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Executive Summary

Introduction

At present the gas metering and meter reading services provided by Transco are covered by Transco's transportation price control.

This document sets out initial proposals for disaggregating the transportation price control by creating separate price controls for gas metering and meter reading. This document also sets out proposals for the full separation of Transco's metering and meter reading businesses from its core transportation business to facilitate competition in these services.

Price Control

Ofgas is proposing to separate the current Transco price control into separate controls to cover transportation, metering and meter reading activities. Each of these price controls would cover the period from 1 April 1999 to 31 March 2002.

As far as possible, Ofgas does not intend to revisit the principles or assumptions used in calculating Transco's allowed revenues under the present control. Revenues will be split between the businesses, but their present value will not change in total.

Ofgas proposes an RPI-X structure for the transportation, metering and daily meter reading parts of the price control. We are seeking views on whether non-daily meter reading costs should be subject to RPI-X or a pass through.

Ofgas has not revisited the principles or assumptions underlying Transco's allowed revenues in the present price control. Ofgas proposes to split Transco's allowed revenue between the three businesses by breaking down the total allowed revenue into its forward looking cost components, and then splitting each cost component between the three businesses according to the degree to which it is attributable to each of the separate businesses, ie. the degree to which that cost could be avoided due to cessation or reduction in the scale of the business. Ofgas has adopted two methodologies which use different cost components to make up allowed revenue. Method 1 has the following cost components:

- annual operating costs;
- annual capital repayment (or depreciation); and
- return on regulatory value.

Method 2 has the following cost components:

- annual operating costs; and
- annual capital expenditure.

The table below compares the split of revenues under both approaches.

Table 1 - Ofgas' Split of Allowed Revenue

Revenues **£ million, 1996 prices**		**1999/2000** **(£ million)**	**2000/2001** **(£ million)**	**2001/2002** **(£ million)**
Method 1	Transportation	2,136	2,289	2,260
	Metering	291	295	299
	Meter Reading	39	39	39
Method 2	Transportation	2,284	2,257	2,228
	Metering	323	327	332
	Meter Reading	39	39	39

Whilst method 1 follows the MMC's approach, Ofgas believes that method two has more economic validity because it is based on forward looking cash outlays.

Ofgas proposes to maintain the structure of the current price control for the unbundled transportation control. This will mean that 50% of revenue is fixed and 50% is determined by the volume transported. Ofgas proposes price controls for which revenue is allowed in proportion to the number of meters Transco provides and the number of meter reads carried out for the metering and meter reading controls respectively.

Ofgas accepts that Transco should not bear all the risk of the uncertainties in forecasting the demand for services under each of the price controls and therefore, proposes a K factor for each of the price controls. Capital expenditure monitoring will be maintained for each of the separate price controls with a view to correcting for any underspend not due to unanticipated efficiency gains, at the time of setting the next price control. Ofgas also proposes that similar licence conditions to Standard Conditions 3 and 4 of the PGT licence should apply to Transco's metering and meter reading pricing methodologies.

Separation

Ofgas is proposing the full physical, financial and informational separation of Transco's metering and meter reading businesses from its core transportation business. Ofgas proposes that implementation of full separation will take place between 1 April 1999 and the next price control review (April 2002).

In developing its proposals for the separation of Transco into three separate business units, Ofgas has drawn on the experience of the separation in 1995 of British Gas plc's supply business from the remainder of British Gas plc. Hence the scope of separation will include:

- appointment of a compliance officer;
- separate accounts for each of the businesses;
- separate management structures for each of the businesses;
- separate staff and resourcing for each of the businesses;
- separate information systems with Chinese Walls; and
- minimum common services among each of the businesses.

New Processes

Ofgas proposes that a number of new operational processes will need to be developed shortly, to be introduced on 1 April 1999, eg. trading arrangements for meters and daily read equipment, recording of the ownership of meters/dataloggers, access to meter read history etc. Ofgas proposes to develop these processes by establishing industry workgroups. It is important to note that as Transco is introducing a rebate for meter provision, installation and maintenance of meters on 1 April 1999, many of these proposals will need to be developed, regardless of Ofgas' proposals on separation and splitting the price controls.

To support competition in the longer term, Ofgas believes that two fundamental changes will be required; removal of metering and meter reading provisions from

Transco's network code and modifications to information systems to support interactions between the industry and Transco separated businesses. Ofgas is concerned to ensure that any developments to contractual arrangements and information systems should be co-ordinated with developments driven by other industry demands, where possible.

Alternative Approach

Ofgas believes that consideration should also be given to the possibility of an auction of Transco's metering assets. Under an auction, Transco would not inherit a 100% share of the national market for meter provision. Such an approach could in itself be more conducive to the development of effective competition.

1. Introduction

This document sets out Ofgas' initial proposals for developing conditions which will help to secure effective competition in gas metering and gas meter reading services for the benefit of consumers.

At present the gas metering and meter reading services provided by Transco are covered by Transco's transportation price control. This document sets out initial proposals for disaggregating the transportation price control by creating separate price controls for gas metering and meter reading, whilst maintaining the same overall allowed revenue of the present 'bundled' control. The document also sets out proposals for the full separation of Transco's metering and meter reading businesses from its core transportation business to better facilitate competition in these services.

This document is divided into five parts. Part I gives the background to Ofgas' proposals, and parts II, III and IV detail Ofgas' proposals. Part V discusses an alternative approach to securing competition in meter provision.

The content of the chapters is as follows. Chapter 2 sets out Ofgas' objective for metering and meter reading. Chapter 3 describes the present metering and meter reading services and discusses the barriers to entry for potential competitors to Transco in the provision of these services. Chapter 4 summarises Ofgas' proposals. Chapter 5 explains the activities and services covered by the proposed three separate price controls. Chapter 6 explains how Transco's current standards of service will be allocated to the separate price controls. Chapter 7 proposes the duration and form of the separate price controls. Chapter 8 discusses two approaches for allocating allowed revenue to each of the separate price controls. Chapter 9 proposes structures for the price controls. Chapter 10 details the proposal for separation of Transco into three businesses. Chapter 11 examines the new processes required to allow competition to develop. Chapter 12 describes an alternative approach to securing competition in meter provision.

After considering the views of respondents to the initial proposals set out in this document, Ofgas expects to make its final proposals in February 1999. If BG plc (BG) rejects the final proposals, Ofgas would expect to refer the matter to the Monopolies and Mergers Commission (MMC).

Ofgas would be pleased to receive the views of all interested parties including suppliers, shippers, consumers and their representatives and potential metering and meter reading service providers.

If you wish to express a view on the issues raised in this document, or any related matter, it would be helpful to receive your reply by 1 December 1998. Responses should be addressed to :

Dr Eileen Marshall CBE
Deputy Director General
Office of Gas Supply
Stockley House
130 Wilton Road
London SW1V 1LQ.

It is open to respondents to mark all or part of their responses as confidential. However, we would prefer, as far as possible, that responses were provided in a form that can be placed in Ofgas' library. If you have any queries concerning this document, Mr Simon Doggett on 0171 932 1657 would be pleased to help.

PART I - BACKGROUND

2. Ofgas' Statutory Duty

The Director General of Gas Supply (DGGS) has a statutory duty to secure effective competition in metering and meter reading. This duty is supported by a number of provisions in the current regulatory framework and recent developments in the industry. These are set out in this chapter.

2.1 The Regulatory Framework

a) The Gas Act 1986

The general duties of the DGGS are set out in section 4 and 4A of the Gas Act. The DGGS must exercise his/her functions in the manner he/she considers is best calculated to secure that, so far as it is economic to meet them, all reasonable demands for gas are met; that licence holders are able to finance their authorised or licensed activities; and that there is effective competition in the shipping and supplying of gas.

Subject to these primary duties, the DGGS also has a duty to exercise his/her functions in the manner he/she considers is best calculated to protect the interests of consumers of gas conveyed through pipes; to promote efficiency and economy by licensees; and to secure effective competition in the carrying on of activities which are ancillary to shipping and supply (including metering and meter reading). In addition, he/she has certain duties relating to safety.

b) The Public Gas Transporters' Licence

Standard Conditions 3 and 4 of the Public Gas Transporters' (PGT) Licence require that PGTs' charging methodology proposals should be based on a methodology which aims to meet a number of objectives, namely:

- that compliance with the methodology results in charges which reflect the costs incurred by the licensee in its transportation business;
- that the methodology properly takes account of developments in the transportation business; and

- that compliance with the methodology facilitates effective competition between gas shippers and between gas suppliers.

In addition, changes to PGT's charging methodology are subject to veto by the DGGS where they cover "transportation arrangements".[1]

Transco has argued that metering and meter reading are not transportation arrangements and are therefore not covered by these conditions. However, Transco has agreed, in the interim, that proposed changes to its metering and meter reading charging methodology will be treated as if they were covered by Conditions 3 and 4.

c) The Gas Suppliers' Licence

Two Standard Conditions in the Gas Suppliers' licence are particularly relevant to the DGGS' statutory duty to secure competition in metering and meter reading.

Standard Condition 22 requires the supplier to make metering arrangements on behalf of its domestic customer, unless the customer has made its own arrangements. The licence condition sets out a number of ways in which this may be done:

- arranging with the transporter for a meter owned by it to remain in place;

- arranging to purchase the installed meter from the meter owner;

- arranging for a meter to be installed where there is no meter in place; or

- making other arrangements as agreed between the supplier and customer.

Ofgas envisages that other arrangements could take the form of suppliers leasing meters from a third party.

At present, suppliers using Transco's network are only able fully to exercise one of these provisions, ie. arranging with Transco to leave its meter in place. The licence clearly envisaged suppliers being free to make a number of alternative arrangements.

Standard Condition 8 of the suppliers' licence defines a date referred to as the "metering liberalisation date" (to be directed by the DGGS but no earlier than 1 April 1999). After this date suppliers will be required to accept metering arrangements made by domestic customers. This includes meter provision, meter reading and meter inspections. Standard condition 8 also makes provision for Ofgas to designate a document referred to as "the metering code" which sets out requirements designed to facilitate the accurate reading of meters and the transmission of meter reading data in an appropriate form.

Standard Condition 8 thus allows customers to make their own metering arrangements without the risk of being refused a supply, and therefore facilitates competition in metering and meter reading services.

d) The Fair Trading Act 1973 and The Competition Act 1980

In addition to his/her duties under the Gas Act, the DGGS has a number of functions under the Fair Trading Act 1973 and the Competition Act 1980 (which are exercised concurrently with the Director General of Fair Trading). These functions relate to monopoly situations and to "courses of conduct which have or are intended to have or are likely to have the effect of restricting, distorting or preventing competition" in respect of activities which require licences under the Gas Act or activities ancillary to such activities (including metering and meter reading).

2.2 Other Developments which Further Support the DGGS' Duty in Relation to Gas Metering

The DGGS' duty to secure effective competition in metering and meter reading is supported by a number of other developments.

a) 1997 MMC Review

The Monopolies and Mergers Commission (MMC) reported in its review of Transco's transportation and storage services, in May 1997,[2] that:

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[1] As defined in Standard Condition 1 of the PGTs' licence conditions.
[2] 'A report under the Gas Act 1986 on the restriction of prices for gas transportation and storage services', Monopolies and Mergers Commission, May 1997.

"We share the concern of BG (and of some shippers) that the unbundling of further activities such as meter work within the next two years could prove a distraction at a time when the priority is to increase domestic competition and we believe the costs and benefits, as well as the timescale, of unbundling such activities should be carefully considered before taking them forward."

Ofgas has carefully considered the view of the MMC regarding the timing of metering and meter reading unbundling, and the effect that this may have on the development of domestic competition. Domestic competition was fully introduced in May 1997, and Ofgas believes that the processes have now been fully tried and tested. This document presents Ofgas' proposals for the unbundling of metering and meter reading, which we propose to implement from April 1999.

b) The Competition Bill

The Competition Bill, which is currently before Parliament, will create functions and powers for the DGGS (again, to be exercised concurrently with the Director General of Fair Trading) which will strengthen his/her powers to act against anti-competitive behaviour and will bring UK legislation into line with European competition law. The Government proposes two prohibitions. The first (contained in Chapter 1) will be in respect of agreements or decisions which have the effect of preventing, restricting, or distorting competition. The second (contained in Chapter 2) is in respect of the abuse of a dominant position. These prohibitions are closely based on Articles 85 and 86 of the Treaty of Rome, which provides the legislative basis of the European Union. The Bill provides for the strengthening of the regulators' investigative powers in relation to competition and monopoly investigations.

c) The Green Paper

The Department of Trade and Industry (DTI) gave continued support to securing competition in its recently published response to the Green Paper on utility regulation.[3] In its response it stated that "in principle, the introduction of competition in the provision of meters and meter reading services should help to ensure cheaper and better services".

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[3] 'A Fair Deal for Consumers, Modernising the Framework for Utility Regulation', Department of Trade and Industry, March 1998.

d) The Future of Gas and Electricity Regulation

More recently, the DTI has published a Consultation Document on the future of gas and electricity regulation,[4] in which it expresses support for competition in metering and meter reading. It states that:

"The Government supports the efforts of the gas and electricity regulators to introduce competition in metering services. The introduction of competition should serve a number of purposes. It should remove potential obstacles to the development of competition in gas and electricity supply. It should open the way for cost reduction and innovation in metering services themselves and it should stimulate the introduction of new and innovative metering technology, where commercially viable."[5]

It continues:

"Arrangements for metering services (meter provision - the provision, installation, and maintenance of meters and meter reading - the arrangements for collecting data from meters and, in electricity, the additional function of data aggregation for electricity trading) will be an important factor in the further development of competition in the gas and electricity markets."[6]

e) Competition in Metering and Meter Reading in the Electricity Market

The Office of Electricity Regulation (OFFER) published a consultation document in May 1998,[7] which amongst other things, set out a number of proposals for the further development of metering services. The paper confirmed the need to introduce competition in all metering service functions (which includes maintenance, fixing and changing) by April 2000. OFFER has subsequently published a second consultation paper on this issue,[8] which contains:

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[4] 'A Fair Deal for Consumers. Modernising the Framework for Utility Regulation. Public Consultation Paper on the Future of Gas and Electricity Regulation', Department of Trade and Industry, October 1998.
[5] page 24.
[6] page 25.
[7] 'Separation of Businesses. A Consultation Paper' OFFER, May 1998.
[8] "Separation of Businesses. Second Consultation Paper", October 1998.

- respondents' views (which were largely in support of the proposals);

- OFFER's request for further views on the nature of future regulation of electricity metering and on the price control; and

- OFFER's proposed implementation plan, which includes a proposal to set up industry workgroups promptly to discuss issues such as the trading of meters, new industry agreements, operational processes and new systems requirements.

3. Analysis of Metering and Meter Reading Services

For the purposes of this document, Ofgas has divided the metering and meter reading services provided by Transco into five categories: meter provision, meter work, daily meter reading, non-daily meter reading covering premises using less than 2,500 therms (73,200 kWh) per annum and non-daily meter reading covering Industrial & Commercial premises using more than 2,500 therms (73,200 kWh) per annum.

This chapter analyses each of these categories and indicates barriers to entry into the supply of each of these services.

