

2006-07 Gas Distribution Quality of Service Report

Document Type: Report

Ref: 294/07

Date of Publication: December 2007

Target Audience: Consumers and their representatives, gas distribution networks (GDNs) and any other interested parties

Overview:

Ofgem has put in place arrangements to ensure that gas distribution networks (GDNs) provide an appropriate level of service quality.

The objectives of this report are to summarise the key mechanisms in place to protect customers in terms of the quality of service they receive from GDNs and to publish information on the main quality of service indicators reported by GDNs under the Regulatory Instructions and Guidance (RIGs) requirements.

This is the fifth report Ofgem has published on the quality of service performance of gas transporters. It is a retrospective report for 2006-07.

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Context

Ofgem seeks to regulate gas distribution networks (GDNs) effectively as competition in this area is not practicable. Regulation is necessary to protect the interest of consumers. We place incentives on GDNs to operate efficiently. To mitigate against the risk that GDNs will respond to these incentives by reducing the quality of service which they provide to their customers, we also specify a number of outputs and standards of performance which GDNs must deliver.

Under their licence (Standard Special Condition D9), GDNs are required to collect information regarding their delivery of the outputs specified and report this to Ofgem. The Regulatory Instructions and Guidance ("RIGs") published by Ofgem includes definitions and guidance for collating information and data on these outputs.

This report summarises GDNs performance against these quality of service outputs for the period from 1 April 2006 until 31 March 2007.

Associated Documents

- Gas Distribution Quality of Service Regulatory Instructions and Guidance, March 2005 (Ref. No. 100/05):
http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13055_259_05.pdf
- Gas Distribution Price Control Review Final Proposals, December 2007 (Ref. No. 285/07):
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=362&refer=Networks/GasDistr/GDPCR7-13>
- Guidance for reporting on standards of performance and standard special licence condition D10 for gas distribution network operators and independent gas transporters, November 2005 (Ref. No. 254/05):
http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/10970_10005.pdf
- 2005-06 Gas Distribution Quality of Service Report, December 2006 (Ref. No. 210/06): http://www.ofgem.gov.uk/Networks/GasDistr/QoS/Documents1/16406-210_06.pdf
- 2004-05 Gas Distribution Quality of Service Report, December 2005 (Ref. No. 280/05):
http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13213_280_05.pdf
- 2003-04 Gas Distribution Quality of Service Report, April 2005 (Ref. No. 119/05):
http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/11148_11905.pdf
- 2002-03 Gas Distribution Quality of Supply Report, March 2004 (Ref. No. 71/04):
http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6642_7104.pdf

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Summary

Ofgem has put in place arrangements to ensure that gas distribution networks (GDNs) provide an appropriate level of service quality. The aim of this report is to summarise the key mechanisms in place to protect customers and to publish information on the main quality of service indicators reported by GDNs under the Regulatory Instructions and Guidance (RIGs) requirements.

This is the fifth report Ofgem has published on the quality of service performance of gas transporters. It is a retrospective report for 2006-07 and sets out information concerning each of the service areas described below.

Interruptions

Each GDN has provided information on the number and duration of both planned (replacement) and unplanned (emergency and repair) gas supply interruptions for each GDN in line with their obligations under the RIGs. The majority of interruptions are for planned works and can be linked to the mains replacement programme.

Consumer satisfaction surveys

Since 1 April 2005 GDNs have been required to undertake quarterly postal surveys seeking feedback from consumers who have experienced either a planned or unplanned gas supply interruption. We present the survey results for 2006-07.

Mains replacement activity

The report presents information on mains replacement activity undertaken and outlines the total length of mains decommissioned and installed since 2002-03. Additional information showing the annual breakdown of this information for each GDN is presented in Appendix 1.

Environmental issues

Each GDN must report on a range of environmental issues. The data for 2006-07 shows that emissions of methane have decreased on both low pressure and medium pressure pipes since 2004-05. This is associated with the mains replacement programme.

Changes to the quality of service arrangements

Ofgem has reviewed the quality of service arrangements applying to gas transporters as part of the gas distribution price control review (GDPCR). Chapter 7 of this document describes the main features of the regime that is expected to apply from 1 April 2008.

1. Introduction

Chapter Summary

This chapter sets out the purpose and structure of the document and provides some background information on GDNs outputs and quality of service arrangements.

Purpose and structure of the document

1.1. The purpose of this report is to summarise GDNs performance against quality of service outputs for the period from 1 April 2006 until 31 March 2007. The areas covered by this report include:

- Chapter 2 - background information on the GDNs and their outputs and quality of service arrangements,
- Chapter 3 - data on the number and duration of interruptions for each GDN,
- Chapter 4 - results from GDN consumer satisfaction surveys,
- Chapter 5 - information on mains replacement activity;
- Chapter 6 - GDNs' environmental performance,
- Chapter 7 - changes to the quality of service arrangements that are being implemented as part of GDPCR.

1.2. This report also provides background information on the key mechanisms in place to protect consumers with regard to the quality of service they receive from GDNs.

1.3. This is the fifth Quality of Service report published by Ofgem. It is the second report since National Grid Gas sold four of its gas distribution businesses and since Ofgem introduced the requirement for GDNs to undertake quarterly consumer satisfaction surveys.

