shipper interruption were lifted, Transco would have no option but to call one of its own.

At an industry meeting in November 1998,²³ Transco explained the only situation in which it would trump shipper interruption, other than NSLs within the LDZs, is:

²³ Energy & Capacity Workstream meeting, 10 November 1998.

“when the forecast actual demand (taking account of shipper interruption) exceeds the capacity of that part of the NTS. Some Transco interruption is then required, on top of the shipper interruption already in place. If shippers were allowed to convert some of their own interruption into Transco interruption, the required reduction would not be achieved and system security would be compromised. To avoid any confusion, any sites which have already been interrupted by their shipper are added to the list of candidates for Transco interruption (although, of course, shippers have the opportunity to vary these).”

A related issue is that non-compliance with a shipper interruption on the part of a customer will have implications for the level of interruption needed by Transco. Under the current system, Transco bases its need to interrupt once it has taken into account the level of interruption it presumes will result from any shipper interruption currently in place. If, however, a shipper interruption is not complied with, Transco’s calculation of quantities of gas being offtaken will be incorrect, ie. the level will be less than Transco estimated. This will have implications for the level of interruption that Transco would need to call for safety reasons.

Ofgas’ View

Our initial view is that Transco is acting correctly. It would be inappropriate for Transco to over interrupt in such a manner on the off chance that a shipper cease its interruption. Transco’s treatment of shipper interruption is similar to the way it treats sites closed, for example, over the Christmas break. If the treatment were changed then Transco may also have to issue interruption notices to such closed sites.

One possible way to deal with this concern about shippers ceasing their interruption and causing a surge in demand would be for Transco’s network code to require shippers to give Transco longer notice of any termination of shipper interruption. If necessary, Transco could then initiate its own call for interruption.

5.6 Failure to Interrupt (FTI) Charges at Interconnectors

Issue

In response to our document, *Shipping arrangements for interconnectors: a consultation document*,²⁴ a number of shippers expressed views regarding FTI charges at interconnectors.²⁵

It is possible for a failure to interrupt to occur at interconnectors, and other similar offtakes with multiple parties both sides of the transaction, without being able to identify the party responsible. The difficulty then arises of ensuring that the FTI charges are levied on the party that caused the failure to interrupt.

Discussion

Some have argued that FTI charges are inappropriate at interconnectors as they do not have the same incentive effect as elsewhere on Transco's system. Another view is that any FTI charges should continue to be levied on NTS shippers, although in principle it should be the operator of the flow control valve (FCV), as it is the FCV operator who controls the rate at which gas is offtaken from Transco's system. The FCV operator at Moffat is Transco and at Bacton it is Interconnector UK (IUK).

Support, however, exists for maintaining the current position of NTS shippers being responsible for FTI charges in line with current network code arrangements. Allied to this is the view that it would be inappropriate to alter the structure of the current regime for interconnectors in isolation from a more general interruptions review.

One respondent argued that due to the significant size of the interconnectors and the potentially significant effect on system security of a failure to interrupt, interconnectors should face FTI charges significantly higher than those elsewhere on the NTS.

Ofgas' View

Ofgas realises the importance of interruption as a tool for the safe & efficient operation of Transco's system and in ensuring firm loads are secure. The potentially significant impact of interconnector loads makes it all the more important that they interrupt when called upon to do so. Ofgas continues to believe that FTI charges are the only incentive

²⁴ Published in February 1998.

²⁵ A paper was submitted by AGAS on behalf of a number of parties including Conoco, Shell Gas Direct, British Gas Trading, Esso and AGAS. A copy of this paper is available in the Ofgas library along with other responses to the February consultation document.

to interrupt that currently exists and should remain wherever an interruptible service is offered, including at interconnectors, for the present.