3.1 Structure of Metering and Meter Reading Services

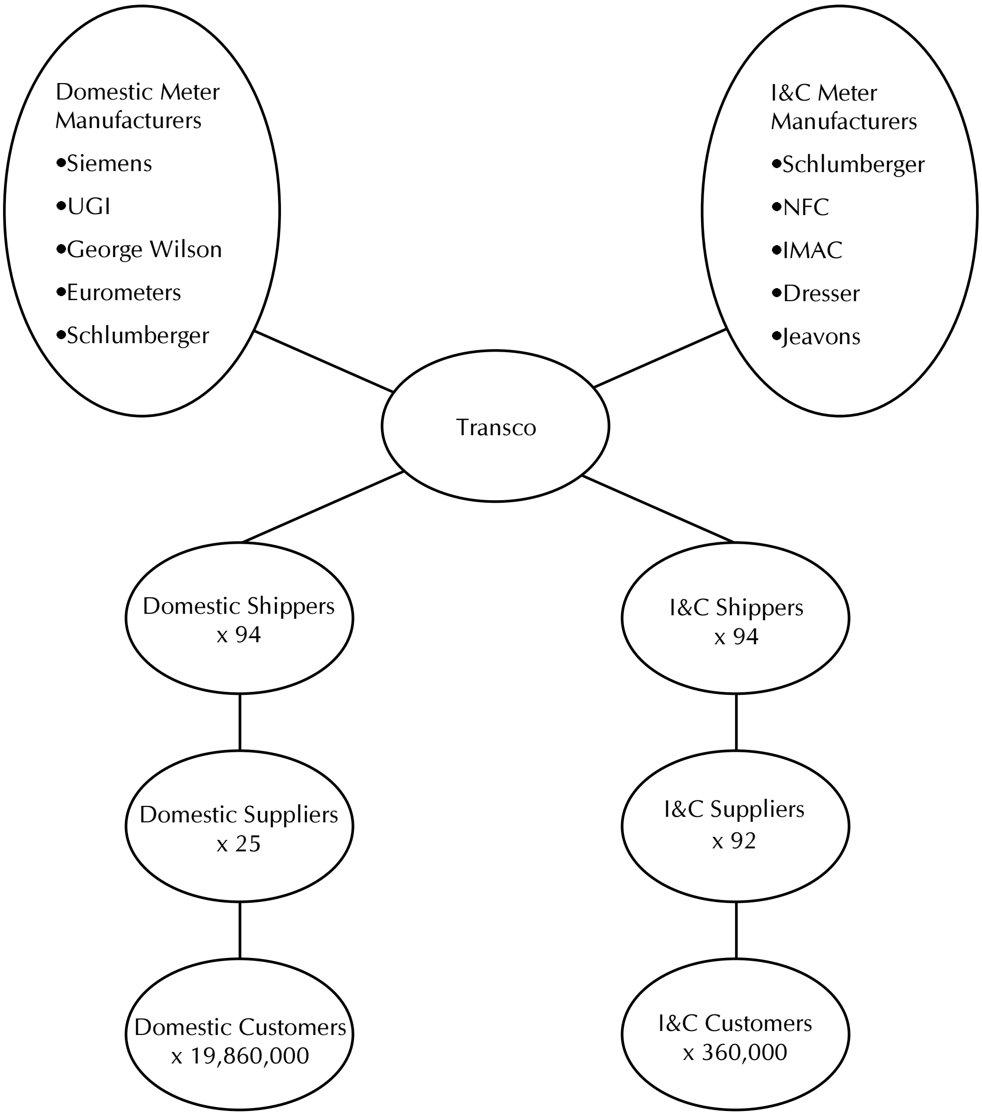
This section sets out the present structure for each category.

a) Meter Provision

Transco is currently the monopoly provider of meters in Great Britain (except for approximately 44,000 meters which are on, IPGT's networks). Transco owns 19.86 million domestic meters and 360,000 industrial and commercial (I&C) meters.[9] Transco provides meters on behalf of suppliers and customers through the shippers. It purchases domestic meters (including prepayment meters) from five meter manufacturers and I&C meters from five manufacturers (a total of nine manufacturers). Figure 1 illustrates the contractual relationships.

[9] Information provided by Transco as part of Ofgas' consideration of Transco's charging proposal, PC25.

Figure 1 - Meter Provision Relationships



Prior to 1 October 1998, suppliers were charged by Transco, through their shippers, for the provision, installation and maintenance of meters. This charge was bundled with Transco's transportation charge and therefore shippers could not avoid the metering element of the charge by providing their own meters.

Since 1 October 1998, the metering element of the charge has been identified separately at £10 per annum for the provision, installation and maintenance of domestic credit meters and an additional £10 per annum for prepayment meters. Charges for meters at sites consuming more than 2,500 therms (73,200 kWh) per annum are based on a function derived from the Supply Offtake Quantity.[10] Charges continue to be bundled with the transportation charge, thus providing no incentive for suppliers to seek alternative meter providers. However, from 1 April 1999, suppliers that provide, install and maintain their own meters will receive a rebate, through their shipper, equivalent to Transco's charge.

b) Meter Work

Transco is currently the monopoly supplier of the majority of meter work services, including, installation, maintenance and repositioning (involving work up to and including the Emergency Control Valve).[11] Suppliers have only recently been able to exercise their statutory rights under Schedule 2B of the Gas Act, to cut off supply by removal of the meter.

Transco provides meter work services to shippers on behalf of suppliers. In 1997 Transco installed 1.6 million (domestic and I&C) meters.[12] Transco uses its own service engineers and sub-contractors to provide these services. Figure 2 illustrates these relationships.

[10] This is the maximum daily offtake at a supply point.
[11] A valve (not a service valve) for shutting off the supply of gas in an emergency.
[12] Information provided to Ofgas by Transco in June 1998.

Figure 2 - Meter Work Relationships

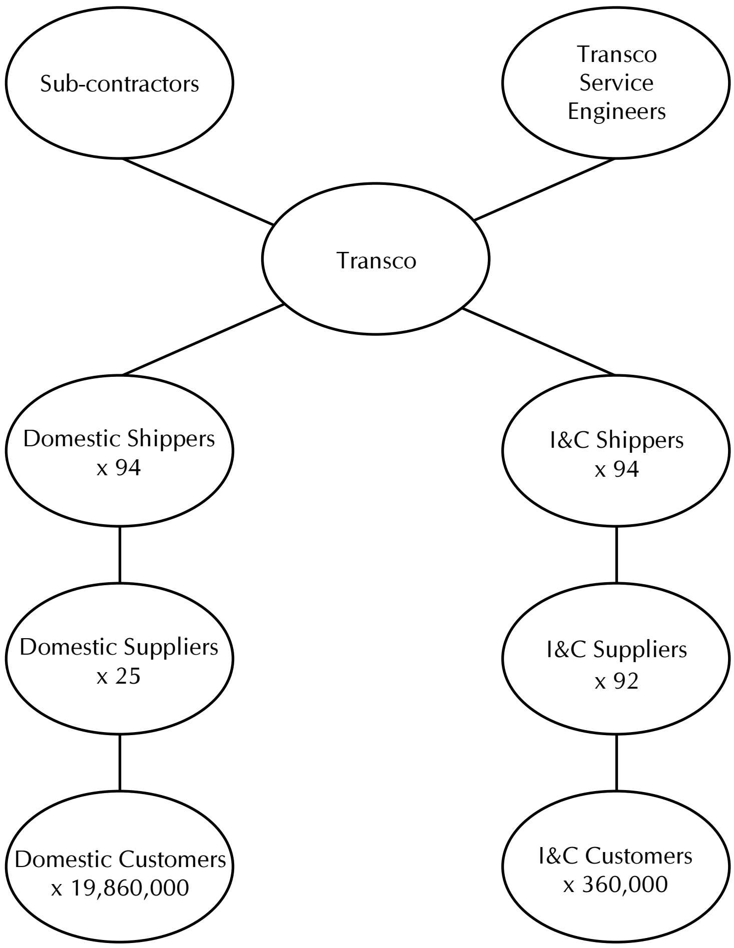


Table 2 shows the charges levied by Transco for a range of meter works. The charge for meter provision, installation and maintenance of meters is discussed in section 3.1(a).

Table 2 - Transco's Meter Work Charges[13]

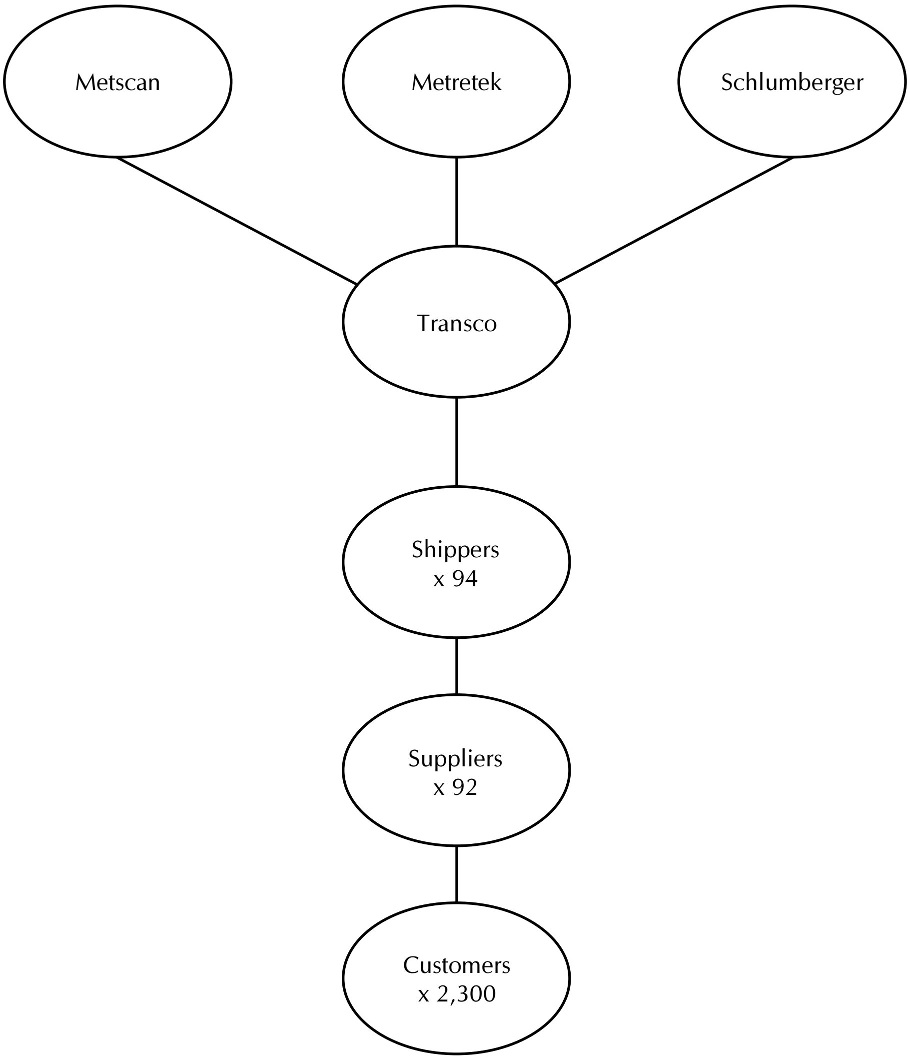
Meter work service	Charge (£)
Reposition meter	64.10
Remove or clamp a U6 or equivalent meter	35.25
Remove U16/U25/U40 meter	50.25
Damaged meter repairs	31.05 (plus materials costs)
Fit security collar to meter	24.45
Replace door on meter housing	46.17 (plus materials costs)

c) Daily Meter Reading

Transco is currently the monopoly supplier of meter reading services for Daily Metered (DM) sites, as classified under Transco's network code. Transco procures datalogging equipment (equipment connected to a meter which automatically records consumption and transmits readings to a central point) from three manufacturers and provides the meter reading service to shippers, on behalf of suppliers and their customers. Figure 3 illustrates the relationships.

[13] These charges are taken from the March 1998 'Transco Engineering Charges Statement'.

Figure 3 - Daily Meter Reading Relationships



Transco levies a single charge for the provision, installation and maintenance of dataloggers and the provision of a daily read service. The charge for this service is presently £444.46 per annum. Transco has not disaggregated this charge into separate charges for each different service.

DM sites are defined by Transco's network code (Section G) as sites where a supply point's Annual Quantity (AQ) is above two million therms per annum (58.6142 GWh); the supply point is interruptible; or where the supply point is a National Transmission System (NTS) supply point. However, DM reading equipment may also be installed at sites using less than two million therms (58.6142 GWh) per annum at a consumer's request via the shipper. These sites are treated as DM sites and charged as such. In total, there are approximately 2,300 DM sites.

There are a number of sites where daily meter reading equipment has historically been installed by Transco, but the supply point's is below two million therms (58.6142 GWh) per annum and the equipment was not requested by the customer. Transco does not guarantee provision of daily reads to these customers. Accordingly, these are treated, in gas balancing and charging terms, as non-daily read sites. There are approximately 23,800 non-daily of these sites. In addition, some suppliers/customers also install their own dataloggers.

d) Non-Daily Meter Reading (Domestic)

Transco currently provides a domestic cyclic non-daily meter reading service to suppliers, via shippers under a contract outside of the network code called the Incentive Based Contract.[14] Transco does not use its own staff to carry out the manual reading of the meters, but procures this service from four Meter Reading Agencies (MRAs). AccuRead[15] provides the readings in seven of Transco's local distribution zones (LDZs), Yorkshire Electricity and Energy Communication Services (ECS)[16] in two LDZs each, and Northern Metering Services Limited (NMSL)[17] in one LDZ. Special Condition 9C of Transco's PGT licence requires it to obtain this service on the most economically advantageous terms reasonably obtainable having regard to all the available sources of this service. Ofgas' review of Transco's purchasing of non-daily meter reading services in 1997/98 is discussed in Appendix 1.

Two shippers have chosen to purchase their domestic cyclic non-daily meter reading directly from MRAs and not through Transco. BGT purchases its reads directly from AccuRead and this contract accounts for 84% of domestic cyclic meter readings. Beacon purchases its domestic cyclic meter readings from two MRAs which accounts for around 1% of these readings.

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[14] This contract was introduced from 1 July 1998 and will end on 31 December 1998. Transco is currently negotiating a similar contract for a further six months. The present contract also applies to cyclic monthly and non-monthly reads, and opening reads for the above 73,200 kWh per annum market, and special, same-day rapid and next-day rapid reads at all sites.
[15] AccuRead is a joint venture between Group 4 which owns 51% of the company and BGT which owns 49%. It was formed from the British Gas meter reading operation.
[16] This is a wholly owned subsidiary of London Electricity.
[17] This is a wholly owned subsidiary of Northern Electric.

Transco remains the main provider of domestic non-daily meter reading services to BGT's competitors. It is important that Transco's charging practices do not distort the terms of competition faced by BGT and its competitors.