1.4. Previous Gas Distribution Quality of Service reports can be found on the Ofgem website: www.ofgem.gov.uk.

2. Background

Chapter Summary

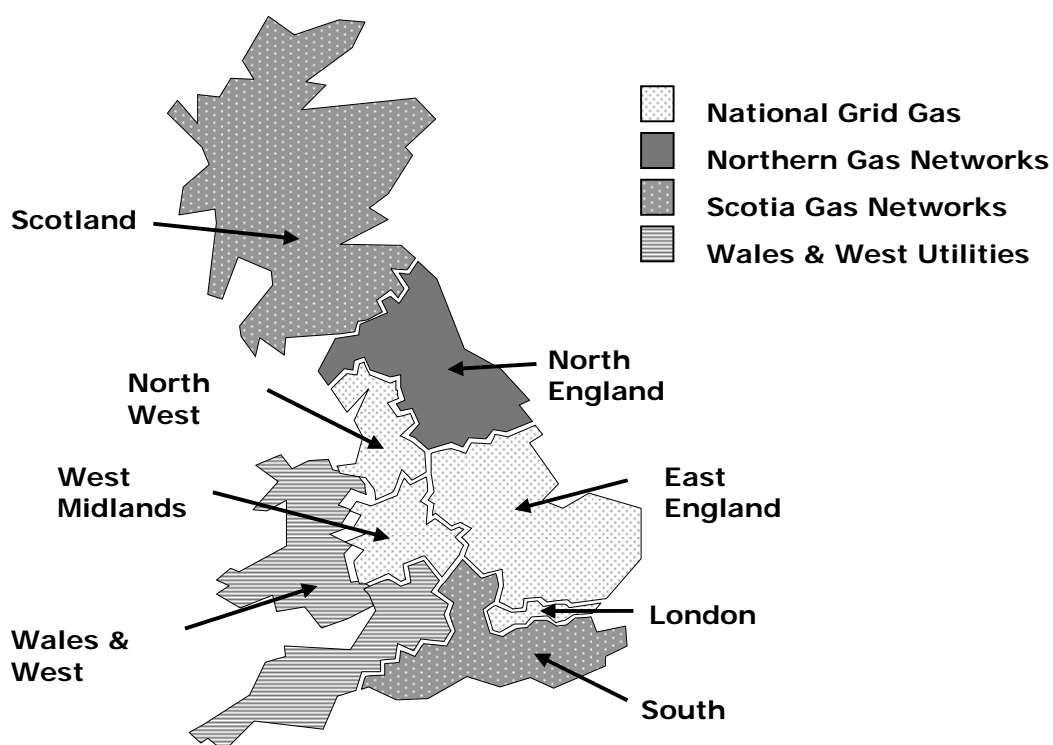
This chapter provides background information on the GDNs and their output and quality of service arrangements.

Introduction to the GDNs

2.1. Suppliers trade gas in a competitive wholesale market, which is then transported to customers' premises through gas transmission and distribution networks. GDNs take gas from exit points on the high pressure National Transmission System (NTS) and transport it at lower pressures to end users.

2.2. There are eight gas distribution networks, which are owned by four gas distribution companies – National Grid Gas (NGG), Northern Gas Networks (NGN), Scotia Gas Networks (SGN), and Wales & West Utilities (WWU). Figure 2.1 shows the eight networks and their owners.

Figure 2.1 - Map of gas distribution networks and gas distribution companies



2.3. The key characteristics of each GDN are set out in Tables 2.1 and 2.2 (page 6).

National Grid Gas plc

2.4. NGG is part of National Grid, which owns the NTS, the majority of the UK electricity transmission network and 4 GDNs – North West, East England, West Midlands and London. These are the GDNs that NGG elected to retain when it conducted its sale of gas distribution networks. Prior to the sale, NGG owned all eight GDNs.

2.5. The GDNs owned by NGG extend from London (north of the Thames) through eastern and central England, and as far north as the Lake District.

2.6. National Grid operates its gas distribution business and its gas transmission business as two separate businesses within a single legal entity (National Grid Gas plc). The distribution business and the transmission business each have their own gas transporter's licence. NGG's four GDNs share a single licence, but each has a separate price control.

Northern Gas Networks

2.7. Northern Gas Networks (NGN) owns North England GDN. NGN purchased North England GDN from NGG on 1 June 2005. North England GDN extends south from the Scottish border to South Yorkshire.

2.8. NGN is owned by a consortium led by Cheung Kong Infrastructure Holdings Ltd and including United Utilities plc. It has contracted out its asset management services to United Utilities Operations Limited (UUOL) a subsidiary of United Utilities, which also owns and operates the electricity distribution network in North West England. NGN itself has approximately 50 staff members who are responsible for managing the network and overseeing the contract with UUOL.

Scotia Gas Networks

2.9. Scotia Gas Networks (SGN) owns two GDNs, South of England and Scotland. SGN purchased South of England GDN and Scotland GDN from NGG on 1 June 2005.

2.10. South England GDN extends from Milton Keynes, to Dover in the east and Lyme Regis in the west, including London boroughs to the south of the River Thames. Scotland GDN covers Scotland, which is the largest GDN by area but the smallest in terms of their Regulatory Asset Value. It includes five independent networks which are not connected to the distribution system due to their location.

2.11. SGN's two networks are contained within two wholly-owned legal entities known as Scotland Gas Networks and Southern Gas Networks. Scotland Gas Networks and Southern Gas Networks each have their own gas transporter's licence.

2.12. SGN is owned by a consortium made up of Scottish and Southern Energy plc, Borealis Infrastructure Management Inc and Ontario Teachers Pension Plan. It receives a number of services, such as corporate services, from service companies established as part of the Scottish & Southern Energy group. Scottish & Southern Energy owns and operates electricity distribution networks in Scotland and southern England, as well as gas shipping, electricity generation and gas and electricity supply businesses.

Wales and West Utilities

2.13. Wales and West Utilities (WWU) owns Wales and West GDN. WWU purchased Wales and West GDN from NGG on 1 June 2005. Wales and West GDN encompasses Wales and a large part of south-west England from Swindon to the tip of Cornwall.

2.14. WWU is owned by a consortium led by the Macquarie European Infrastructure Fund. It is the only GDN owner that is independent from other UK gas and electricity network businesses.

Independent Gas Transporters (IGTs)

2.15. There are also a number of smaller Independent Gas Transporters (IGTs) in Great Britain. IGTs operate relatively small local distribution networks which mainly serve the new housing market. There are nine companies that hold 15 IGT licences between them. However, only six of these companies own or operate transportation assets with approximately 900,000 customers connected to their networks.

Table 2.1 - GDNs' customer numbers for financial year 2006-07

	NGG				NGN	SGN		WWU	TOTAL
	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	
Domestic	3,803,077	2,167,133	2,583,932	1,873,408	2,444,855	1,705,814	3,923,590	2,363,358	20,865,167
Non-Domestic	120,857	98,365	84,646	61,626	42,865	32,994	68,249	37,182	546,784
Total*	3,928,007	2,266,737	2,670,756	1,936,694	2,489,732	1,740,815	3,995,106	2,402,657	21,430,504

* Total number of customers including CSEPs, where each CSEP counts as one customer.