Ofgas' June 1998 document,²⁶ recognised the arguments of the shippers that it may be inappropriate to levy FTI charges on NTS shippers at interconnectors because of the number of parties on both sides of the transaction together with the fact that they do not control the offtake directly. The FTI charge may not fall on the party ultimately responsible for the failure to interrupt. Ofgas took the initial view that FTI charges levied on NTS shippers do not seem appropriate and that they should instead be levied on the FCV operators at Moffat and Bacton, ie. Transco and IUK, respectively. Ofgas is, however, conscious of altering the current regime at interconnectors in isolation from the rest of Transco's system.

Ofgas, therefore, takes the view that, for now, NTS shippers should remain liable for FTI charges at both interconnectors. To the extent, however, that an interruptible NTS shipper responds correctly to an interruption notice from Transco, ie. they nominate down on UK Link and can demonstrate they acted correctly, it would seem inappropriate that they face FTI charges. This is especially true at Moffat where the FCV operator is Transco. Ofgas is prepared to investigate any instances where a shipper has acted correctly and still received an FTI charge, with the potential to direct any such charge to be waived.

²⁶ 'Shipping arrangements for the interconnectors: conclusions', Ofgas, June 1998.

6. Interruptions and the Reform of Gas Trading Arrangements (RGTA)

This report has highlighted the key role interruption plays in balancing the supply and demand for gas (through shipper interruption) and for gas transportation (through Transco interruption) when supplies of gas or gas transportation are constrained. Such constraints lead to variations in the marginal cost, that is, the cost of an extra unit, of supplying and transporting gas. These costs can also vary over different time periods or by location. It is possible to envisage a set of arrangements whereby such cost variations are fully reflected in prices. Such a complex pricing system would allow customers to be fully responsible for their own demand management, adjusting their demands for gas and gas transportation in the light of relevant price signals.

Such arrangements would, however, require complex pricing systems which offer prices that differ over time and by location. This would then require complex metering and information systems. Interruption provides a simpler method of demand management by, in effect, giving transporters and shippers the ability to adjust demands directly in the face of imbalances. This implies a greater role for shippers and the transporter than in a more complex world where demand management would lie directly with customers.

Interruption is one of many tools available to shippers and gas transporters to secure the efficient balancing of the demand for, and supply of, gas and gas transportation services. The price of such interruptible services should therefore reflect the underlying short-term costs of supplying gas and gas transportation. Moreover, since interruption is used as a partial substitute for both balancing and storage services, it is important for efficiency that the terms and conditions of interruptible services should be consistent with those areas where pricing signals do exist. This implies that as the regimes governing transportation capacity, storage services and commodity markets change, interruptible services will need to be adjusted to reflect those changes.

In general, the gas supply system is moving towards the placing of greater reliance on markets and pricing signals to balance the supply and demand for gas and gas transportation. Substantial changes are being introduced into the arrangements for the

supply of gas storage services, commencing in the 1999/2000 storage year, and major changes in the gas balancing and transportation capacity regime will follow shortly thereafter. Ofgas has recently published documents on both these issues.²⁷ For the future, therefore, it will be important that interruption arrangements adapt so as to ensure consistency with these changes and to promote efficiency in the new circumstances.

The consequences for interruptible services of some of these developments can be illustrated by considering the implications of the introduction of arrangements that will lead to the sale of firm rights to NTS transportation capacity and that will facilitate secondary trading in such rights.

Currently, Transco has considerable discretion over the specification of interruptible services and the prices at which they are offered. Prices are linked to NTS charges, but the relationship between the services offered, their prices and the underlying transportation costs are far from transparent.

The development of secondary markets for transportation capacity should, however, give clearer signals of the value of transportation interruption. The existence and severity of constraints in terms of both location and / or time will tend to be reflected in capacity prices, and it is to be expected that the variety and prices of interruption services on offer will, in turn, reflect those capacity prices. Moreover, the development of liquid, short-term markets in transportation capacity opens up the prospect of competition in transportation interruption, since a shipper can offer such interruption as a means of economising on the purchase of rights to transportation capacity.