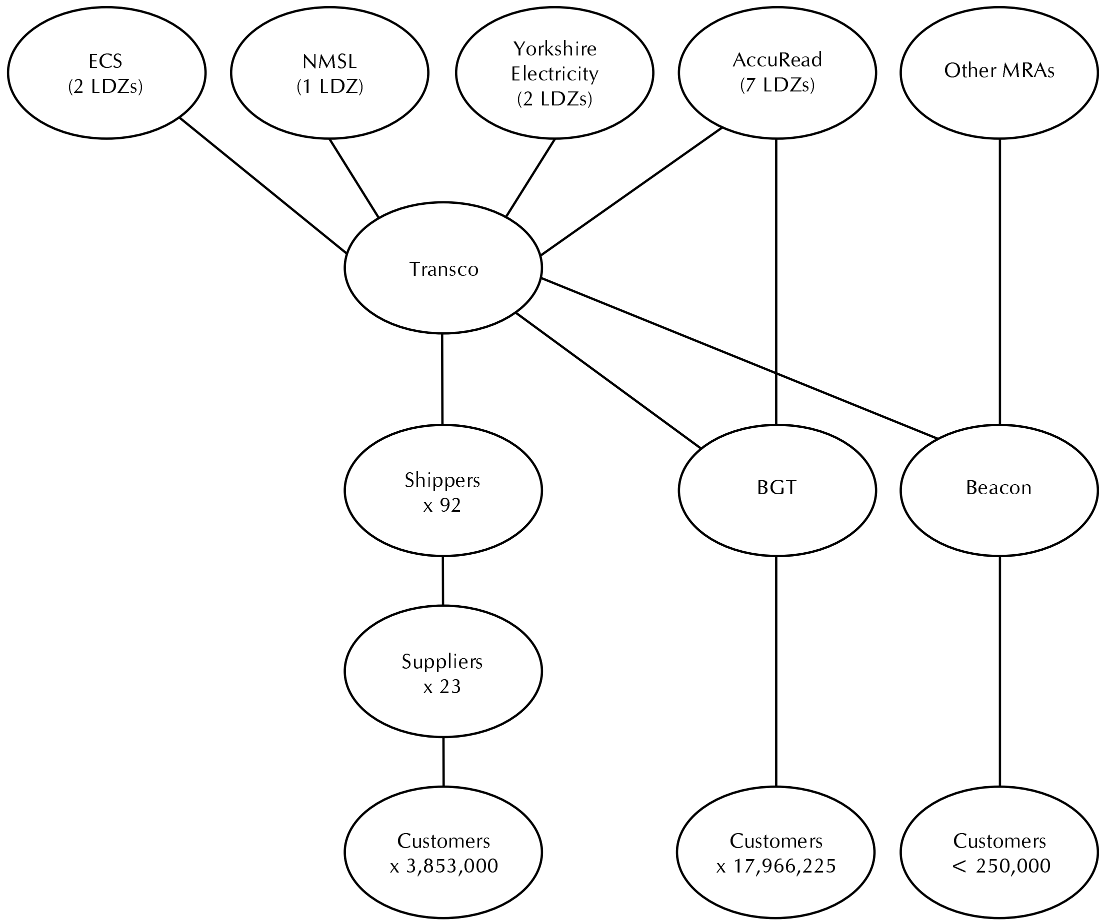
Transco does not offer a domestic opening meter read service. Shippers either provide these services themselves or purchase these services from MRAs.

Table 3 shows the charges that Transco levies for non-daily domestic and I&C meter reading services and figure 4 illustrates the industry relationships.

Table 3 - Transco's Non-Daily Meter Reading Charges

Read type	**Supply point charge (£)**	**Meter point charge (£)**	**Meter number cap**
Monthly	4.39	3.04	5
Non-monthly (I&C)	3.82	3.54	3
Non-monthly (domestic)	3.50		1
Opening (I&C)	5.00	4.34	3
Special	5.47	5.47	3
Same day rapid	11.38	11.38	3
Next day rapid	9.76	9.76	3

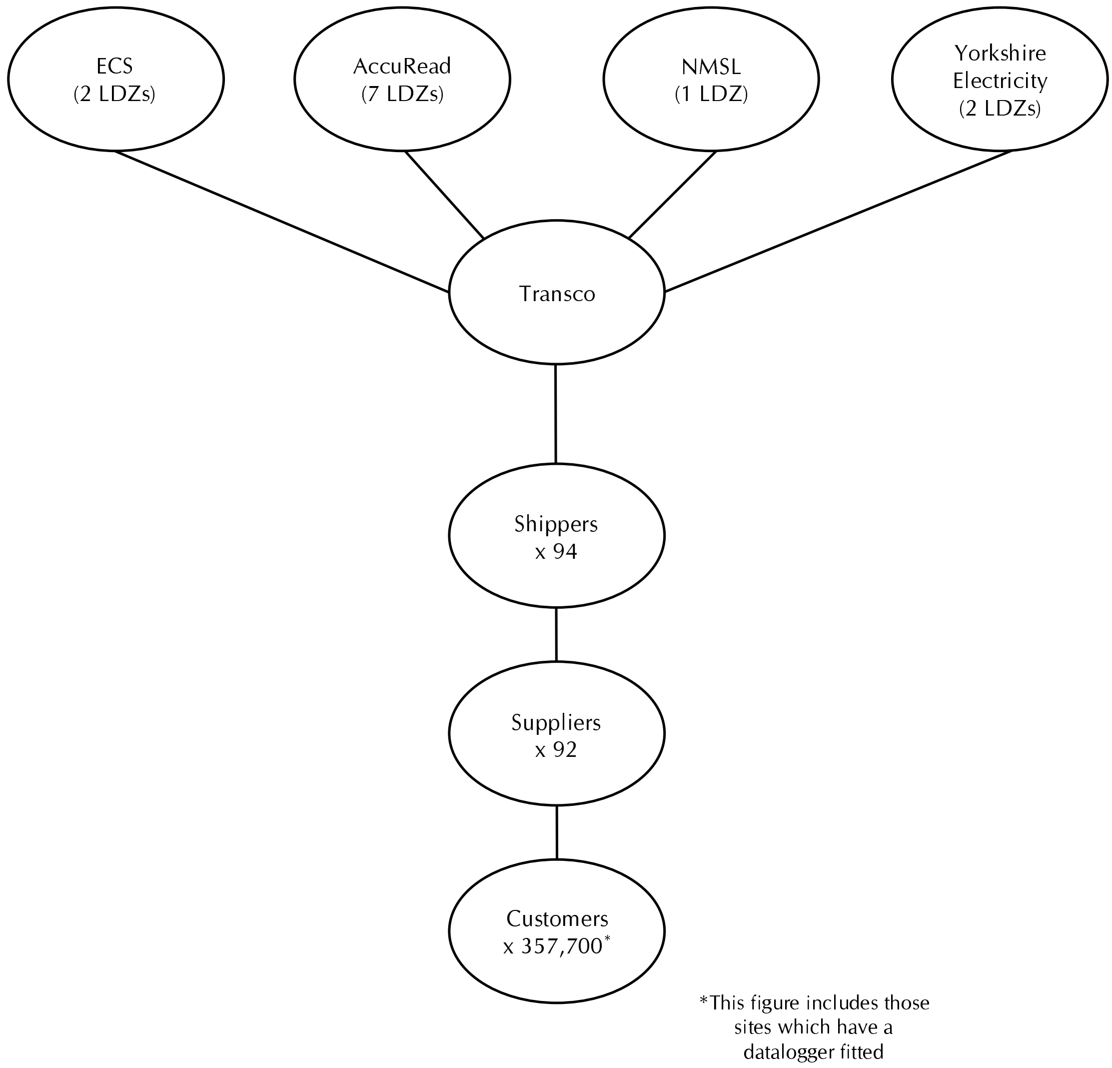
Figure 4 - Non-Daily Meter Reading (Domestic) Relationships



e) Non-Daily Meter Reading (Industrial and Commercial)

Transco is currently the monopoly provider of non-daily meter reads in the industrial and commercial gas supply market. Transco procures the manual reading of meters from the same four MRAs that provide domestic meter reads. So far, no shipper in this supply market has chosen to purchase meter reading services directly from an MRA. Transco has the same obligation to purchase there services in the most economically advantageous manner, as it has for domestic meter reads.

Figure 5 - Non-Daily Meter Reading (Industrial and Commercial) Relationships



3.2 Preliminary Assessment of Barriers to Entry

In competitive markets, competitors are incentivised to keep prices down, provide standards of service to meet customers needs and to fully develop operational processes so that customers can request and obtain services. This leads to incentives to develop effective IT systems with buyers of the service.

Conversely, in monopoly markets the dominant player is incentivised to:

- restrict the supply of services to customers and raise the price of the service above the level that would be found in a competitive market;

- subsidise the provision of contestable services from revenue obtained for providing monopoly services;

- bundle charges for more than one service to limit the transparency in pricing and to lock customers into purchasing additional services;

- not provide standards of service that meet customers needs; and

- where a company provides services to support competitive provision of other services eg. Transco and electricity distribution companies, it may give preference to its own providers over competitors, when providing such services.

These types of behaviour raise barriers to entry into the supply of each of the services. Evidence of the existence of these barriers is set out below.

3.3 Evidence of Barriers to Entry

a) Meter Provision

i) Charging Structure

Ofgas welcomes Transco's introduction of a £10 per annum rebate for suppliers (through their shippers) that elect to provide, install and maintain meters from parties other than Transco.[18] However, until this charge is further disaggregated into separate charges for provision, installation and maintenance, shippers and suppliers are required to purchase all of these services from Transco or from an alternative provider.

Ofgas is concerned that the level of metering charges levied by Transco may not fully reflect the cost of providing these services, and that Transco may be discriminating between its monopoly transportation services and its potentially competitive metering services, by overcharging for the former and undercharging for the latter. Ofgas' decision not to veto the introduction of these charges was on the basis that they were more cost reflective than not having a charge at all, but did not fully reflect the costs

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[18] This rebate is available from 1 April 1999.

incurred in providing these services. As stated in Ofgas' review of Transco's proposals for 1998/99 transportation prices, Ofgas understands that Transco will undertake further analysis to justify any further increase in the charge for prepayment meters.

ii) Incentives to Innovate

As a monopoly provider of meters, Transco is not incentivised to purchase innovative metering technology, for example budgeting meters, automated meter reading and multi-utility metering. The current price control only incentivises Transco to purchase the lowest cost meters within the statutory requirements for meters. Some recent developments by Transco, for example, the domestic electronic meter (the E6) have been innovations which have not brought direct benefits to gas consumers. Ofgas has been made aware of customers who wish to obtain innovative metering technology which is of direct benefit to them and suppliers who are prepared to offer it.

iii) Processes

Customers and suppliers have a statutory right to own meters or make metering arrangements other than with Transco. There are currently no operational procedures or information systems to support such alternative arrangements. In particular, there are no processes to support the exchange of meters between different meter owners when a customer switches gas supplier.

iv) Quality of Data on Transco's Sites and Meters Database

Ofgas is aware of shortcomings in the quality of data on Transco's Sites and Meters Database. Transco's analysis has indicated that the manufacturer of the meter is unknown for over 43% of sites, and that the year of manufacture of the meter is unknown for over 11% of sites.[19] Shippers have recently reported discrepancies of up to 30% between their record of prepayment meters and Transco's record. Many suppliers have also complained that Transco's records of meter serial numbers are incomplete in many cases, holding only a portion of the serial number. Transco currently has little financial incentive to improve the quality of data and this will have an impact on competition in the provision of meters. Ofgas considers that data quality may be improved through more effective processes and the introduction of a standard of

[19] Data from a paper provided by Transco to Ofgas during the MMC Review explaining the detail behind Transco's projections for the Meter Work Formula Review Process.

service and associated liabilities in regard to the maintenance of the database. However, Ofgas is aware that Transco believes it is currently sufficiently incentivised in this area. Views are sought on this issue in Chapter 6. Poor quality data may be a barrier to competition in the provision of all metering and meter reading services.

The processes for correcting inaccuracies identified by suppliers, meter readers and customers, have on occasions proved to be laborious, time-consuming and are exacerbated by Transco's requirement in some cases to undertake a site visit, before accepting amendments.

b) Meter Work

i) Charging Structure

Ofgas is concerned that whilst Transco offers a variety of meter work services (eg. meter installation, maintenance and removal), some of these services are not separately charged. For example, since there is no separate charge for meter installation, suppliers are unable to choose an alternative meter installer to install meters owned by Transco. Removal and repositioning of meters are charged separately, but it is not clear whether Transco's charge is cost reflective and non-discriminatory.

ii) Absence of Adequate Processes

The current procedures require that the scheduling and execution of meter work is arranged with Transco via the shipper, with Transco undertaking meter work and the subsequent updating of meter information on the industry database on an exclusive basis, ie. current arrangements do not cater for the provision or processing of data updates from any party other than Transco.

Operational obstacles (such as the inability to obtain meters from Transco) also make it difficult for suppliers to use other metering service providers.

iii) Inappropriate Processes

Although suppliers are now able to remove meters independently of Transco (in order to exercise their rights under Schedule 2B of the Gas Act), Ofgas considers that the current arrangements discriminate against shippers, who wish to upgrade the physical work to network code isolation status. Transco's network code states that an isolation shall be carried out "in such manner as Transco may in any case determine". Where a supplier removes a meter, Transco has determined that isolation status can only be obtained where the meter, associated materials and data are returned to Transco. This is not the case where Transco itself removes a meter on behalf of a supplier. Therefore suppliers who remove meters independently of Transco, are currently at a disadvantage to those who use Transco.

iv) Delays in Introduction of Processes

Negotiations between Ofgas, suppliers and Transco concerning suppliers removing Transco-owned meters were prolonged (over a two year period) and illustrate the disincentive to Transco to negotiate operational processes, so that suppliers can carry out meter works independently.

v) Standards of Service

Whilst Transco's performance against its public service standards, as set out in Special Condition 19 of its PGT licence is adequate, Ofgas is concerned that Transco's response times for carrying out meter work may not meet customers' needs on many occasions.

c) Daily Meter Reading

i) Charging Structure

Transco has not disaggregated its daily meter reading charges to show the separate costs associated with the provision, installation, and maintenance of dataloggers, as well as the processing of the meter readings. Therefore, although Transco's network code allows for shippers to procure and install dataloggers on sites that have been classified as DM, there is no incentive to do so.

Ofgas has recently vetoed two proposals from Transco to increase the level of its bundled charges for daily meter readings. Ofgas is concerned that the present level of the charge, and any increase, may mean that customers with daily read meters are subsidising transportation customers for meter readings which Transco requires for gas balancing and other transportation activities. Transco has not shown to Ofgas' satisfaction that this is not the case.

As explained in Chapter 6, the liabilities which are currently being paid to shippers by Transco for the daily read service may provide a disincentive for shippers to use alternative providers in a competitive market. However, as there is no competition in the provision of this service at present, the standards of service and associated liabilities ensure that customers receive an appropriate level of service.

ii) Processes

Ofgas believes that, although the network code allows shippers to provide their own dataloggers or to have access to the Transco owned datalogger, there are no operational processes which support these activities. There are no processes for shippers to collect and submit DM reads instead of Transco. Ofgas has evidence that shippers and customers require, in some cases, a different service or additional services to those being provided by Transco, eg. hourly reads or provision of the reads earlier in the day.

d) Non-Daily Meter Reading (Domestic)

i) Charging Structure

Transco currently levies separate charges for the domestic non-daily meter reading services which it offers. Ofgas is concerned that these charges may not fairly reflect the full cost of providing these services, and that Transco may be discriminating between its transportation services and its meter reading services, to the detriment of competition in meter reading. In particular, when Ofgas chose not to veto the introduction of Transco's current charges, we were concerned that the 50:50 split between supply point and meter point charges may not reflect Transco's and the MRA's cost structures.

ii) Processes

Shippers are presently able to procure domestic non-daily meter reading services either from Transco or MRAs. Operational processes and information systems are in place to support the use of independent meter reading service providers, and the contractual arrangements for meter reading have been taken out of Transco's network code. However, these processes are discriminatory as between Transco's MRAs and those MRAs providing meter readings for unbundled shippers.

Transco formally recognises only shippers as its customers through its network code. On this basis, shippers are required to interact with Transco on behalf of suppliers, customers and meter reading service providers, although Transco does provide information directly to suppliers in some circumstances. Conversely, Transco's internal business groups have direct access to its information systems and support staff.

iii) Quality of and Access to, Transco's Sites and Meters Database

Ofgas' follow-up document to its review of the impediments to competition in non-daily meter reading[20] identified that it is discriminatory for Transco to provide direct input to UK Link only for its own Meter Reading Agencies. Ofgas asked Transco to analyse whether MRA's, which were working in an unbundled environment, could obtain direct access to Transco to input meter readings. Transco has not delivered this analysis or provided evidence that there is not a discriminatory arrangement.