Table 2.2 - GDNs' key network characteristics for financial year 2006-07

		NGG				NGN	SGN		WWU	TOTAL
		East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	
Network lengths (kms)	Local transmission system	2,482	685	952	925	1,194	1,328	1,735	2,412	11,713
	Intermediate pressure	1,809	269	372	345	740	1,123	677	2,915	8,251
	Medium and low pressure	42,636	21,771	32,274	22,025	33,536	20,381	45,444	27,014	245,081
	Total length of mains	46,927	22,725	33,598	23,295	35,470	22,833	47,856	32,341	265,044
Network materials (kms)	Cast/spun iron	13,522	8,677	11,074	8,679	10,871	6,302	17,349	8,595	85,070
	Ductile iron	2,851	1,817	1,655	1,271	3,444	942	1,848	2,439	16,267
	Polyethylene	27,354	10,924	18,938	11,663	18,988	13,762	24,699	17,686	144,014
	Other	3,199	1,307	1,931	1,682	2,167	1,827	3,960	3,621	19,694

GDNs' quality of service and outputs arrangements

2.16. GDNs are natural monopolies. Regulation is necessary to protect the interest of consumers. Ofgem uses incentive regulation to encourage GDNs to reduce costs and lower charges to customers. However, to balance GDNs incentives to reduce costs, we also specify a number of quality of service outputs and standards which GDNs must deliver, to ensure GDNs provide an appropriate level of service to consumers.

2.17. The current quality of service and outputs arrangements have been implemented through a number of different frameworks. This report focuses on the outputs framework, established under each GDNs' licence (Standard Special Condition D9). This requires GDNs to report performance on a number of key quality of service indicators, including:

- The number and duration of interruptions,
- Consumer satisfaction surveys,
- Mains replacement activity; and
- Environmental performance.

2.18. The Regulatory Instructions and Guidance ("RIGs") published by Ofgem¹, set out detailed definitions and guidance for collecting and reporting this information to ensure that GDNs measure and report information on the specified outputs on a consistent and regular basis.

2.19. Each GDN has further duties under its licence to maintain the 'efficient and economic operation of its pipeline system'. The Health and Safety Executive (HSE) enforces requirements under the Pipelines Safety Regulations² in relation to maintaining the network and under the Gas Safety (Management) Regulations³ in relation to gas escapes.

2.20. This report summarises GDNs' performance against these quality of service outputs for the period from 1 April 2006 until 31 March 2007.

¹ Gas Distribution Quality of Service Regulatory Instructions and Guidance Version 3, Ofgem, March 2005, 100/05

² The Pipelines Safety Regulations 1996, SI No 825

³ Gas Safety (Management) Regulations 1996, SI No 551

3. Interruptions reporting

Chapter Summary

This chapter summarises the interruptions reporting framework for GDNs and their performance for 2006-07. It also highlights issues with the quality of this data and how this is being addressed.

GDNs' interruptions reporting measures

3.1. GDNs have been required to record and report non-contractual interruptions information to Ofgem since April 2003 as part of the output reporting framework.

3.2. GDNs are required to report the following key interruption measures:

- The number of non-contractual supply interruptions to customers from all planned and unplanned activities per 10,000 customers per year; and
- The average number of customer minutes lost per interruption, resulting from non-contractual supply interruptions to customers.
-

3.3. The RIGs require GDNs to report non-contractual interruptions data disaggregated by cause and customer type for each network. This information is provided on both a quarterly and an annual basis.

3.4. The majority of reported interruptions can be accounted for by planned work, as illustrated in Table 3.1.

Table 3.1: Reported number of non-contractual interruptions 2006-07

All GDNs	Reported number of interruptions per 100 customers			
Type of interruption	2003-04	2004-05	2005-06	2006-07
Planned interruptions	0.79	1.04	1.37	2.02
Unplanned interruptions	0.14	0.25	0.24	0.38
Total	0.92	1.29	1.61	2.40

3.5. The increase in the number of planned interruptions over the period 2003-04 to 2006-07 is attributable to the mains replacement programme agreed with the HSE (see Chapter 5). The primary cause of the increase in unplanned interruptions in 2006-07 was a single incident at Crooke in North England which affected more than 6000 customers. There has also been an improvement in reporting which affects the figures.

Data quality issues

3.6. During the course of 2004, it became evident that the information reported by GDNs on non-contractual interruptions was not as robust as expected. As such, Ofgem commissioned an assessment of the systems used to record and report the interruptions information to understand this issue further. Wilcock Consulting was appointed to undertake this assessment in April and May 2004. The final report is available on Ofgem's website⁴.

3.7. This assessment highlighted that the reported number of interruptions is understated and the duration of interruptions is significantly overstated due to problems with the data and the way that it is collected. Some progress has been made through changes to the reporting requirements in the RIGs for the number and duration of non-contractual supply interruptions. A revised version of the RIGs was published in March 2005 which took effect from 1 April 2005.

3.8. The GDNs have advised that the changes to RIGs have improved both the accuracy and completeness of the data reported and that further improvements in the quality of this data can be expected in future. Ofgem agrees that this is an area where further improvement can be made. As part of the changes associated with GDPCR, we propose to introduce minimum standards for the quality of data submitted by GDNs. The data on the number and duration of interruptions will be required to be at least 95 per cent complete from 1 April 2009.

⁴ An assessment review of Transco's measurement systems and RIGs reporting: Final report by Wilcock Consultants, September 2004

4. Consumer satisfaction surveys

Chapter Summary

This chapter summarises the results of quarterly consumer satisfaction surveys which GDNs have been required to undertake since 1 April 2005.

Introduction

4.1. In April 2005 Ofgem introduced a requirement on the GDNs to carry out quarterly postal consumer satisfaction surveys. The GDNs must carry out two separate surveys to assess consumer satisfaction with work associated with planned (replacement) and unplanned (emergency and repair) interruptions to gas supplies. GDNs must use a sample size sufficient to ensure that at least 100 surveys are completed and returned per quarter for each survey type (planned and unplanned).

4.2. These surveys cover performance in three key areas:

- Communication,
- The inconvenience caused by the interruption, and
- The professionalism and efficiency of the work carried out in restoring supply.