Similar points hold in relation to developments in gas storage services. Storage and interruption are alternative means of balancing supply and demand, and it is to be expected that the pricing signals that emerge from the forthcoming auctions of capacity at the Hornsea and Rough facilities will provide useful information as to the value of certain types of interruptible service. The linkages between transportation interruption, storage services and prices will also be to the fore when, later this year, Ofgas comes to review the arrangements for the supply of LNG storage services.

²⁷ 'Review of the supply of gas storage and related services', Ofgas, February 1999, and 'Reform of Gas Trading Arrangements: Proposals and Consultation', Ofgas, February 1999

7. Summary and Conclusions

This report has compared the level of interruptions in winter 1997/98 with the previous winter and highlighted a number of issues that remain outstanding since our previous report. It also highlights new issues that arose during winter 1997/98 and the Review of Gas Trading Arrangements.

It is difficult to draw conclusions on the effectiveness of the interruptions regime in the network code given the warmth of winter 1997/98, and the relatively low level of Transco interruption. However, the issue of the greater likelihood of interruption for NSLs in a warm winter was highlighted by the weather during winter 1997/98.

Ofgas is disappointed in the lack of progress during last summer in the interruptions forum convened by Transco. The issue of NSLs and TNIs and their relationship with Transco's investment programme remains outstanding, although NSLs will finally be recognised by the network code. Ofgas remains convinced that Transco should not be allowed to change the status of site unilaterally without the site's agreement, and would welcome a network code modification proposal to this effect. This would provide a forum for debate within the network code modification process. Where sites do agree to a change in status, Ofgas believes that a commensurate reduction in transportation charges should be offered by Transco.

The relationship between Transco and shipper interruption is another area where concerns exist. We have indicated our belief that Transco's current policy regarding the trumping of a shipper with a Transco interruption is correct, though we have considered an alternative that may address shippers' concerns, ie shippers give Transco a longer notice of any termination of shipper interruption. Ofgas believes that improvements to Mod 119²⁸ (discussed in detail our last interruptions review) and clarification of the treatment of sites in Transco's demand estimation routine are still required.

Nonetheless, Ofgas welcomes changes that have been introduced over winter 1998/99. These include:

²⁸ page 36, 'The gas interruptions regime for winter 1997/98', Ofgas, December 1997. Mod 119 gives the option of interruption communications between Transco and shippers either electronically or by fax and phone. Two way electronic communication may be of benefit to shippers with a large portfolio of sites.

- ◆ the introduction of an after the day service to confirm Transco interruption. This will help customers to be clear about whether shippers or Transco called the interruption. Transco, however, is expected to continue to monitor and improve the communication it has with customers; and
- ◆ the ongoing VIC exercise, referred to on page 19, has improved the quality and reliability of data held by Transco.

In the short term, Ofgas is keen to see Transco introduce more flexible interruption services within the current network code framework. In particular, Ofgas believes that the pricing of interruption services must be addressed as a matter of urgency. In this regard, Ofgas welcomes Transco's recent efforts to undertake a more fundamental review of the suite of network code interruption services with commensurate changes to the pricing of those services. In particular, Transco issued a discussion paper to shippers and customers that questions the appropriateness of offering only a 45 day (or longer) interruption service.²⁹ Transco has also issued to customers at its last interruption workshop a questionnaire seeking views on the most appropriate structure of its interruptible transportation services.³⁰

In the longer term, this report highlights the potential benefits that a connections type agreement, similar to those in the electricity industry, could have for the interruptions regime. It would create the direct relationship with Transco that customers are keen to establish. This in turn would improve the lines of communication for interruption purposes, as well as helping to eliminate customers' concerns regarding Transco's unilateral site redesignation.

Ofgas will work closely with Transco, shippers and customers to ensure that more flexible interruptible services, with a more appropriate pricing structure, are in place for October 1999.

²⁹ NCD1 discussion paper- "Review of Interruptible Services", November 1998, Transco

³⁰ Interruption Questionnaire, November 1998, Transco