Concern was also expressed that the quality of information on Transco's sites and meters database, and its updating of that information, was not of a standard required by unbundled shippers. Subsequently, concern was also expressed that the validation processes and the "must-read" provisions of Transco's network code are a barrier to entry into competitive meter reading. A shipper has recently proposed a network code modification (Modification 229) to address the potential advantages that accrue to Transco's meter reading business through its discriminatory access to data.[21] Ofgas supports the principle of this modification as a step towards removing barriers to entry.

iv) Potential Conflicts of Interest

Transco's meter reading business is also responsible for some activities related to the validation of meter reads, such as domestic opening reads, and is involved in the monitoring of meter read performance. This results in some lack of clarity as to the boundaries of these activities, as well as potential conflicts of interest. It is questionable whether the staff responsible for providing Transco's meter reading service should also have knowledge of the meter reading activities of unbundled shippers, or should lead Transco's input on development of processes and interfaces for unbundled meter reading.

e) Non-Daily Meter Reading (Industrial and Commercial)

Ofgas believes that the experiences in domestic non-daily meter reading, as detailed above, have been replicated, to a large extent, in industrial and commercial non-daily meter reading.

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[20] 'Competitive Gas Meter Reading. Potential impediments to the development of effective competition. Follow-up to Ofgas' consultation document', Ofgas, December 1997.

[21] Further details on Modification 229 can be found in Appendix 1.

3.4 Conclusions

Transco is a dominant player in four of the above five categories: meter provision, meter work services, daily meter reading, and non-daily (I&C) meter reading. Transco does not provide the majority of non-daily (domestic) meter readings. However, this is only because BGT accounts for 84% of these meter readings. Ofgas believes that Transco still has influence in the provision of non-daily domestic meter reading through its unique position as both PGT and meter reader.

Ofgas is also particularly concerned that Transco's metering and daily meter reading charging structure may be a barrier to entry. In addition, there is concern that adequate processes are not in place to allow competitors to provide metering and meter reading services, and that the data Transco provides is not of a sufficient quality to allow competition to develop. For a number of metering and meter reading services there is evidence that customer's requirements for new and improved services are not being met by Transco.

Chapter 4 provides a summary of Ofgas' proposals to reduce the barriers to entry and encourage potential competitors to provide metering and meter reading services.

Views are sought from industry respondents on each element of Ofgas' analysis, and in particular:

- **the barriers to entry into the supply of metering and meter reading, which have been detailed in section 3.3; and**

- **experience and evidence of further barriers to entry into the supply of these services.**

4. Summary of Ofgas' Proposals

4.1 Ofgas' Proposals

On the basis of the analysis and evidence set out in Chapter 3, Ofgas proposes three fundamental measures for the development of effective competition in metering and meter reading:

- splitting Transco's existing price control into three parts covering transportation, metering and meter reading. This will help to ensure that Transco's charges are more transparent and cost reflective;

- physically, financially and informationally separating the three businesses. This will help to ensure that Transco does not give preference to its own metering and meter reading businesses over competitors, when using Transco's administrative services; and

- developing new operational processes to support the development of competitive procurement of services. Processes do not exist, in most cases (except non-daily meter reading) to allow shippers, suppliers or customers to procure services independently of Transco.

Transco has argued that there are some synergies between metering and meter reading operations and that these businesses need not be separately price controlled.

Transco has argued that new competitors are likely to offer metering and meter reading as a combined service in future (eg. with the introduction of Automated Meter Reading (AMR)). Ofgas believes that separate price controls are the most effective way of ensuring that costs are not cross subsidised. As to separate requirements, while experience to date has suggested that competitive meter reading companies concentrate solely on meter reading, this may simply reflect the barriers to entry into the provision of metering services. It may nevertheless be appropriate to implement a full separation to allow the market to test whether combined services prove to be the preferred mode of supplying these services. Ofgas is considering the degree of separation between Transco's metering and meter reading businesses.

The remainder of this document sets out further details of Ofgas' proposals to: implement separate price controls (Part II); implement physical, financial and informational separation of the three businesses (Part III); assist in the development of the new industry processes and structures required by the competitive environment (Part IV) and an alternative proposal for meter provision (Part V).

4.2 Timetable

Ofgas recognises the potential impact of its proposals on Transco, shippers and suppliers and therefore proposes a phased approach to implementation.

Ofgas intends that the new price controls should come into effect on 1 April 1999. At this time, sufficient measures should be put in place to establish competition in metering and meter reading services.

Ofgas believes that measures can be put in place on 1 April 1999 that will result in minimal disruption to the existing processes of shippers and suppliers. However, some changes are inevitable. When the three separate price controls are effective, the charges for Transco's services will be restructured appropriately, so shippers and suppliers will need to take account of the new charges. There are likely to be some changes in the non-system operational procedures for dealing with Transco, to reflect the separate businesses. Transco has made similar procedural changes whenever it has reorganised in the past, eg. from its District to a Local Distribution Zone (LDZ) structure. There will also be a requirement for some reorganisation in Transco's handling of data and query management, to establish clear boundaries between the businesses and to refine processes for improving the accuracy of the underlying industry databases.

Ofgas recognises that the full separation of Transco into three businesses will take longer to achieve and some barriers to entry will remain in place on 1 April. Therefore, we propose to formulate an implementation plan that will address the most pressing barriers in the short term, with full separation and other barriers to entry being addressed over the period of the price control.

Ofgas recognises that there may be some minor consequential changes required to the gas supplier, shipper and transporter licences, as a result of full physical, financial and informational separation. Ofgas intends to deal with these prior to the implementation of full separation.

In the longer term, there will be a need for more far-reaching changes to contractual arrangements, processes and industry information systems. These changes will need to be co-ordinated with other changes required by the industry and may require significant modification to Transco's network code. Ofgas will consult on the detail of the changes in due course.

Views are sought from industry respondents on each element of Ofgas' proposals, and in particular:

- **Ofgas' proposals to separate the current Transco price control into separate transportation, metering and meter reading price controls;**

- **Ofgas' proposals to physically, financially and informationally separate the inherently monopoly transportation activities from the potentially competitive metering and meter reading activities, and the degree of further separation between the metering and meter reading activities;**

- **Ofgas' proposals develop new operational processes, where necessary, and whether these are appropriate measures to encourage competition in the provision of metering and meter reading services;**

- **alternative approaches, which may encourage competition; and**

  - **the proposed implementation timetable.**

PART II – PRICE CONTROL

5. The Coverage of the Separate Price Controls

5.1 Present Price Control

At present, Transco's revenues from metering and meter reading services are included in its transportation price control. This price control formally limits the revenues derived from the supply of transportation services for shippers. Special Condition 9C of BG plc's PGT licence defines 'transportation revenue' under the current price control as "...the turnover (measured on an accruals basis) derived from Supply of Transportation Services for Shippers...", and the deduction of any money designated by the DGGS to reflect a loss of sales to other suppliers of any particular services. The 'Supply of Transportation Services' is defined as

"...the undertaking and performance for gain or reward of engagements:

- in connection with the conveyance of gas through the Transportation System; and
- for the prevention of the escape of gas which has been taken off the Transportation System;

by the Licensee for other persons except engagements relating to the acquisition or disposal of gas otherwise than for the efficient operation of the Transportation System or for replacing gas lost from that system."

This definition includes transportation, metering and meter reading.

5.2 The Principles for Separating Transco's Price Control

Ofgas has sought to disaggregate the present transportation price control into three parts, whilst maintaining the same overall revenue caps in the three new controls, taken together, as implied by the present aggregated control. Dividing Transco's transportation price control will limit its ability to discriminate between different classes of customers by preventing the cross-subsidy of contestable services from monopoly services. The greater the disaggregation of the price controls, eg. disaggregation as between metering and meter reading, the more Transco's ability to cross-subsidise is restricted.

Applying these principles, Ofgas has divided the revenues covered by the current single transportation price control into three:

- transportation;
- metering; and
- meter reading.

As discussed in Chapter 4, Transco has stated to Ofgas that it does not believe that it is necessary to separate the price controls relating to metering and meter reading. However, Ofgas has seen no evidence to suggest that there are significant synergies between the two businesses and that customers will purchase their metering and meter reading services from a range of providers.

There are also a number of other contestable services included within the present transportation price control, including connections and system extension services, which Transco provides and which Ofgas does not propose to separate from the monopoly transportation price control as part of this review. However, Ofgas intends to develop proposals for further separation in due course.

5.3 Coverage of the 'Unbundled' Price Controls

a) Transportation

The proposed 'unbundled' transportation price control will allow sufficient revenue for Transco to fulfil its statutory duty to meet all reasonable demands for the transportation of gas in Great Britain.

In particular, the proposed transportation price control is intended to include:

- the activities required to transport gas along Transco's pipelines, from the beach terminals, interconnectors, offshore storage facilities or onshore storage facilities to the emergency control valve at end users' premises;[22]

- other shipper services, eg. administering allocation agreements;

- the provision of a national emergency service as required by Standard Condition 18 of its PGT licence;

- the provision, installation and maintenance of meters and dataloggers which are connected to Transco's pipeline network from which data are required for balancing the flows of gas within the pipeline network;

- connections and extensions to Transco's pipeline network (as explained above it is intended to remove these services from the transportation price control in the future);

- services provided on behalf of meter providers, meter workers, meter readers, shippers and suppliers to facilitate competition in the provision of metering, meter reading, shipping and supply services, eg. the current Supply Point Administration services;[23]

- the meter point and meter works databases; and

- meter read histories before 1 April 1999.

In particular, the transportation price control excludes:

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[22] Other activities such as telecoms and billing are needed to support the provision of these activities. How the relevant activities are defined and attributed to the relevant price control is discussed in Chapter 8.

[23] Transco provides a range of services to all gas shippers and suppliers to facilitate the transfer of domestic customers between suppliers.

- the metering and meter reading services as defined below; and

- services which do not fall within the definition of 'transportation revenue' set out above.

New services may be provided by Transco in the future which are not within the definition of 'transportation revenue'. Ofgas will be consulting shortly on how Transco should price such services and how the costs incurred in providing such services should be calculated.

b) Metering

The proposed metering price control includes all the potentially contestable metering services currently provided by Transco. Specifically, this will include:

- the provision of meters;

- the installation of meters;

- meter maintenance;

- meter repair;

- meter repositioning;

- providing and maintaining meter boxes; and

- discontinuance (eg. removals of meters).

A full list of the present metering and meter reading services is provided in Appendix 2.

In particular, the metering price control excludes:

- the provision, installation and maintenance of meters and dataloggers at sites required by Transco for gas balancing;

- the meter point and meter works databases; and

- meter reading services as defined below.

c) Meter Reading

The proposed meter reading price control includes the procurement and management of meter reading agencies to provide monthly and non-monthly reads as requested by shippers for all customers, and opening reads at sites consuming more than 2,500 therms per annum when a customer changes supplier. It also includes the processing of reads provided by such agencies and daily reads obtained from dataloggers.

Ofgas is considering the definition of the activities to be included in a pass-through element of the unbundled meter reading price control. In particular, Ofgas is concerned that currently the pass-through may be interpreted as including activities which should be covered by a separate transportation price control with an RPI-X form. Validations required by Transco's network code, procuring must reads, processing 'unbundled' shippers rejected reads, monitoring and controlling datalogger[24] operations, processing 'unbundled' shippers meter read queries, and processing domestic opening meter read rejects would be covered by the transportation price control.

The meter reading price control excludes:

- meter read histories before 1 April 1999;

- the meter point and meter works database;

- dataloggers required by Transco for gas balancing; and

[24] This does not include dataloggers which are not included within the definition of the 'unbundled' transportation price control.

- the validation of meter reads as required under the Network Code. The meter reading business could offer a validation service over and above that required under the Network Code.

5.4 New Services

At this stage, it is not clear whether new metering or meter reading services will develop, and if so whether they will fall clearly into one of the metering, meter reading or transportation price control formulae. To ensure clarity in the allocation of revenues as between the three separate price controls, Ofgas proposes that the DGGS should have the power, after consultation, to determine whether such new services should be price controlled and, where appropriate, to which formula the revenues for such new services should be allocated.

Ofgas would welcomes views on the services and activities to be included or excluded from each of the 'unbundled' price controls.

6. Standards of Service

6.1 Present Situation

Currently, Transco is required to record and report the performance of a number of its services under both its network code and Special Condition 19 of its PGT licence. These standards are described below.

a) Network Code Standards and Liabilities

In October 1996, a Network Code Review Group (0072) was set up to consider re-balancing the standards and liabilities package to reflect the importance of those Transco services that are associated with changing supplier. The Review Group proposed retaining all the services within the scope of the existing package, but proposed the aggregation of some standards and changing the definition of others. Also, the Review Group proposed extending the existing package to include new services. These are described in Appendix 4.

In December 1997, Ofgas issued a consultation on the current network code liabilities package and the proposals of the Review Group.[25] Ofgas has recently published the conclusions[26] of this review.

On 23 January 1998, the DGGS consented to amendments to Transco's network code that fundamentally altered the processes used to reconcile the transportation of gas and the balancing of gas in the domestic market. Shippers supported the adoption of this Reconciliation by Difference (RBD) process, but proposed that the adoption of such new processes (and Transco's avoidance of the incursion of costs that were assumed in the price control) should prompt the introduction of new standards of service. Network Code Modification 202a ('Implementation of Incentive Mechanisms Associated with RBD') introduced some one-off standards that were limited to the months of December 1997 and January 1998 and some ongoing standards of service that require Transco to investigate promptly any invoices it suspected may be inaccurate and which, as a result, it delayed issuing to a shipper.

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[25] 'Transco's Standards of Service: A Consultation Document', Ofgas, December 1997.
[26] 'Transco's Standards of Service: The Director General's Conclusions', Ofgas, September 1998.

The tables below show the scope of the standards of service (including the standards of service introduced by Modification 202a) which have now been proposed by Ofgas following its December 1997 consultation, and the associated liability payments.

Table 4 - The Proposed Network Code Standards Package

Standard	Target	Description
1. Daily Metered (DM)	**95%**	Validated meter readings taken daily from each datalogger meter for the previous day's gas flow for each site with DM status. These readings to be transmitted to the relevant shipper before 11 am (5 hours after the end of the gas day)
2. Enquiry Response	**95%**	An enquiry is made when a shipper requests validation of information regarding a supply point from Transco. Transco will respond to the enquiry within 1 business day. A failure occurs when Transco does not respond within 2 business days.
3. Nominations		
3.1 - Not Referred	**99%**	Supply point nominations will be processed within 2 business days after receipt. This applies only to the industrial and commercial market and new domestic sites.
3.2 - Referred	**95%**	A nomination is generally referred when a request is made for an increase in capacity or capacity for a new site (and sometimes when a shipper requests aggregating several supply points). Transco has to refer the nomination to a local district to see if capacity is available. Transco will respond to the nomination within 12 days from the original nomination.
3.3 - Invalid Offer	**100%**	An invalid offer is when Transco responds to a nomination with an offer which cannot subsequently be confirmed by the shipper through no fault of its own. This can relate to an error by a Transco district or a computer system problem.

4. Confirmations		
4.1 - Confirmation Response	**99%**	Transco shall respond to a confirmation with either a rejection or acknowledgement to the proposing shipper within 2 business days.
4.2 - Notification to existing shipper	**99%**	Transco shall issue a notice informing an existing shipper that another shipper has issued a confirmation for one of their sites within 2 business days.
4.3 - Objection	**99%**	If the incumbent shipper raises an objection, Transco will notify the proposing shipper of the objection within 2 business days.
4.4 Transfer of Ownership - Confirming shipper	**99%**	Transco will notify the proposing shipper, not later than the fifth day before the supply point transfer, that the transfer will take effect.
4.5 Transfer of Ownership - Existing shipper	**99%**	Transco will notify the existing shipper, not later than the fifth day before the supply point transfer, of ceased responsibilities.
5. Meter Asset Information	**95%**	When a Transco meter is changed or Transco alters any asset information when it visits the site, Transco will pass this information to shippers within 5 business days.
6. Gas not available for Offtake – Domestic	**100%**	Transco shall not make gas unavailable for offtake for more than 24 hours.
7. Gas not available for Offtake - I&C	**100%**	Where Transco does not make gas available for offtake, a refund related to the value of capacity will be made by Transco.
8. Site Visits	**90%**	When a site visit has been agreed, Transco will carry out the visit within 15 business days, or on the date otherwise agreed. If Transco is unable to gain access, it is still treated as a failure.