4.3. Data obtained from these surveys enables Ofgem to better understand any areas of concern with the quality of the service delivered by GDNs in this area and provides a comparable measure of performance across the different networks. The detailed requirements for carrying out the surveys and reporting the results are also set out in the RIGs.

4.4. The results of the consumer satisfaction surveys for 2006-07 are discussed below. In addition to this, each GDN is required to publish their own quarterly and annual results on their websites⁵.

⁵ National Grid Gas - <http://www.nationalgrid.com/uk/Gas/OperationalInfo/operationaldocuments/customersurvey/>

Northern Gas Networks - <http://www.northerngasnetworks.co.uk/cms/54.html>

Scotia Gas Networks - http://www.scotiagasnetworks.co.uk/index.aspx?id=54&rightColHeader=8&rightColContent=15&rightColFooter=237&TierSlicer1_TSMMenuTargetID=21&TierSlicer1_TSMMenuTargetType=4&TierSlicer1_TSMMenuID=6

Wales & West Utilities - <http://www.wwutilities.com/survey.asp?GroupKeyPos=01,04,04>

Results from Replacement Surveys

4.5. The main survey questions assess respondents' satisfaction with the GDNs' performance in the following areas:

- The duration of the interruption,
- Advanced notification of the works requiring the interruption,
- Communication from the GDN whilst the works were being carried out,
- Skill and professionalism of the workforce that carried out the work, and
- Overall quality of the work carried out.

4.6. Customers were asked to score the GDNs in each of these areas using the following scale: Very satisfied (5), Satisfied (4), Neither (3), Dissatisfied (2) and Very dissatisfied (1).

4.7. A satisfaction score was calculated for each attribute and an overall customer satisfaction score was calculated by combining the scores for each question. A number of questions were asked to establish the profile of customers that responded to the survey. The replacement survey also includes a question regarding whether or not the respondent received notification before the work was carried out.

4.8. Table 4.1 summarises the scores GDNs received in each attribute for 2006-07 for interruptions resulting from planned (replacement) work. It also shows the combined customer satisfaction score for interruptions resulting from planned work.

Table 4.1 - 2006-07 satisfaction scores for planned interruptions

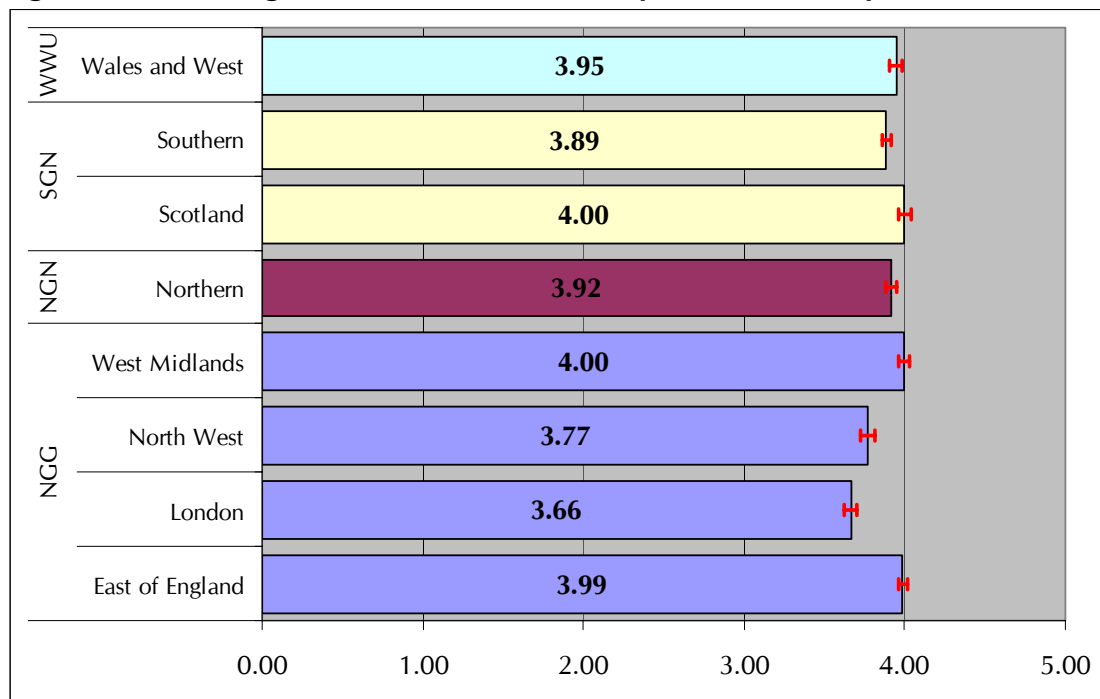
		Duration of interruption	Advance notice of work	Communication from the GDN	Skill and professionalism of workforce	Overall quality of work	Combined score
NGG	East of England	3.88	4.15	3.82	4.06	4.04	3.99
	London	3.40	3.90	3.43	3.82	3.77	3.66
	North West	3.55	3.96	3.64	3.88	3.82	3.77
	West Midlands	3.82	4.15	3.88	4.10	4.05	4.00
NGN	Northern	3.75	4.14	3.81	3.97	3.91	3.92
SGN	Scotland	3.96	4.15	3.85	4.03	3.99	4.00
	Southern	3.74	4.08	3.71	4.01	3.90	3.89
WWU	Wales & West	3.67	4.18	3.68	4.11	4.09	3.95

4.9. The range of the scores suggests that customer satisfaction levels are fairly consistent across Great Britain. The lowest result was 3.4 (for London's duration of interruptions) and the highest was 4.18 (for WWU's advance notice of work).

4.10. Scotland and West Midlands jointly achieved the highest combined score for planned interruptions. WWU achieved the highest score for three of the five

attributes. London received the lowest customer satisfaction scores overall and for each attribute.

Figure 4.1 - Average satisfaction scores for planned interruptions



Results from Unplanned (Repair) Surveys

4.11. As with the planned (replacement) survey, the main survey questions for unplanned (emergency and repair) interruptions assess respondents' satisfaction in the following areas:

- The duration of the interruption;
- Communication from the GDN whilst the works were being carried out;
- Skill and professionalism of the workforce that carried out the work; and
- Overall quality of the work carried out.

4.12. Respondents use the same scale when answering these questions. Again a satisfaction score is calculated for each attribute along with an overall combined customer satisfaction score.

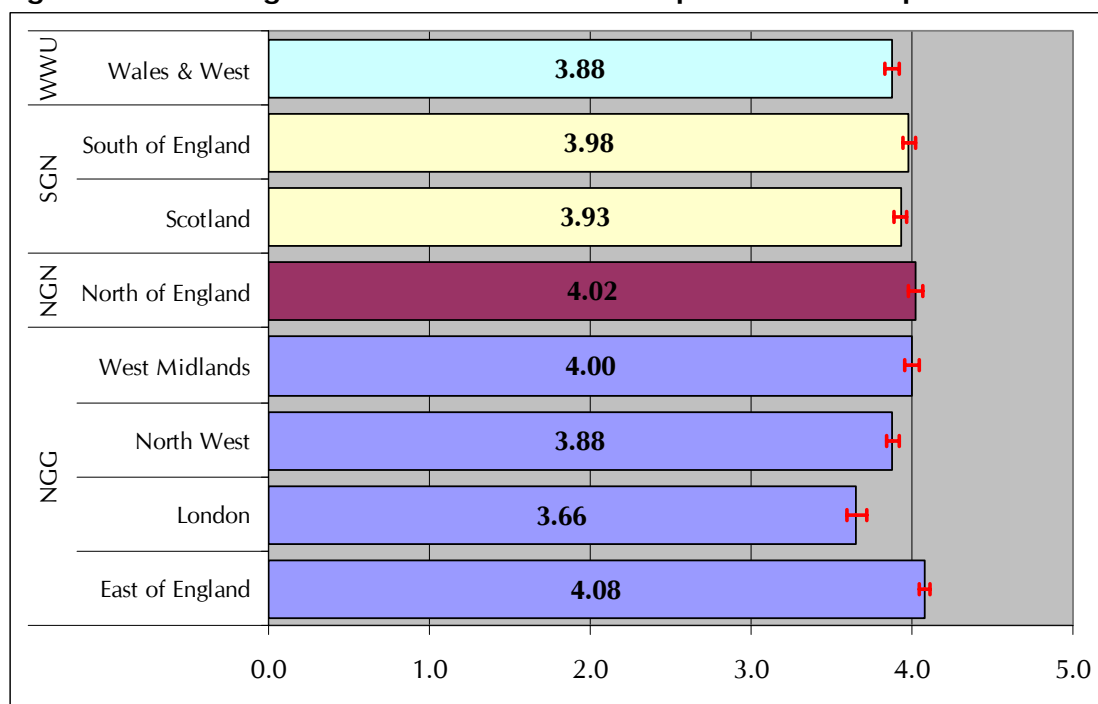
4.13. Table 4.2 summarises the scores GDNs received in each of these attributes for 2005-06 for interruptions resulting from unplanned (repair) work.

Table 4.2 - 2006-07 satisfaction scores for unplanned interruptions

		Duration of interruption	Communication from the GDN	Skill and professionalism of workforce	Overall quality of work	Combined score
NGG	East of England	3.82	3.98	4.28	4.22	4.08
	London	3.22	3.52	3.96	3.92	3.66
	North West	3.55	3.76	4.11	4.09	3.88
	West Midlands	3.70	3.94	4.20	4.15	4.00
NGN	Northern	3.71	3.91	4.26	4.20	4.02
SGN	Scotland	3.70	3.80	4.12	4.10	3.93
	Southern	3.76	3.86	4.18	4.11	3.98
WWU	Wales & West	3.51	3.68	4.18	4.14	3.88

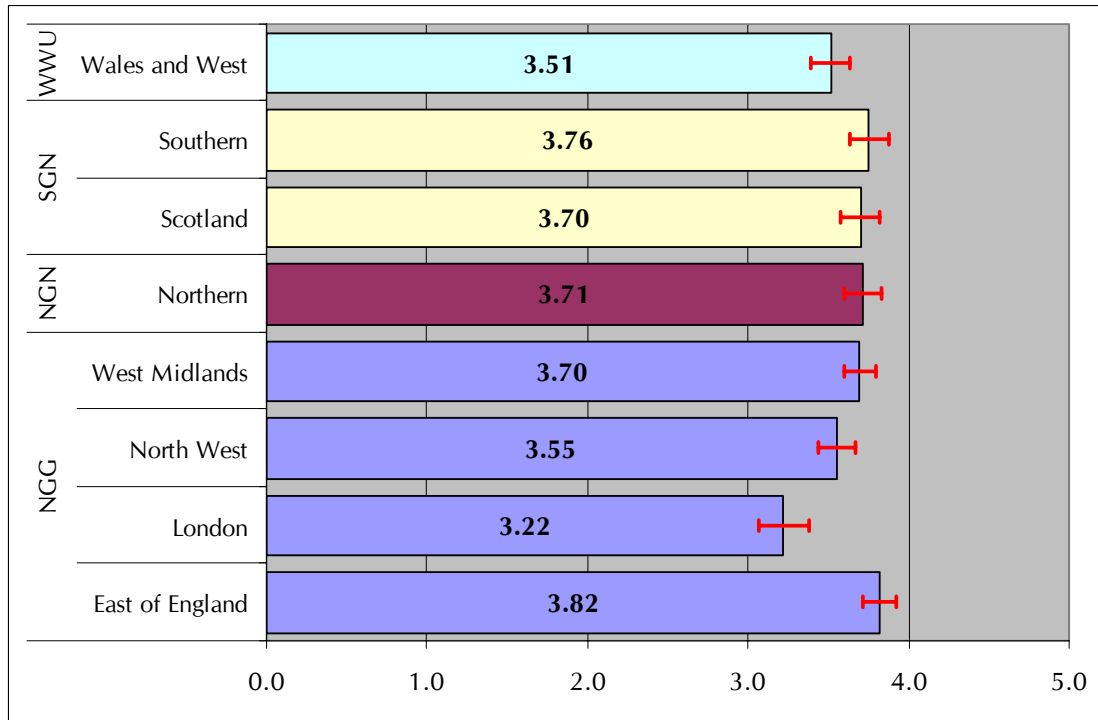
4.14. With the exception of Scotland and WWU, the combined satisfaction scores for unplanned interruptions were the same as or higher than those for planned interruptions. East England achieved the highest customer satisfaction scores overall and for each attribute, while London received the lowest customer satisfaction scores overall and for each attribute.