10. File Format/UK Link[27] **Communication of File Format/UK Link change**		
10.1 - Consultation Period	**100%**	Transco will notify UK Link Users of its proposal, setting out in outline the nature and purpose of the modification and a timetable of implementation. Transco will allow at least 15 days for representation.
10.2 - Notice of changes	**100%**	Transco will notify users of the proposed implementation timetable together with a change notification at least 3 months prior to the planned implementation date.
10.3 - Failure to implement changes	**100%**	Transco will notify shippers as soon as Transco is aware, but not later than the close of business on the agreed date, that it will not be possible to implement a change.
11. CV		
11.1 - CV File	**100%**	Transco is to send the daily CV in any format by 11:00 am (required by DM shippers by this time).
	100%	If CV file not sent by 11:00 am, then Transco to send in any format by 16:00 (required by all shippers by this time).
11.2 - CV Corrections	**100%**	CV corrections not to be made later than the 5th day after the Gas Flow day.
12. Suppressed Invoices		
12.1 - NDM	**95%**	If Transco takes action to suppress an NDM reconciliation invoice following a valid meter read, Transco must release the reconciliation invoice within one month of the relevant reconciliation billing period.

[27] The review group has also suggested a legally binding addition to the UK-Link manual for Network Unavailability. This will stipulate that the system will be restored within 12 to 48 hours of a major failure and that data will be restored to the last daily back up. (See appendix 2 of UK-Link IS Service Definition Document).

12.2 - DM	**95%**	If Transco takes action to suppress a DM reconciliation invoice following a valid meter read, Transco must release the reconciliation invoice within one month of the relevant reconciliation billing period.

Table 5 - The Network Code Liabilities Package

Standards	**Stage 1**	**Stage 2**	**Stage 3**
1. Daily Metered (DM)	£20	£30	£30
2. Enquiry Response	£2	-	-
3. Nominations			
3.1 - Not Referred	£2	-	-
3.2 - Referred	£15	£15	-
3.3 - Invalid Offer – District	£15	-	-
- Invalid Offer - System	£10	£10	£10
4. Confirmations			
4.1 - Confirmation Response	£3	-	-
4.2 - Notification to existing shipper	£2	£20	-
4.3 - Objection	£2	-	-
4.4 - Transfer of Ownership Confirming shipper	£2	-	-
4.5 - Transfer of Ownership Existing shipper	£2	-	-
5. Meter Asset Information			
- Above 10,000 therms	£10	£30	-
- Below 10,000 therms	£2	£5	-
6. Gas Not Made Available for Offtake - Domestic	£20	£20	-

7. Gas Not Made Available for Offtake - Industrial & Commercial	£50	-	-
8. Site Visits	£20	-	-
10.File Format/UK Link **Communication of File Format/UK Link Changes** 10.1 - Consultation Period 10.2 - Notice of Changes 10.3 - Failure to implement changes	 £100 £350 £300	 - - -	 - - -
11. CV 11.1 - CV File: by 11:00 - CV File: by 16:00 11.2 - CV corrections	 £1 £50	 - -	 - -
12. Suppressed Invoices 12.1 - NDM 12.2 - DM	 £20 £40	 £30 £60	 - -

b) Transco's Public Service Standards

When the transportation and storage business was separated from the supply business, Transco was assigned a number of British Gas' public service standards. In accordance with Special Condition 19 of its PGT licence, it is required to publish its performance against a number of service standards and pay compensation for failure to meet certain standards. The table below explains the standards and shows Transco's performance in 1996 and 1997.

Table 6 - Transco's Recent Performance for its Public Service Standards

Standard of Service	Planned Performance Level (%)	Payments for failure (£)	1996 Actual (%)	1997 Actual (%)
Answering telephone calls - all calls to call centres to be answered within 30 seconds.	90	n/a	97	93
Replying to letters - all correspondence to receive a reply within 5 working days.	90	n/a	95	99
Recording complaints - a record to be kept of all complaints.	100	n/a	99	100
Visits in response to correspondence – contact will be made within two working days of receiving the correspondence.	93	n/a	99	98
Notification of planned work – written notification to be provided where supply will be interrupted or access is required to customers' premises.	95	n/a	100	99
Keeping appointments – those with gas consumers and the general public to be kept.	95	10	99	99
Responding to gas emergencies - all uncontrolled escapes within one hour and all controlled escapes within two hours.	97 97	n/a	96 98	98 99
Providing alternative heating and cooking facilities - to be provided where a gas supply has been disconnected for certain categories of gas consumers.	100	20	100	100

6.2 *The Principles for the Standards of Service for each of the 'Unbundled' Businesses*

Ofgas is proposing to maintain a similar total allowed revenue for the three 'unbundled' businesses (separation costs may be allowed and are discussed in Chapter 8) as Transco would have been allowed under the current price control, we therefore intend to maintain a similar level of service standards. Accordingly, we have allocated the current network code and public service standards either to just one of the businesses or to more than one of the businesses. These allocations follow the definitions of the coverage of each of the controls described in Chapter 5.

Following the allocation of the service standards, it is also necessary to consider whether the level of the standard[28] and the associated liability payments are appropriate to reflect the importance of the service to the customers of that 'unbundled' business. Ofgas is seeking respondents' views on the appropriate standards and liabilities for each of the standards of service allocated to each of the unbundled businesses.

It may be appropriate for new standards of service to be introduced, in particular for services which the unbundled transportation business provides on behalf of metering and meter reading providers. Ofgas will consider any such proposals, bearing in mind the intention not to increase the overall level of Transco's exposure to these service standards and liability payments, and the importance of such services to the development of competition in metering and meter reading.

In its December 1997 follow-up document to the consultation on the impediments to competition in meter reading, Ofgas accepted that the liability payments associated with Transco's non-daily meter reading service were an impediment to the development of

[28] Ofgas is concerned that Transco's performance of the meter asset information standard was sporadic as shown in the table below, and often significantly below the target, up to February 1998. Transco has not provided any performance figures since then. The maintenance of accurate meter asset information is likely to be important to facilitate competition in both metering and meter reading. Ofgas is discussing with Transco its failure to provide performance figures for this standard since February.

Table F1 – Transco's Recent Performance of the Meter Asset Information Standard

Standard	**Target**	Oct '97	Nov '97	Dec '97	Jan '98	Feb '98	Mar '98	Apr '98	May '98	June '98
Meter Asset Information	**95**	79	58	23	82	53	-	-	-	-

competition. Ofgas will monitor any standards of service applying to the unbundled metering and meter reading businesses to ensure that they do not harm the development of competition in the provision of these services. However, it is important to ensure that customers are able to obtain appropriate standards of service whilst competition develops in the provision of metering and meter reading services.

6.3 *The Proposed Allocation of the Network Code and PGT Standards of Service to the Unbundled Businesses*

The two tables below show Ofgas' proposed allocation of Transco's standards of service to the unbundled businesses and the reasons for Ofgas' proposed allocation. T represents the unbundled transportation business, MO the unbundled metering business and MR the unbundled meter reading business.

Table 7 – The Proposed Allocation of Transco's Network Code Standards of Service

Standard	T	MO	MR	Reason for allocation
1. Daily Metered (DM)	#			This reflects the proposal in Chapter 5 that dataloggers required by Transco for daily balancing should be within the transportation price control.
2. Enquiry Response	#			To ensure non-discrimination between different shippers
3. Nominations				
3.1 - Not Referred	#			To ensure non-discrimination between different shippers.
3.2 - Referred	#			To ensure non-discrimination between different shippers.
3.3 - Invalid Offer	#			To ensure non-discrimination between different shippers.
4. Confirmations				
4.1 - Confirmation Response	#			To ensure non-discrimination between different shippers.
4.2 - Notification to existing shipper	#			To ensure non-discrimination between different shippers.
4.3 - Objection	#			To ensure non-discrimination between different shippers.

4.4 Transfer of Ownership - Confirming shipper 4.5 Transfer of Ownership - Existing shipper	# # 			To ensure non-discrimination between different shippers. To ensure non-discrimination between different shippers.
5. Meter Asset Information	#			To ensure non-discrimination between different metering service providers.
6. Gas not available for Offtake – Domestic	#			To ensure that shippers and their customers do not suffer a reduction in service level.
7. Gas not available for Offtake - I&C	#			To ensure that shippers and their customers do not suffer a reduction in service level.
8. Site Visits	#	#	#	To ensure that shippers and customers do not suffer a reduction in service level.
10. File Format/UK Link[29] **Communication of File Format/UK Link change** 10.1 - Consultation Period 10.2 - Notice of changes	 # #			 To ensure that users are aware of UK Link developments in a non-discriminatory manner. To ensure that users are aware of UK Link developments in a non-discriminatory manner.
10.3 - Failure to implement changes	#			To ensure that users are aware of UK Link developments in a non-discriminatory manner.
11. CV 11.1 - CV File 11.2 - CV Corrections	 # #			 To ensure non-discrimination as between shippers. To ensure non-discrimination as between shippers.
Suppressed Invoices 12.1 - NDM 12.2 - DM	 # #			 To ensure that shippers do not suffer a reduction in service level. To ensure that shippers do not suffer a reduction in service level.

[29] The review group have also suggested a legally binding addition to the UK-Link manual for Network Unavailability. This will stipulate that the system will be restored within 12 to 48 hours of a major failure and that data will be restored to the last daily back up. (See appendix 2 of UK-Link IS Service Definition Document).

Table 8 – The Proposed Allocation of Transco's Public Service Standards

Standard of Service	T	MO	MR	Reason for allocation
Answering telephone calls	#	#	#	To ensure that customers continue to receive an appropriate level of service.
Replying to letters	#	#	#	To ensure that customers continue to receive an appropriate level of service.
Recording complaints	#	#	#	To ensure that customers continue to receive an appropriate level of service.
Visits in response to correspondence	#	#	#	To ensure that customers continue to receive an appropriate level of service.
Notification of planned work	#	#		To ensure that customers continue to receive an appropriate level of service. Ofgas considers that it is unlikely that the meter reading businesses will carry out any such work.
Keeping appointments	#	#	#	To ensure that customers continue to receive an appropriate level of service.
Responding to gas emergencies	#			This allocation is consistent with the definition of the coverage of transportation price control in Chapter 5.
Providing alternative heating and cooking facilities	#			This allocation is consistent with the definition of the coverage of transportation price control in Chapter 5.

6.4 Potential New Standards

As explained in Section 6.2 Ofgas intends as far as possible not to change the overall service standard requirements on Transco following this review. However, shippers have identified a number of services which appear to be important for providing metering and meter reading services which the unbundled transportation business will provide. To ensure that the quality of these services is not a barrier to entry in the provision of metering and meter reading, Ofgas would like views on whether any such services require standards of service, and the appropriate level and associated liability payment. Some of the issues raised with Ofgas are explained below.

There are areas where respondents may wish to consider proposing new standards which have already been raised with Ofgas. Concerns were raised with Ofgas during its 1997 consultation on impediments to competition in meter reading,[30] that the quality of Transco's sites and meters database may be an impediment to competition. Shippers have also made Ofgas aware that Transco's prepayment meter information may be up to 30% inaccurate for invoicing purposes. Also, Transco has expressed concern to Ofgas about its potential liability for providing shippers with incorrect meter information.

It may also be necessary for Transco to be required to provide meter information in a timely manner to allow competitors to carry out meter work.

Concern has also been expressed to Ofgas about Transco's processes for accepting and validating meter reads. It is important that these processes are not discriminatory between different providers.

6.5 Ofgas' Proposals

Ofgas proposes to allocate the network code standards and liabilities package to each of the unbundled businesses as shown in table 6. Ofgas also proposes to separate the standards under Special Condition 19 of Transco's PGT licence between each of the unbundled businesses as shown in table 7. After considering the responses to this document Ofgas will decide how best to develop any proposals for new standards and liabilities or changes to the levels of the current standards and liabilities to reflect the importance of the services provided to each of the unbundled business' customers. This may include further consultation or it may include proposing to set up a network code group with customer representation to develop proposals.

Ofgas would welcome views on the proposals set out above and, in particular:

[30] 'Competitive Gas Meter Reading: Potential impediments to the development of effective competition: Follow-up to Ofgas' consultation document', Ofgas, December 1997.

- **the proposed allocation of the existing standards and liabilities;**

- **whether the standards or liabilities should be rebalanced to reflect the importance of particular services to the customers of the 'unbundled' businesses; and**

- **whether any additional standards and liabilities are required.**

7. Duration and Form of Control

7.1 Duration of the Price Control

a) The Present Control

The existing transportation price control commenced on 1 April 1997 and covers the period to 31 March 2002. BG may make a disapplication request to lead to termination of Special Condition 9C of its licence, which is the licence condition covering the price control.

b) Ofgas' Proposed Approach

Ofgas is proposing the introduction of the unbundled price controls for the three businesses from 1 April 1999, covering the remainder of the existing price control period to 31 March 2002.

Ofgas does not consider that the current level of competition in the provision of metering and meter reading services is sufficient to remove price control regulation from Transco's provision of these services. However, Ofgas proposes that BG will have the opportunity to request a disapplication of the metering or meter reading price controls before the end of the current price control period. Ofgas would consider any such request by reference to the extent of the development of competition.

It is also possible that Transco may wish to consider divesting either or both of the unbundled metering and meter reading businesses at some future point, a process which Ofgas' separation proposals may facilitate. If so, Ofgas will have to consider what is proposed in a manner consistent with its duties under the Gas, Competition and Fair Trading Acts. Such physical separation of the businesses would help to meet a concern of present competitors in supply, namely, the effectiveness of "Chinese walls" dividing businesses in common ownership in maintaining confidentiality in transactions. Ofgas proposes a licence modification giving it a right of veto in respect of any material sale of assets which would transfer ownership of a significant percentage of market share or which would lead to the purchaser achieving a significant market share in either the metering or meter reading markets.

7.2 *Form of the Price Control*

a) The Present Control

i) RPI-X

The overall form adopted for Transco's existing transportation price control was the limitation of growth in revenues through an "RPI-X" formula.

ii) Pass-through

Whilst adopting the RPI-X form of control for the majority of Transco's activities, the present price control treats non-daily meter reading costs as a pass-through, subject to a requirement upon Transco to incur these costs as efficiently as possible.[31] This was because the extent to which Transco would be providing this service to shippers, and in particular BGT, was very uncertain.

iii) Notional Revenues Provision

Special Condition 9C of Transco's PGT Licence allows the DGGS to reduce Transco's allowed "transportation revenue" to reflect a loss of sales to other suppliers of any particular services. The MMC stated that it expected the DGGS to consider carefully whether this notional revenues provision would be appropriate for metering unbundling.[32] The notional revenues issue is discussed in Chapter 9 in the context of how the revenue of Transco's unbundled businesses will change to reflect its market share.

b) Ofgas' Proposed Approach

A move away from RPI-X requires a fundamental review. Ofgas does not consider that this is an appropriate time to perform such a review and therefore Ofgas proposes to continue with the RPI-X form, as supported by the MMC, for the duration of this price control.

Ofgas is considering whether to continue with the pass-through mechanism for non-daily meter reading costs, which continues to protect Transco from the uncertainties surrounding these costs or include these costs within an RPI-X control. In an unbundled

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[31] MMC report, May 1997, pp. 22.

[32] "...we would expect her to consider carefully whether the application of the notional revenues provision would be appropriate and we agree with her statement that unbundling of activities such as meter work would require further licence amendment to allow the effects on BG's revenues and costs to be adequately taken into account", MMC report, May 1997, p. 29.

environment, more shippers may move to contracting directly with Meter Reading Agencies (MRAs) for the provision of non-daily meter reading services. If this happens then the scope of any pass-through element of the price control should be reduced. For illustrative purposes the present price control totals assume that Transco's share of meter reading will be maintained.

Ofgas proposes that:

- the transportation price control should have an 'RPI-X' form;
- the metering business should be subject to an RPI-X price control; and
- the daily meter reading costs which Transco incurs in providing this service will be covered by an 'RPI-X' price control.

Ofgas welcomes respondent's views on the appropriate duration and form of each of the unbundled price controls.

8. Splitting Revenues

8.1 Introduction

Ofgas proposes to split the revenues of the existing transportation price control for the last three years of the 1997-2002 price control period, between the three new businesses of transportation, metering and meter reading, based upon the costs attributable to each business.

As far as possible, Ofgas does not intend to revisit the principles or assumptions used in calculating Transco's allowed revenues under the present control. Revenues will be split between the businesses, but their present value will not change in total.

Transco is subject to a notional revenues provision under the existing price control. The effect of this provision is that the price control assumes 100% market share for Transco in the services that it offers. If companies other than Transco provide these services then the allowed revenues may be reduced to reflect the costs Transco incurs in providing these services. Transco is therefore already subject to the effect of competition on its allowed revenues. The unbundling process will formalise the existing effects of competition and the notional revenues provision on the revenues of the metering and meter reading businesses, through the introduction of new structures for the price controls of these two businesses (as discussed in Chapter 9).

8.2 Approach to Splitting Revenues

Ofgas proposes to split Transco's allowed revenue between the three businesses by breaking down the total allowed revenue into its constituent forward looking cost components, and then splitting each cost component between the three businesses according to the degree to which it is attributable to each of the separate businesses, ie. the degree to which that cost could be avoided due to cessation or reduction in the scale of the business. Such an attribution approach should ensure that each of the unbundled price controls is set at a level that reflects the relative costs that will be incurred by each of the businesses.

Ofgas is considering two alternative methods for the application of these overall attribution principles. Each method breaks down allowed revenue into a different set of cost components.

a) Method 1

The first method breaks down Transco's allowed revenue into the following cost components:

- annual operating costs;
- annual charges for capital repayment (or depreciation); and
- a return on regulatory value.

Under this approach, the attribution principles outlined above are applied to each cost component in turn.

However, this method presents difficulties in applying the attribution principles to the second two cost components, since capital repayment costs and many of the elements of the return on regulatory value are not truly avoidable on a forward looking basis as they do not reflect cash outlays. The attribution principles in respect of these items therefore need relaxing to allow the concept of avoidability to be applied on a retrospective basis. For example, capital repayment costs are not truly avoided by the cessation of the business which uses the assets that generate those repayment costs, but, it is possible to introduce the concept of avoidability on a retrospective basis by saying that had that business and its assets never existed, those capital repayment costs would not have been generated.

Whilst such a relaxation of attribution principles is possible, Ofgas is concerned that its economic basis may not be valid.

b) Method 2

The second method breaks down Transco's allowed revenue into components which correspond to the cash outlays of the business, namely:

- annual operating costs; and

- annual capital expenditure.

The total of these costs will, however, differ from Transco's total allowed revenue. Under this method, this difference, or residual, will then be allocated between the three businesses in proportion to the cash outlays already attributed.

The advantage of this method is that the attribution principles can be applied on a pure forward-looking cash basis. Also, it will more closely reflect the total outlays necessary to fund three stand-alone businesses.

Ofgas welcomes respondents' views on the two methods explained above.

8.3 Method 1

a) Annual Operating Costs

i) The Existing Control

The annual operating costs underlying the price control are shown in Appendix 3. The allowed operating expenditure was £7.1 billion in 1996 prices for bundled transportation and storage over the period 1997/98 to 2001/02.

ii) Ofgas' Split of Operating Costs

The forecasts provided by Ofgas and Transco to the MMC, which the MMC used in reaching its conclusions, were broken down into 14 operating cost processes (one of which was Storage). These forecasts and the MMC's conclusions can be used to estimate a breakdown of the total operating expenses between these processes. Whilst this breakdown gives some guidance on an appropriate attribution of operating costs between the three businesses, a greater level of detail is required for a robust attribution of costs. Ofgas has therefore considered an activity based costing (ABC) breakdown, prepared by Transco, of actual costs incurred for 1997. Analysis of operating costs at this level of detail will provide the basis for attribution between the three businesses.

The following table summarises Ofgas' initial attribution of operating costs between the three businesses.

Table 9 - Attribution of Annual Operating Costs 1999 – 2002[33]

Operating costs £m, 1996 prices	1999/2000	2000/2001	2001/2002
Transportation	1,206	1,190	1,168
Metering	62	60	59
Meter reading	2	2	2
Total (Present control)	1,271	1,253	1,229

b) Annual Charges for Capital Repayment

i) The Present Control

The annual capital repayment projections underlying the present price control and the MMC's conclusions are shown in Appendix 3. The price control allowed £2.8 billion of capital repayment for bundled transportation (£3.0 billion for Transportation and Storage) for the period 1997/98 to 2001/02, at constant 1996 prices.

ii) Ofgas' Split of Charges for Capital Repayment

In attributing capital repayment between the three businesses, Ofgas is proposing to continue with the single 'unfocused' MAR of 60% to be applied to pre-1992 assets. However, this may be revisited in setting the next price control. The use of the 'unfocused' approach is to keep the principle of maintaining the basis of the present control as far as possible in the process of disaggregation. The use of the 'unfocused approach in this way is therefore without prejudice to consideration of such issues when the price control comes to be reset in 2002.

The accounting lives used by the MMC will continue to be used as a proxy for economic lives in the calculation and attribution of capital repayment. However, there is evidence to suggest that in a number of cases these lives may not reflect the economic lives of the assets. Ofgas therefore intends to review all asset lives when setting the next price control.

The following table summarises our initial attribution of capital repayment charges between the three businesses.

[33] This table may contain differences due to rounding of figures.

Table 10 - Attribution of Annual Capital Repayment Charges 1999 – 2002[34]

Capital Repayment £ million, 1996 prices	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	447	453	456
Metering	118	125	131
Meter Reading	1	1	1
Total (present control)	566	579	588

c) Return on Regulatory Value

i) The Present Control

The projections underlying the present price control for return on regulatory value are shown in Appendix 3. The control allows £3.82 billion for bundled transportation (£4.05 billion for transportation and storage) for the period 1997 to 2002, at constant 1996 prices.

ii) Ofgas' Split of the Return on Regulatory Value

The return on regulatory value is calculated considering the following components:

- regulatory value;
- movements in regulatory value due to annual capital expenditure, customer contributions and annual capital repayment charges; and
- cost of capital.

A) <u>Regulatory Value</u>

Under the present price control the opening regulatory value is to be rolled forward over the five year price control period by:

[34] This table may contain differences due to rounding of figures. These operating costs are before adjustments for inter-business transactions between Transportation and Storage (ie. including the projections for operating margins).

- updating regulatory value by movements in the RPI;
- adding annual capital expenditure;
- deducting annual capital repayment charges and amortisation of customer contributions (subject to pre-1992 MAR adjustment); and
- deducting customers' contributions.

As discussed above, Ofgas is not proposing to revisit these principles in the present disaggregation process, and will therefore continue with an 'unfocused' MAR in its calculation of the regulatory value of each business.

The following table summarises Ofgas' initial attribution of regulatory value between the three businesses.

Table 11 - Attribution of the Regulatory Value 1999 – 2002[35]

Regulatory Value £ million, 1996 prices	**Opening, as at 31/03/99**	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	9,854	9,895	9,948	10,033
Metering	1,478	1,547	1,596	1,621
Meter Reading	5	5	5	5
Total (present control)	11,337	11,447	11,550	11,660

B) *Annual Capital Expenditure and Customer Contributions*

Capital expenditure and customer contributions cause movements in regulatory value over the price control period and therefore affect the return on regulatory value.

The present price control allows bundled transportation £3.57 billion of capital expenditure net of customer contributions (£3.62 billion for Transportation and Storage) for the period 1997 to 2002, in constant 1996 prices. The projections for each of the five formula years are shown in Appendix 3.

[35] This table may contain differences due to rounding of figures.

There is uncertainty in any capital expenditure programme that spans a five year period. The price control therefore includes a 'clawback' of unspent capital expenditure not due to unanticipated efficiency improvements when setting the allowed revenues for the next price control.

As with other aspects of the price control, the total capital expenditure projections will not be revisited during the unbundling of the price control. Therefore, the sum of the capital expenditure projections in the three unbundled price controls for each year will, as far as possible, reconcile to the total capital expenditure underlying the price control for that year.

Any major changes in investment programmes and other information that may have come to light since the price control was put in place, will not be taken into account when attributing capital expenditure. The effects of such changes will be taken into account when setting the next price control. Ofgas does, however, note that some significant changes may exist, such as differences between the capital expenditure for 1997 and actual capital expenditure incurred for the 1997 calendar year. This is shown in Table 12 below. These figures will be updated to take into account the period 1 January 1998 to 31 March 1999 and will form the basis of capital monitoring by Ofgas for each of the 'unbundled' businesses.

Table 12 - Comparison of Actual and Planned Capital Expenditure in 1997

Category of expenditure (£ million)[36]	**1997 Actual**	**1997 Transco Investment Plan**	**Variance**
NTS Pipelines	49	74	(25)
NTS Plant & Machinery	63	69	(6)
RTS Pipelines	17	21	(4)
Diurnal Storage	0	10	(10)
RTS Plant & Machinery	12	26	(14)
Mains	42	39	3
Services	47	45	2
District Plant and Machinery	16	13	3
Land and Buildings	2	0	2
Tools & Transport Operations	13	11	2
Meters	155	226	(71)
Telecoms Business Unit	7	5	2
Meter Reading	1	-	1
Information Services	38	57	(19)
Supplies and Transport	14	14	0
System Operations	13	17	(4)
Transportation Services	0	7	(7)
Gross Replacement Expenditure	176	266	(90)
Total Gross Capital Expenditure[37]	**663**	**902**	**(239)**

All customer contributions relate to capital expenditure that has been attributed to the Transportation business. Customer contributions for the price control period are shown in Appendix 3.

The following table summarises Ofgas' attribution of annual capital expenditure (net of customer contributions) between the three businesses.

[36] Figures stated in 1996 prices.
[37] This table may include differences due to rounding of figures.

Table 13 - Attribution of Annual Capital Expenditure (Net of Customer Contributions) 1999 – 2002[38]

Capital Expenditure (Net of Customer Contributions) £ million, 1996 prices	1999/2000	2000/2001	2001/2002
Transportation	488	505	541
Metering	188	175	156
Meter Reading	1	1	1
Total MMC	677	681	698

C) *Cost of Capital*

The return on regulatory value represents the return which shareholders are considered to require as a result of their investment in Transco. This is currently set by applying the cost of capital determined for Transco to its regulatory value over the period of the price control.

A real, pre-tax cost of capital of 7% has been used in setting the present transportation price control. This cost of capital was endorsed by the MMC. The MMC did not distinguish between the cost of capital that would be appropriate for different businesses within Transco, nor did it explicitly state whether the overall cost of capital of 7% would be affected by the development of competition in metering and meter reading. However, in its report the MMC made numerous references to the introduction of competition to areas of Transco's business.[39]

In addition, in its March 1997 projections submitted to the MMC, BG envisaged that from the formula year 1998/99 all meter reading would be contestable. Ofgas considers that competition in the areas of metering and meter reading was taken into account by the MMC when performing its calculations of the overall cost of capital for the current price control.

Ofgas is considering two alternatives for attribution of the cost of capital.

[38] The table may contain differences due to rounding of figures.
[39] MMC Report, May 1997, pages 26, 29, 34, and 35.

The first alternative is to attribute the cost of capital in proportion to an appropriate measure of investment. This measure could be either:

- total investment to date by each business (ie. regulatory value); or
- the further investment that each business is putting at risk annually (ie. cash outlays).

The second alternative involves a consideration of the different levels of risk for the three businesses and therefore different required rates of return. The total return over the whole price control period on regulatory value for the four businesses (including storage) would remain unchanged at 7% (6.98% for the bundled transportation business). It may be appropriate for the rate of return for the meter reading business to be calculated as a percentage of revenue to reflect the small asset base required to provide these services.

Ofgas has calculated the cost of capital used in its current calculations through the application of Capital Asset Pricing Model (CAPM) and the analysis of the costs of capital of comparable companies. The gearing ratios used in the calculations reflect the gearing levels of comparable companies. The weighted average costs of capital of the businesses have been calculated at 1 April 1997. They have been adjusted equi-proportionally so that the average rate of return for the three businesses remains at the 6.83% implied in the present price control for the bundled business in the final three years of the price control.[40] The rates of return proposed for the three businesses are shown in the table below:

Table 14 - Weighted Average Cost of Capital for the Unbundled Businesses

	Transportation	Metering	Meter reading
Weighted average cost of capital	6.75%	7.30%	7.95%

[40] Average rate of return for the three businesses of 6.83% is calculated by an IRR (Internal Rate of Return) analysis over the last three years of the price control for the bundled transportation business.

Whilst it is clear that the three businesses are likely to have different costs of capital as estimated above, Ofgas is concerned that the lack of companies with activities comparable to the proposed metering and meter reading businesses means that this estimate is subject to a relatively high degree of uncertainty. At this stage, Ofgas is therefore minded to pursue the first alternative for attributing cost of capital.

The table below shows Ofgas' proposed attribution of the return on regulatory value based on the first alternative.

Table 15 - Attribution of Return on Regulatory Value 1999 – 2002[41]

Return on regulatory value £ million, 1996 prices	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	663	646	635
Metering	110	110	110
Meter Reading	0.4	0.4	0.4
Total post RPI-X revenue profiling by business	774	756	746
Total MMC	783	756	736

Ofgas welcomes respondents' views on the proposed split of the cost components under method 1.

8.4 Method 2

Ofgas has attributed between the three businesses the two cost components (operating costs and capital expenditure) under this method as discussed in section 8.2. The results of this attribution are shown in the tables below.

The total costs within these tables differ from the totals in the corresponding tables under method 1 due to a difference in the treatment of overheads which are shared between the three businesses. Under method 1 these costs have been allocated between the businesses on the basis of operating costs already attributed and are

[41] This table may contain differences due to rounding of figures.

included within the totals of the annual operating costs and capital expenditure tables. Under this method these costs are allocated on the basis of total attributed cash outlays, and are included within the residual component shown below.

Table 16 - Attribution of Annual Attributable Operating Costs 1999 – 2002[42]

Annual Attributable Operating Costs £ million, 1996 prices	1999/2000	2000/2001	2001/2002
Transportation	1,062	1,047	1,026
Metering	53	52	51
Meter Reading	2	2	2
Total	1,117	1,101	1,079

Table 17 – Attribution of Annual Attributable Net Capital Expenditure 1999 – 2002

Annual Attributable Net Capital Expenditure £ million, 1996 prices	1999/2000	2000/2001	2001/2002
Transportation	488	505	541
Metering	188	175	156
Meter Reading	1	1	1
Total	677	681	698

To reach the allowed revenue total underlying the present price control the residual, which represents unattributed operating and capital expenditure, and allowances to recognise shareholders interest's, has been marked-up in proportion to the annual attributable operating and capital expenditure. It could be argued that the mark-up of this residual would better recognise shareholders interests if it was weighted to take account of a specific rate of return required by each business. Table 17 below shows an unweighted attribution of the residual after RPI-X profiling.

[42] These operating costs are before adjustments for inter-business transactions between Transportation and Storage (i.e including the projections for operating margins).