Figure 4.2 - Average satisfaction scores for unplanned interruptions



4.15. Figure 4.3 shows customer satisfaction scores for the duration of unplanned interruptions. Results ranges from 3.22 (London) to 3.82 (East of England).

Figure 4.3 - Satisfaction scores for the duration of unplanned interruptions



5. Mains replacement and the HSE

Chapter Summary

This chapter provides background information regarding the mains replacement programme and summarises the programme's outcomes for 2006-07.

Introduction

5.1. The principal risk associated with the gas distribution system is the potential to cause harm to people and damage to property through uncontrolled gas release into properties and, more rarely, subsequent explosions. The main causes of these occurrences have been found to be the sudden failure of iron pipes, either by fracture or corrosion.

5.2. There are requirements on GDNs under the Gas Safety (Management) Regulations, in relation to the escape of gas, and under the Pipeline Safety Regulation, on mains replacement activity, enforced by the HSE. These requirements impact on:

- GDNs' ability to convey gas;
- GDNs' ability to restore supplies;
- The level of planned interruptions; and
- Operational guidelines.

Mains replacement programmes

5.3. Since the early 1970s, GDNs have undertaken a series of asset replacement programmes, which have contributed to a significant decrease in the number of incidents which have resulted in people being harmed or damage to property⁶.

5.4. In 2001, following discussions with Ofgem and the GDNs, the HSE adopted a more precautionary approach to the replacement of iron mains located within 30 metres of property. The HSE considered that it was realistic and practicable to speed up the annual rate of mains replacement over the next 5 years so as to be in a position to complete replacement of all remaining 'at risk' iron mains within 30 years⁷.

⁶ For further details on previous mains replacement programmes, see Ofgem publication 71/04 '2002/03 Gas Distribution Quality of Supply Report – March 2004'

⁷ The Health And Safety Executive's Enforcement Policy For The Replacement Of Iron Gas Mains

5.5. Table 5.1 shows how many kilometres of mains have been decommissioned and installed since 2002-03. A breakdown of this data for each GDN is included in Appendix 1.

Table 5.1 - Mains replacement programme activity 2006-07 (all GDNs, km)

Total Mains Decommissioned						
Internal Diameter	2002-03	2003-04	2004-05	2005-06	2006-07	Total
2-3"	351	486	561	619	552	2,569
4-5"	679	1,417	1,484	1,990	2,140	7,710
6-7"	475	439	519	474	554	2,461
8-9"	425	209	215	163	196	1,208
10-12"	452	162	176	112	151	1,053
>12"	255	125	187	170	190	927
Total	2,637	2,838	3,142	3,528	3,783	15,928

Total Replacement Mains Installed						
External Diameter	2002-03	2003-04	2004-05	2005-06	2006-07	Total
</=75mm	461	893	1,091	1,509	1,519	3,592
>75-125mm	593	973	1,017	1,284	1,426	2,073
>125-180mm	404	251	290	249	329	646
>180-250mm	347	97	137	92	110	317
>250-355mm	339	107	122	123	133	207
>355mm	151	48	83	38	75	75
Total	2,295	2,369	2,740	3,295	3,592	24,869

5.6. The table shows that the amount of mains replacement work carried out by GDNs has been increasing over the period.

5.7. During the 2002 price control review Ofgem established a mechanism to create incentives GDNs to meet the HSE's mains replacement targets efficiently. We reviewed the mechanism as part of the recent GDPCR, and concluded that it has worked well to provide GDNs with flexibility over the diameter mix of mains replaced while keeping unit costs down. However we saw fit to introduce some refinements to the mechanism which are described in the GDPCR final proposals document.⁸

⁸ Ofgem, Gas Distribution Price Control Review Final Proposals, (Ref. 285/07) December 2007.

6. Environmental issues

Chapter Summary

This chapter summarises the environmental performance for all the GDNs over the 2006-07 period.

Introduction

6.1. Under the RIGs, GDNs are required to submit an annual environmental report to Ofgem explaining levels of carbon dioxide ("CO₂"), oxides of nitrogen ("NO_x") and emissions of methane ("CH₄"). They are also required to report any loss of gas containment incidents reported under Control of Major Accident Hazard Regulations. Carbon dioxide and NO_x are emitted from compressor stations on the high pressure transmission network. As a result of the separation of gas distribution and transmission networks, there are no compressor stations on the distribution networks, and therefore no emissions are reported.

Environmental reporting

6.2. One of the most important direct environmental impacts of operating gas distribution networks is the emission of greenhouse gases in the form of methane lost from pipelines. Natural gas consists wholly, or mainly, of methane, which has 21 times the Global Warming Potential⁹ of carbon dioxide.

6.3. Tables 6.1 and 6.2 show the levels of methane emitted from both medium and low pressure pipe networks from 2002-03 to 2006-07.

⁹ To compare the relative climate effects of greenhouse gases the relative combustion of a gas is compared with the effect of a unit emission of carbon dioxide integrated over a fixed period of time (100 years). This factor is known as the global warming potential ("GWP"). This method has been derived by the United Nations Framework Convention on Climate Change ("UNFCCC").

Table 6.1 - Methane emissions (tonnes) from medium pressure pipe networks due to leakage

		2002-03	2003-04	2004-05	2005-06	2006-07
NGG	East of England	3,547	3,529	3,458	3,383	3,392
	London	1,658	1,656	1,631	1,586	1,600
	North West	1,310	1,301	1,279	1,302	1,282
	West Midlands	1,571	1,545	1,479	1,501	1,482
NGN	Northern	1,522	1,518	1,496	1,321	1,492
SGN	Scotland	1,279	1,241	1,206	1,219	1,168
	Southern	2,613	2,999	2,908	2,826	2,681
WWU	Wales & West	2,508	2,094	2,047	2,005	1,769
TOTAL		16,009	15,882	15,504	15,142	14,865

Table 6.2 - Methane emissions (tonnes) from low pressure pipe networks due to leakage

		2002-03	2003-04	2004-05	2005-06	2006-07
NGG	East of England	28,887	27,622	28,186	27,327	26,657
	London	18,382	16,429	18,111	16,642	16,366
	North West	23,129	21,876	22,507	23,871	23,202
	West Midlands	18,651	17,067	18,238	17,700	18,299
NGN	Northern	21,595	20,282	21,404	17,645	20,890
SGN	Scotland	13,402	11,689	12,026	12,086	11,086
	Southern	37,061	34,846	35,857	35,012	34,243
WWU	Wales & West	22,787	22,300	23,218	22,320	19,570
TOTAL		183,895	172,111	179,547	172,604	170,314

6.4. The tables above show that methane emissions on both the medium and low pressure networks show a downwards trend over the course of the period. The main reason for this is the mains replacement programme, where older metal pipes more susceptible to leakage are replaced with polyethylene pipes. Some marginal increases have occurred in some networks due to the composition of natural gas and higher operating pressures which more than offset the gains arising from mains replacement.