It could also be argued that the pass-through item for non-daily meter reading should be included in the attributable costs, and thus attract a share of the mark-up for the residuals. Ofgas' work shows that this approach would not change the share of the mark-up attributed to meter reading.

Table 18 - Attribution of the Residual Expenditure 1999 – 2002

Residual expenditure £ million, 1996 prices	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	734	705	661
Metering	82	100	125
Meter Reading	1	1	1
Total (after RPI-X profiling)	817	806	787

Ofgas would welcome views on the proposed split of the cost components under method 2.

8.5 Revenues

A comparison of the allowed revenues split between the three businesses under the two methods is shown in the tables below. The revenues have been rebalanced between the three years in order to achieve an RPI-2 profile for each of the businesses. Such an RPI-X profile ensures a smooth reduction in the level of allowed revenues for each of the businesses overtime, which reduces price volatility. The profile preserves the present value of the revenues over the years of the price control.

Table 19 - Attribution of Revenues 1999 – 2002 Under Method 1[43]

Revenues **£ million, 1996 prices**	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	2,316	2,289	2,260
Metering	291	295	299
Meter Reading[44]	4	4	4
Total (RPI-X profiled)	2,611	2,588	2,563
Present price control total[45]	2,620	2,588	2,553

Table 20 – Attribution of Revenues 1999 – 2002 Under Method 2[46]

Revenues **£ million, 1996 prices**	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	2,284	2,257	2,228
Metering	323	327	332
Meter Reading[47]	4	4	4
Total (RPI-X profiled)	2,611	2,588	2,564
Present price control total[48]	2,620	2,588	2,553

An alternative would be to include non-daily meter reading costs within an RPI-X price control. The tables below show the effect that this would have on allowed revenues.

[43] These revenues are before adjustment for inter-business transactions between Transportation and Storage (ie. including the projections for operating margins).
[44] The meter reading price control is also proposed to include a pass-through element for non-daily meter reading which will be determined annually by the DGGS.
[45] Excludes pass-through of non-daily meter reading services.
[46] These revenues are before adjustment for inter-business transactions between Transportation and Storage (ie. including the projections for operating margins).
[47] The meter reading price control is also proposed to include a pass-through element for non-daily meter reading which will be determined annually by the DGGS.
[48] Excludes pass-through of non-daily meter reading services.

Table 21 - Attribution of Revenues 1999 – 2002 Under Method 1[49]

Revenues **£ million, 1996 prices**	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	2,316	2,289	2,260
Metering	291	295	299
Meter Reading[50]	39	39	39
Total (RPI-X profiled)	2,646	2,623	2,598

Table 22 – Attribution of Revenues 1999 – 2002 Under Method 2[51]

Revenues **£ million, 1996 prices**	**1999/2000**	**2000/2001**	**2001/2002**
Transportation	2,284	2,257	2,228
Metering	323	327	332
Meter Reading[52]	39	39	39
Total (RPI-X profiled)	2,646	2,623	2,599

Ofgas welcomes respondents' views on the revenues proposed for the three businesses under each of the methods.

8.6 Separation Costs

a) Ofgas' Proposed Approach to Separation Costs in Unbundling

Separation costs may be incurred in 'unbundling' the three businesses. Benefits may also arise for customers from 'unbundling' and the opportunity to choose alternative metering and meter reading providers. Ofgas considers that an assessment of the level of separation costs, together with a comparison against the expected financial and non-financial benefits (including dynamic benefits) of these proposals effectively addresses

[49] These revenues are before adjustment for inter-business transactions between Transportation and Storage (ie. including the projections for operating margins).
[50] The meter reading price control covers both daily and non-daily meter reading services, as explained in Chapter 5.
[51] These revenues are before adjustments for inter-business transactions between Transportation and Storage (ie. include the MMC's projections for operating margins).
[52] The meter reading price control covers both daily and non-daily meter reading services, as explained in Chapter 5.

the MMC's request to consider carefully the costs and benefits associated with the introduction of competition into metering and meter reading.[53]

At this stage, Ofgas has not quantified the separation costs arising from these proposals. We nonetheless consider aspects of the treatment of separation costs (including Transco's high level projections) in section 8.6(b). The corresponding benefits are considered in section 8.6(c).

b) The Costs of Unbundling

Many of the costs which might be said to arise from the proposals in this document are in fact already provided for within the existing price control. For example, Ofgas believes that in the existing allowance for capital expenditure the MMC recognised the cost of developing Transco's IT systems to meet the needs of its transportation, metering and meter reading customers.[54] The recognition and inclusion of these costs in the price control means that such costs should not be charged to the end user a second time.

Transco has recently provided preliminary high-level estimates of the one-off and ongoing separation costs that would be incurred by the business, assuming full physical, financial and information separation. These are shown in table 20. At this stage, Transco's analysis does not include quantification of additional ongoing Information Systems (IS) costs. The level of these costs will depend on the information flows required to support the new industry structure and on Transco's role in the provision of these IS requirements.

Transco has also noted that the costs quoted in its analysis do not include additional costs that other industry participants may incur as a result of the unbundling process.

[53] MMC report, May 1997, p 29.
[54] MMC Report, May 1997, pages 48, 51 and Appendix 8.7.

Table 23 - Transco's Preliminary Separation Cost Estimates[55]

Item	One Off Cost range £M	Ongoing Cost range £M/yr	Driver
Information systems	55-90	-	Separate Databases
Emergency Service/Meterwork	0	15-25	Depressed utilisation of operatives (net)
Purchase and logistics	0	5-7	Diseconomies
Other	10-25	8-15	Diseconomies
Formula Rate	0-40	0-35	Approach to Rates
Total Range	65-155	28-82[56]	

c) *The Benefits of Unbundling*

Ofgas believes that customers will be able to realise significant benefits from the introduction of competition in metering and meter reading. Customers will see prices based on efficient costs, service standards which meet their needs, and a range of innovative products to meet their needs better. These benefits are dynamic and potentially realisable for a long period into the future, although it is not easy to quantify them.

The introduction of competition into the supply of gas to domestic customers is an example of where customers have been able to obtain benefits including price reductions of up to 20%.

Ofgas' proposals will reduce the opportunity for Transco to cross-subsidise its metering and meter reading activities from revenue obtained for the provision of transportation services, the prices of the services provided by each of the three businesses will better reflect the costs of providing these services. These improved price signals will allow customers to make better choices about the combination of services they purchase. This means that resources are allocated more efficiently across the whole economy.

[55] This table and the text accompanying it has been provided by Transco.
[56] The range excludes ongoing IS costs.

In addition, the act of separation and the increased focus that management will be able to pay to the 'unbundled' businesses may themselves allow increased efficiency savings to be realised. It may also be more efficient for parts of Transco's workforce to carry out just one activity for an 'unbundled' business rather than a number of activities. Adjustments to allowed revenues to reflect the costs of separation will therefore be considered alongside efficiency savings which may be derived from 'unbundling'.

d) Ofgas' Proposals

Ofgas proposes to consider further, and in the light of responses to this consultation, how separation costs and benefits should be treated.

Ofgas welcomes respondents' views on the treatment and scope of separation costs that may be incurred through unbundling the businesses.

9. Structure of Controls

9.1 The Present Price Control

The 1997-2002 price control is different in structure from the 1994-1997 control because it:

- distinguishes between supplies to large and smaller users; and
- allows 50% of revenue to vary with gas volumes, with the other 50% fixed (but both being subject to 'RPI-X').

The MMC supported these proposals[57] which were intended to prevent revenue varying excessively with the level and mix of demand, to reduce the variability of Transco's revenue with respect to changes in the weather and to lead to the more efficient use of gas.

In Ofgas' July 1997 consultation document,[58] we suggested that the gas transportation volumes forecast by Transco, and used by the MMC, may have been understated. Ofgas' view was based on actual 1996/97 volumes being 3.8% higher than Transco's forecast. That view was reinforced by volumes for the first six months of 1997/98 being 7.1% higher than forecast by Transco to the MMC.

To ensure that Transco did not receive higher revenues than the MMC believed necessary to finance its activities, Ofgas implemented a price control with several parts. This means that if volumes exceed Transco's projections to the MMC by up to 3% it will not get any more revenue, but beyond 3% it receives revenue to cover the costs of transporting these higher volumes. If either Ofgas or Transco are correct in their volume projections to the MMC then Transco will receive the level of revenue considered appropriate by the MMC.

[57] MMC report, May 1997, p 25.
[58] "BG Transportation and Storage, The Director General's Price Control Proposals April 1997-March 2002, A Consultation Document", July 1997, Ofgas.

The MMC[59] supported the continuation of a notional revenues provision for transportation (including metering and meter reading).

Certain revenues are excluded from the price control. These include revenues which "derive from the supply of transmission services which otherwise are not ordinarily required by shippers" (providing for the DGGS to determine which activities are or are not of a kind ordinarily required by shippers), gas balancing neutrality charges, connection charges and the provision of emergency services to other PGTs.

9.2 *Ofgas' Proposals for the Structure of the Separate Controls and Consequent Pricing Issues*

Ofgas believes that unbundling will improve efficiency through consumers making more appropriate choices from a wider range of services which better meet their needs. The structure of the price controls is important in facilitating greater efficiency. To help achieve greater efficiency Ofgas has considered the following issues in developing the structure of the price controls:

- a simple and small number of cost determinants, facilitating cost reflective pricing, where practicable;
- the use of correction factors in order not to expose Transco to a significant risk of excessive variability in rates of return due to the uncertainties of forecasting the demand for services;
- the exclusion of revenue which does not require regulation; and
- the prevention of abuse of any dominant position by the unbundled metering and meter reading businesses.

a) Determinants of Allowed Revenue

The 50:50 fixed:volume split for the existing price control was not developed following detailed analysis of Transco's cost base. However, this structure was considered by Ofgas to be an improvement on the previous 100% volume based structure. Volume

[59] MMC report, May 1997, p 29.

projections put forward by Transco at the time of the last price control have been exceeded. The split of revenue has therefore moved to being more volume based than fixed. However, Ofgas does not intend to revisit the volume forecasts used when the price control was set.

The costs of metering and meter reading do not vary in direct proportion to gas volumes transported through the pipeline network, as some of the changes in volumes transported may be due to increases in demand from existing customers. However, metering and meter reading costs do change to reflect changes in volumes which are due to changes in customer numbers. Therefore, metering and meter reading costs should be removed from both the fixed and variable elements of the current transportation price control. Given the approximate nature of the original 50:50 structure of the transportation price control Ofgas is minded to take costs equally from both the fixed and variable parts.

This could be achieved by an equal proportionate reduction in both the fixed and variable denominators in the price control formula. Also, it would be possible to update the volume forecasts to take account of better information. However, Ofgas is not minded to do this as it would be inconsistent with the approach adopted of not revisiting the main principles established when setting the price control. Ofgas would welcome views on its proposed structure for the transportation price control and how the current formula can be most appropriately adjusted.

The majority of the costs in the metering and meter reading businesses vary in proportion to the number of meters in place and the number of meter reads performed respectively. Ofgas is therefore currently proposing using these two determinants for these businesses' price controls.

The main operating costs of the metering business which are driven by the number of meters are:

- installation of meters and dataloggers;

- maintaining, repositioning or removing meters or dataloggers;

- labour costs relating to site support;
- work scheduling;
- procurement of materials; and
- maintenance of operational records.

These costs represent about 60% of the operating costs of the metering business.

Meters represent 96% of the asset base of the metering business. Capital expenditure, capital repayment and regulatory return costs are also primarily driven by the number of meters. Ofgas believes that the importance of the number of meters in driving both the operating expenses and these costs makes this an appropriate determinant for a linear price control.

The main operating expenses of the meter reading business (including costs in the proposed pass-through) which are driven by the number of meter reads are:

- payments to the meter reading agencies;
- co-ordinating the collection of datalogger reads;
- monitoring and controlling the meter reading agencies;
- handling meter read queries; and
- handling meter read rejects.

These costs represent about 80% of the meter reading business' operating expenses.

The main components of the meter reading business' asset base are commercial vehicles and telecommunications equipment. The capital expenditure, capital repayment and regulatory return are driven indirectly by the number of meter reads. The cost structure of the meter reading business is therefore driven by the number of meter reads that it performs. This makes meter reads an appropriate determinant for a linear price control.

Ofgas explains below how it proposes to ensure that the revenues of the unbundled businesses are not unreasonably exposed to the uncertainties of forecasting the demand for services. Ofgas will be carrying out further work to ensure that the structure of the metering and meter reading price controls allows these businesses to be viable under a range of market share scenarios.

Ofgas would welcome views on its proposed determinants for the revenue of the unbundled businesses.

b) Accounting for Market Share

Companies' costs vary with the level of market share. Therefore, it is important that the allowable revenues reflect the costs of the companies at different market shares. For this purpose, the existing price control includes a notional revenues provision for transportation (including metering and meter reading). In its report, the MMC commented that it considered that "the notional revenues provision which would allow revenues to be adjusted if services were provided by other suppliers, would still be necessary for 'unbundling' the limited category of activities where competition may be slow to arise, where costs can be readily adjusted in line with the scale of activity, and for which a full licence modification would therefore be unnecessary."[60]

The MMC commented further that "...if the DGGS does consider that unbundling would be desirable, we would expect her to consider carefully whether the application of the notional revenues provision would be appropriate..."[61] for the businesses being 'unbundled'.

Ofgas proposes to continue with a notional revenues provision for the transportation business. Ofgas has considered the application of notional revenues provisions for the metering and meter reading businesses. However, the structure proposed above for the price control means that notional revenue provisions for the metering and meter reading businesses will not be required.

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[60] MMC report, May 1997, p 29.
[61] MMC report, May 1997, p 29.

The pricing of specific services will be decided upon by Transco, subject to pricing not being discriminatory as discussed below.

Ofgas welcomes respondents' views on its proposal not to apply a notional revenues provision to the unbundled metering and meter reading businesses, but retain the provision for the unbundled transportation business.

c) Correction Factors

The existing price control incorporates two types of correction factor:

- the 'K' factor; and
- recovery of capital expenditure under-spend not due to unanticipated efficiency gains.

i) K Factor

The K factor is a correction factor by which over or under recovery of allowed revenues by Transco within a formula year represents an adjustment to revenues allowed thereafter. The level of the K factor is the difference between allowed revenues and actual revenues recovered in any formula year.

Ofgas proposes that the K factor for Transco at 1998/99 should be attributed equi-proportionally over the unbundled businesses in proportion to the costs directly attributed to those businesses. This is because the value of the K factor cannot be attributed directly to any of the three businesses.

Ofgas proposes to investigate the level of the K factor which Transco has submitted for 1997/98. If the investigation leads to an adjustment of the K factor then Ofgas will attribute the change equi-proportionally across the three businesses in proportion to the costs directly attributed to those businesses.

Ofgas proposes to maintain the K factor after 1 April 1999 for the transportation business to reflect the uncertainties in forecasting outturn gas volumes when setting prices. Ofgas also proposes to introduce a correction factor for the metering and meter reading businesses to reflect the uncertainty of forecasting the demand for the menu of services to be provided. The K factors incurred after 1 April 1999 will only be recoverable by the business to which they relate. The importance of the K factor for the metering and meter reading businesses will reduce as competition increases and prices are increasingly set by market forces rather than by using a correction factor to adjust the allowed revenues gained in a monopoly position.

ii) Capital Expenditure Monitoring

Ofgas has agreed with Transco that its capital expenditure during the current price control period will be monitored. Ofgas believes that it is appropriate to adjust the allowed revenues under the next price control to reflect any capital expenditure underspend by Transco which is not due to unanticipated efficiency gains. The MMC supported the possible 'clawback' of unspent capital expenditure if investment levels are lower than expected.[62] Ofgas proposes to continue to monitor each of the 'unbundled' businesses' capital expenditure for the rest of the price control with a view to adjusting the allowed revenues under the next price control if the underspend is not due to unanticipated efficiency gains. The split of planned capital expenditure between the three businesses as shown in chapter 8 will form the basis for determining if there is underspend for each of the businesses.