6.5. There were no incidents involving the release of gas reported under Control of Major Accident Hazard Regulations 1999 during 2006-07.

7. Changes to the quality of service arrangements

Chapter Summary

This chapter summarises the changes to the gas distribution quality of service arrangements that are being made as part of the recent price control review.

7.1. During GDPCR Ofgem has reviewed the quality of service arrangements. Our process has included considering responses to consultation documents, commissioning a programme of consumer research,¹⁰ establishing a quality of service working group and publishing draft and final impact assessments.

7.2. Our final proposals for the quality of service arrangements incorporate a number of important changes to the existing regime. In particular, we have proposed:

- removing the overall standards of performance and migrating a number of the obligations to other parts of the regime;
- converting the overall standards relating to telephone services and emergency response times into licence conditions;
- introducing new requirements for GDNs to undertake quarterly consumer satisfaction surveys in respect of connections and gas emergencies;
- putting in place arrangements that will allow us to gather additional information from GDNs on the accuracy of pipeline records;
- introducing guaranteed standards of performance for responding to consumer complaints and notifying consumers of planned interruptions;
- tightening the guaranteed standards of performance for reinstatement of consumers' premises to 5 days; and
- revising the guaranteed standard of performance for supply restoration to include smaller non-domestic consumers and compensation for third-party damage and water ingress incidents.

7.3. These reforms are intended to rationalise and update the outputs and standards of performance arrangements and improve the way in which GDNs' performance is measured. The new quality of service regime is described in Chapter 5 of the GDPCR final proposals document.¹¹

7.4. The existing quality of service regime, and our rationale for changing it, is discussed in earlier consultation documents including the initial proposals document¹² and the initial licence drafting consultation.¹³ Some of the proposed changes affect the guaranteed standards of performance (GSOPs) which are set out in the Gas

¹⁰ Consumer Research Final Report (ref 127/07).

¹¹ Ofgem, Gas Distribution Price Control Review Final Proposals, (Ref. 285/07) December 2007.

¹² Ofgem, Gas Distribution Price Control Review Initial Proposals Document Ref 125/07 29 May 2007.

¹³ Ofgem, GDPCR Initial Licence Drafting Consultation Ref 221/07, 10 September 2007.

(Standards of Performance) Regulations 2005. We recently issued an open letter which consults on the proposed amendments to the regulations.¹⁴

7.5. The change to the quality of service arrangements is expected to come into effect on 1 April 2008, which means that they will be reflected in the 2008-09 Gas Distribution Quality of Service Report to be published in 2009.

¹⁴ Ofgem, Open letter on Ofgem's proposals to implement revised standards of performance arrangements for gas transporters, (Ref 279/07), 23 November 2007.

Appendices

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Appendix 1 - Mains replacement activity by GDN

The following tables provide a summary of how many kilometres of mains have been decommissioned and installed for each GDN each year since 2002-03.

2002-03									
	NGG				NGN	SGN		WWU	
Mains Decommissioned	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
2-3"	34	18	88	13	60	91	16	29	351
4-5"	136	90	75	44	103	54	100	77	679
6-7"	80	48	35	72	65	37	74	65	475
8-9"	57	26	47	57	67	35	79	57	425
10-12"	64	19	45	83	66	36	79	58	452
>12"	50	25	46	39	41	13	25	17	255
	NGG				NGN	SGN		WWU	
Replacement Mains Installed	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
</=75mm	93	29	82	18	91	61	38	49	461
>75-125mm	92	103	80	57	85	50	84	43	593
>125-180mm	58	27	44	59	62	30	67	58	404
>180-250mm	42	13	29	45	66	31	60	61	347
>250-355mm	47	15	41	77	59	15	36	50	339
>355mm	17	19	35	27	26	8	11	8	151

2003-04									
	NGG				NGN	SGN		WWU	
Mains Decommissioned	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
2-3"	54	7	143	23	92	82	40	46	486
4-5"	325	131	113	169	215	81	220	164	1,417
6-7"	82	49	33	54	48	44	79	51	439
8-9"	38	25	16	24	22	24	37	22	209
10-12"	25	21	23	17	15	13	34	14	162
>12"	30	16	20	6	23	6	13	11	125
	NGG				NGN	SGN		WWU	
Replacement Mains Installed	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
</=75mm	168	30	144	69	154	66	122	139	893
>75-125mm	199	131	91	101	149	67	160	76	973
>125-180mm	45	28	24	22	24	28	44	35	251
>180-250mm	14	11	10	12	11	12	18	9	97
>250-355mm	19	14	9	7	19	11	20	7	107
>355mm	7	7	12	3	7	3	4	5	48

2004-05									
	NGG				NGN	SGN		WWU	
Mains Decommissioned	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
2-3"	54	8	161	32	125	70	48	63	561
4-5"	334	119	149	150	218	92	247	176	1,484
6-7"	96	50	51	55	72	62	76	58	519
8-9"	45	19	20	28	24	23	34	22	215
10-12"	38	19	20	22	17	12	28	20	176
>12"	44	9	19	31	23	10	35	15	187
	NGG				NGN	SGN		WWU	
Replacement Mains Installed	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
</=75mm	230	18	161	100	181	81	139	180	1,091
>75-125mm	200	137	142	75	158	66	164	76	1,017
>125-180mm	50	24	39	28	36	33	47	35	290
>180-250mm	28	15	17	17	13	12	22	13	137
>250-355mm	32	9	15	20	13	9	9	17	122
>355mm	15	3	11	14	8	5	25	3	83

2005-06									
	NGG				NGN	SGN		WWU	
Mains Decommissioned	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
2-3"	48	4	164	116	109	84	31	64	619
4-5"	523	134	228	158	306	122	308	211	1,990
6-7"	87	52	39	33	59	55	79	70	474
8-9"	24	15	17	11	21	24	33	18	163
10-12"	17	11	14	10	11	13	23	14	112
>12"	28	6	25	13	18	12	53	16	170
	NGG				NGN	SGN		WWU	
Replacement Mains Installed	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
</=75mm	322	41	205	266	226	96	131	222	1,509
>75-125mm	290	122	192	72	191	108	226	84	1,284
>125-180mm	40	24	32	17	31	32	45	29	249
>180-250mm	13	7	10	8	9	10	22	13	92
>250-355mm	18	4	12	11	15	10	40	12	123
>355mm	4	3	9	0	4	6	11	0	38

2006-07									
	NGG				NGN	SGN		WWU	
Mains decommissioned	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
2-3"	58	8	149	52	91	89	34	71	552
4-5"	479	113	237	227	373	140	342	229	2140
6-7"	123	51	44	56	65	55	92	68	554
8-9"	47	21	25	17	14	25	27	20	196
10-12"	32	15	26	10	12	13	25	18	151
>12"	28	12	50	41	6	8	40	5	190

	NGG				NGN	SGN		WWU	
Replacement mains installed	East of England	London	North West	West Midlands	Northern	Scotland	Southern	Wales & West	TOTAL
</=75mm	249	22	210	206	265	125	188	254	1519
>75-125mm	367	121	193	117	217	104	218	90	1426
>125-180mm	79	49	41	20	24	32	59	26	329
>180-250mm	20	3	20	11	4	14	23	16	110
>250-355mm	26	6	33	17	4	12	30	4	133
>355mm	7	9	22	7	0	8	20	1	75

Appendix 2 – The Authority's Powers and Duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority ("the Authority"), the regulator of the gas and electricity industries in Great Britain. This Appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute, principally the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation. References to the Gas Act and the Electricity Act in this Appendix are to Part 1 of each of those Acts.¹⁵

1.3. Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This Appendix must be read accordingly¹⁶.

1.4. The Authority's principal objective when carrying out certain of its functions under each of the Gas Act and the Electricity Act is to protect the interests of consumers, present and future, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas conveyed through pipes, and the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

1.5. The Authority must when carrying out those functions have regard to:

- The need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- The need to secure that all reasonable demands for electricity are met;
- The need to secure that licence holders are able to finance the activities which are the subject of obligations on them¹⁷; and
- The interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.¹⁸

1.6. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

¹⁵ entitled "Gas Supply" and "Electricity Supply" respectively.

¹⁶ However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.

¹⁷ under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Act in the case of Electricity Act functions.

¹⁸ The Authority may have regard to other descriptions of consumers.

- Promote efficiency and economy on the part of those licensed¹⁹ under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
- Protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity;
- Contribute to the achievement of sustainable development; and
- Secure a diverse and viable long-term energy supply.

1.7. In carrying out the functions referred to, the Authority must also have regard, to:

- The effect on the environment of activities connected with the conveyance of gas through pipes or with the generation, transmission, distribution or supply of electricity;
- The principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- Certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.8. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation²⁰ and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

¹⁹ or persons authorised by exemptions to carry on any activity.

²⁰ Council Regulation (EC) 1/2003

Appendix 3 - Glossary

G

Gas Distribution Network (GDN)

GDNs transport gas from the NTS to final consumers and to connected system exit points. There are currently eight GDNs in Great Britain which comprise twelve LDZs.

Gas Distribution Price Control Review (GDPCR)

The review of the price control applying to gas distribution networks. The review resets the control for the period commencing 1 April 2008.

Gas Transporter (GT)

The holder of a Gas Transporter's licence in accordance with the provisions the Gas Act 1986.

Guaranteed Standards of Performance (GSOP)

Guaranteed standards of performance set service levels that must be met in each individual case. If a gas transporter fails to provide the level of service required, it must make a payment to the consumer affected, subject to certain exemptions.

H

Health and Safety Executive (HSE)

The Health and Safety Commission is responsible for health and safety regulation in Great Britain. The Health and Safety Executive and local government are the enforcing authorities who work in support of the Commission.

I

Independent Gas Transporter (IGT)

IGTs are GT licence holders that own and operate small local gas networks and levy distribution charges on shippers.

L

Local Transmission System (LTS)

The pipeline system operating at >7barg that transports gas from NTS offtakes to distribution systems. Some large users may take their gas direct from the LTS.

N**National Grid Gas (NGG)**

The GT licence holder for the North West, West Midlands, East England and London GDNs. NGG also hold the GT licence for the gas national transmission system (NTS). Prior to 10 October 2005, NGG was known as Transco.

National Transmission System (NTS)

National Grid's high pressure gas transmission system. It consists of more than 6,400 km of pipe carrying gas at pressures of up to 85 bar (85 times normal atmospheric pressure).

Northern Gas Networks (NGN)

The GT licence holder for North England GDN.

O**Overall Standard of Performance (OSOP)**

Overall standards of performance set minimum average levels of performance in areas where it is not necessarily appropriate to put in place guarantees for individual consumers. These are determined separately for each gas transporter by the Authority.

R**Regulatory Instructions and Guidance (RIG)**

Provides a framework for the collection and provision of accurate and consistent information from the GDNs.

S**Scotia Gas Networks (SGN)**

The GT licence holder for Southern GDN and Scotland GDN.

W**Wales & West Utilities (WWU)**

The GT licence holder for Wales & West GDN.

Water ingress

An incident where water enters gas pipes resulting in a loss of gas supply.

Appendix 4 - Feedback Questionnaire

1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

- Does the report adequately reflect your views? If not, why not?
- Does the report offer a clear explanation as to why not all the views offered had been taken forward?
- Did the report offer a clear explanation and justification for the decision? If not, how could this information have been better presented?
- Do you have any comments about the overall tone and content of the report?
- Was the report easy to read and understand, could it have been better written?
- Please add any further comments?

1.2. Please send your comments to:

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