If there is no price control after 2002 for the contestable businesses, then there is no ready mechanism for customers to recover the under-spend. However, under such a scenario, competition will at least be established in the later years of the price control. This should reduce the opportunity for the metering and meter reading businesses to achieve revenues significantly greater than their costs.

d) Excluded Services

The existing price control excludes revenue under the categories explained in Chapter 5. Ofgas proposes that an equivalent condition of the price control is maintained for each of the three 'unbundled' businesses.

e) Pricing – Non-Discrimination

Ofgas believes that the provisions of Standard Conditions 3 and 4 of Transco's PGT licence remain appropriate for changes to Transco's transportation charging methodology. Ofgas has been in discussion with Transco recently about whether Standard Conditions 3 and 4 apply to Transco's metering and meter reading services.

We believe that competition is not yet sufficiently established in the provision of any metering or meter reading services for Transco to be able to choose to price these services without non-discrimination regulation by Ofgas. It is also important that provisions are in place to ensure that Transco does not subsidise services which are becoming competitive more quickly from revenue obtained for the provision of less competitive services.

Ofgas therefore believes that provisions similar to those in Standard Conditions 3 and 4 of Transco's PGT licence should be applied to the unbundled metering and meter reading businesses to ensure that they do not price in an unduly discriminatory manner. These provisions will also include the requirement for the unbundled businesses to publish their prices and price changes and show the methodology used to calculate all their charges as well as explanations of expected future developments. Ofgas will consult in due course on whether any of these provisions should be changed or dropped as competition becomes established in the provision of metering and meter reading services.

Views are requested on the appropriate provisions that should apply to the unbundled metering and meter reading businesses to ensure that they do not price in an unduly discriminatory manner.

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[62] MMC report, May 1997, p 49.

PART III – SEPARATION

10. Scope of Separation

10.1 Background

As noted in Chapter 3, Ofgas considers that Transco's metering and meter reading businesses gain an unfair competitive advantage as a result of the integration of these businesses with Transco's transportation business. Specifically, this advantage over third party providers accrues from discriminatory access to information, processes and resources. In addition, once the three separate price controls discussed in Part II are implemented, it will be necessary to regulate and monitor these price controls. Ofgas believes that this will be impractical whilst metering remains integrated within Transco's business.

For these reasons, Ofgas proposes the full physical, financial and informational separation of Transco into three businesses. For the purposes of this document, these businesses will be known as Transco PGT, Transco Meter Operator and Transco Meter Reader.

As set out in Chapter 5, it is proposed that Transco PGT will retain its responsibilities for gas transportation and, initially at least, will continue to provide the administrative services covering forecasting, supply point administration, energy balancing, reconciliation, and billing. It is also proposed that Transco Meter Operator and Transco Meter Reader will be separate businesses competing with third party providers to supply metering and meter reading services to the industry. A menu of these services is given in Appendix 2.

In developing its proposals for the separation of Transco, Ofgas has defined the following set of guiding principles to address the barriers to competitive entry that exist as a result of the current integration of the businesses:

- a degree of transparency which allows the costs incurred by each of the three new Transco businesses to be visible;

- non-discriminatory treatment by Transco PGT of Transco Meter Operator and Transco Meter Reader as against competitors of those businesses (covering both the provision and procurement of services);
- prevention of the abuse of dominant position by any of the new Transco businesses;
- creation of financially and commercially viable new businesses for Transco; and
- facilitation of minimal intervention by the regulator in contestable markets.

In developing its proposals for the separation of Transco into three separate business units, Ofgas has drawn on the experience of the separation in 1995 of British Gas plc's supply business from the remainder of British Gas plc ("British Gas"). This separation was implemented in 1995 following recommendations from the 1993 MMC Report. With the exception of arrangements for common services, the arrangements which were introduced at that time, together with British Gas' effective monitoring and compliance, played an essential role in the introduction of competition in gas supply. Similar arrangements are believed to be necessary and appropriate to this proposed separation.

10.2 Scope of Separation

Ofgas believes that the scope of physical, financial and information separation includes the following:

- appointment of a compliance officer;
- separate accounts for each of the businesses;
- separate management structures for each of the businesses;
- separate staff and resourcing for each of the businesses;
- separate information systems with Chinese Walls; and
- minimum common services among each of the businesses.

An explanation of each area is provided below.

a) Compliance Officer

British Gas' separation of trading from transportation required the appointment of a Compliance Officer. Consistent with this approach, Ofgas would expect a similar appointment by BG to take place. The post would be responsible for monitoring compliance with separation arrangements as between transportation and metering, transportation and meter reading and metering and meter reading.

Although Ofgas expects that the role of the Compliance Officer would evolve over time, initially at least such an Officer would:

- report directly to the BG board member responsible for the compliance with the separation requirements;
- report to a separate compliance sub-committee of the board, on all matters in respect of the separation requirements;
- present an annual report to Ofgas, setting out in detail his/her views on the effectiveness of the business separation;
- be available to Ofgas to discuss the effectiveness of procedures, as well as investigating individual complaints; and
- be supplied with whatever staff and resources he or she believes necessary to maintain compliance.

As these proposals are published, work is underway to establish the separation of BG's storage business from the rest of BG. Ofgas is considering whether the Compliance Officer covering that separation could also act as the compliance officer for metering and meter reading.

b) Separate Accounts

Financial separation will assist in monitoring the new price controls. In particular, it will inform the next periodic review of Transco's transportation price control in 2002. In addition, it will assist Ofgas in reviewing proposals for charges for metering and meter reading services.

On this basis, Ofgas proposes that there should be full financial separation of the three Transco businesses, with each business publishing separate financial statements, including, at a minimum, profit and loss accounts, balance sheets and cash flow statements. BG statutory published accounts should reconcile with these regulatory accounts.

In the development of the new financial accounts, Ofgas is aware that there is a need to balance commercial confidentiality with regulatory transparency to promote competition. Ofgas proposes that BG should account for its business units in a manner that gives as much information as would be available from separate subsidiary companies and in accordance with best practice in financial reporting.

c) Separate Management Structures

In creating separate management structures for metering and meter reading, each management team should have the greatest possible control of its respective business. This requires that each business operates largely autonomously and is not subject to undue interference or daily control by other parts of BG.

British Gas' separation of trading from transportation, saw the appointment of a managing director and senior managers for each of the new business units. Consistent with this approach, Ofgas proposes the appointment of separate managing directors and senior personnel (where appropriate) for Transco PGT, Transco Meter Operator and Transco Meter Reader.

In creating separate management structures, there will be the potential for conflicts of interest between the BG board and the new management teams. Ofgas' view is that, in its decision making process, the BG Board will need to consider the increased regulatory burden which might be imposed on the new management teams as well as the perceived advantages to BG. In addition, the BG Board has duties in respect of the Gas Act and under the licence. We would expect the Board to take action if it believed that management actions in any of the businesses would be likely to put BG in breach of these obligations.

BG should be concerned with the sourcing and allocation of capital to individual business units. However, it is important that the management team for each business should be given responsibility for the day-to-day management of the business and empowered to take decisions independently of other parts of BG.

d) Separate Staff & Resources

Ofgas will need to ensure that Transco Meter Operator and Transco Meter Reader have adequate levels of staff and other resources. Accordingly, Ofgas expects the managing director of each new Transco business to provide to Ofgas, through the BG board, the following:

- an annual report on the adequacy of staffing and other resources which have been made available to the business during the previous year; and

- a statement on the adequacy of resources allocated to the business for the forthcoming year, together with supporting information.

It is proposed that BG staff should be allocated to only one of the businesses at any time and that other resources should not be shared between businesses. These two factors are discussed below.

i) Separate Staff

Ofgas considers that Transco Meter Operator and Transco Meter Reader staff should be located in separate buildings or on separate sites. Employees of each business should be identified as being an agent of that business through appropriate branding of identity cards, work-wear and vehicles.

Adopting similar proposals as were used in the 1995 separation of trading from transportation, BG should be permitted to move staff among the business units, either through normal staff transfer or as part of a management development programme. Staff transfers may take place, subject to a quarantine period of three months for those staff with access to sensitive information. The quarantine period is subject to review by the Compliance Officer, who may recommend longer or shorter periods, depending upon seniority and the nature of the work on which the member of staff had been engaged.

The three new Transco businesses should have the ability to develop their own terms and conditions of employment, subject to employment law and best practice. The creation of a new culture and new loyalties for staff working in the Transco Meter Operator and Transco Meter Reader will be assisted by the development of separate terms and conditions.

It could be difficult to maintain effective Chinese Walls and to develop new cultures and loyalties if staff come into contact with staff from other businesses in the training environment. The most appropriate arrangement is for BG to ensure that staff from each business attends separate centrally organised training courses. However, it is recommended that this policy is subject to the final decision of the Compliance Officer.

ii) Separate Resources

Transco Meter Operator and Transco Meter Reader should have sufficient resources for the operation of their businesses which are not shared between the two businesses or Transco PGT. Where Transco currently leases resources from BG plc or other parties, such arrangements may continue but new separate leasing arrangements will need to be put in place.

e) Separate Information Systems with Chinese Walls

Transco currently undertakes a number of administrative roles on behalf of the industry. Transco considers that some of this information is commercially confidential, including:

- details of the supply point;
- details of meter assets;
- details of the meter owner;
- meter reading histories for all supply points connected to its transportation network; and
- plans and other information associated with the extension and reinforcement of the transportation system.

In a competitive environment, some of this information may need to be made available to new parties such as suppliers, meter operators and meter readers. It will therefore be necessary to review the present confidentiality restrictions.

Notwithstanding the extent to which information is deemed to be commercially confidential, it is essential that it is available on non-discriminatory terms. Ofgas therefore proposes that Transco Meter Operator and Transco Meter Reader should introduce separate information handling systems to support their particular activities and should not use Transco PGT's systems.

Against this background, Ofgas proposes to seek to prevent all inappropriate forms of information transfer among Transco PGT, Transco Meter Operator and Transco Meter Reader, either directly or indirectly. These shall include, but not be limited to:

- formal transfers by established systems;
- informal transfers by communication, whether electronic, written or oral; and
- transfers of information, including accumulated knowledge, resulting from staff transfers between the businesses.

Ofgas proposes that Transco issues all staff with a Code of Conduct that will govern their behaviour in relation to the maintenance of Chinese Walls at all levels throughout the three businesses. Terms and conditions for BG's staff already contain a provision relating to compliance with BG's codes of conduct. These may need to be developed to provide a link between breaches of Chinese Walls and BG's existing formal disciplinary procedures. In addition, the Code of Conduct will need to include a section to deal specifically with any potential for breaches at the corporate level.

In considering what information may continue to flow between the business, Ofgas proposes to adopt the principle that no information may flow, except for defined exceptions. A list of exceptions should be developed by the Compliance Officer in conjunction with Ofgas, with the industry consulted where appropriate.

Where a breach of a Chinese Wall takes place, in the first instance, it is a matter for the Compliance Officer. Where the action taken by the Compliance Officer cannot resolve the matter, Ofgas may take whatever measures are available to the regulator to remedy the breach. All cases dealt with under either internal or external process should be addressed specifically in the Compliance Officer's annual report.

f) Common Services

In the separation of trading from transportation in 1995, British Gas was allowed to retain common services in a number of areas, given the economies of scale and scope predicted. Following separation, and in particular during the course of the 1997 review of Transco's price control, it became clear that the actual economies did not match those predictions, thereby weakening the case for common services.

Ofgas believes that in the proposed separation of Transco Meter Operator and Transco Meter Reader businesses from Transco PGT, the three businesses should operate with the absolute minimum of common services. The only common services Ofgas envisages are certain corporate services which by their very nature cannot be separated, such as operating a common BG Board or the preparation of regulatory accounts within the BG businesses.

10.3 Separation of Metering and Meter Reading

As noted in Chapter 4, the question of separating Transco Meter Operator from Transco Meter Reader is less clear cut than the separation of both of these businesses from Transco PGT. It may not therefore be as appropriate to fully separate the metering business from the meter reading business, as it would be to separate the transportation business from the two metering businesses. Ofgas would welcome views on this issue.

10.4 Emergency Service Provision

In developing proposals for separation, Ofgas believes that continued high standards of, and customer and industry confidence in, the safe operation of the network are essential. To this end, Ofgas has begun to consult with, and intends to continue consulting with, the Health & Safety Executive on any proposed changes. At this stage, Ofgas considers that the key area which needs further consideration is the provision of the Transco emergency service.

At present, Transco provides an emergency service that covers the transmission network through to the customer's installation. This is enforced through Standard Condition 18 of its PGT licence. Under the terms of this condition, Transco's overriding responsibility, where a gas escape occurs, is to make safe. This is regardless of whether the problem lies with the transportation system, the service pipe, the meter installation or the customer's installation. In addition, where it is practicable and safe to do so, the engineer responding to the emergency will also attempt to maintain the supply to the customer where this can be achieved within thirty minutes and using materials costing not more than £4.

In practice, where the meter installation is found to be the source of the escape, because Transco generally owns the meter, the emergency engineer replaces it where a replacement is available. Generally this means that domestic credit and prepayment meters are replaced. However, it is important to note that, because this involves the use of more than £4 worth of materials, it is not a service provided under the terms of Standard Condition 18. Transco is using the opportunity provided to it as the provider of the emergency service to maintain its meters.

Ofgas does not propose to make any changes to the provision of the emergency service under standard Condition 18. Transco PGT will retain its responsibilities to make safe and to maintain the supply as described above. However, Ofgas considers that the present arrangement under which faulty meters are replaced presents potential difficulties.

First, if Transco PGT were to continue to replace faulty meters in the course of emergency work, there is a possibility that it could replace meters belonging to another meter owner. This raises a number of commercial and legal issues. Second, if Transco PGT were to replace only meters owned by Transco this would discriminate against other meter owners. Finally, as competition develops, the meter population may increase in diversity, making it difficult for Transco to maintain a stock of suitable spare meters for use on emergency visits.

On balance, Ofgas believes that the most practical arrangement is for Transco PGT to cease the practice of replacing faulty meters during visits made as part of its emergency service provision. This effectively means that the meter installation will be treated in exactly the same way as the customer installation under the terms of Standard Condition 18. Although this will not affect Transco's ability to comply with this licence condition, for the reasons explained above, in practice it may result in more instances of Transco not being able to maintain supply than at present. In order to reduce the impact on customers, Ofgas proposes that processes are put in place which will allow Transco to notify the customer or suppliers' nominated service provider at the same time as making the escape safe. Ofgas believes that this will allow new service providers to provide a fast response to repair meter and customer installations.

Views are sought from industry respondents on each element of Ofgas' proposals for the scope of separation, and in particular:

- **the degree of separation between Transco's metering and meter reading activities;**
- **the balance between good corporate governance and effective separation;**
- **whether the proposed arrangements meet the needs of competitors and consumers;**
- **what changes in the proposals, if any, would be beneficial; and**
- **the proposed arrangements in respect of emergency service provision.**

PART IV – NEW PROCESSES

11. Scope of New Processes

11.1 Introduction

The implementation of the new price controls will better ensure that prices for Transco's services are non-discriminatory. Physical, financial and informational separation of Transco's metering and meter reading businesses from its transportation business will lead to non-discriminatory access to Transco PGT's administrative services. However, before competition can be introduced, new industry processes and structures must be developed and implemented. Processes developed in the short term will allow suppliers and customers to use metering and meter reading service providers other than Transco.

It is important to note that, because Transco has introduced a rebate for those suppliers who do not use its meter provision, installation and maintenance service, many of these processes will need to be developed, regardless of the progress of Ofgas' proposals.

11.2 Short Term Measures

Ofgas proposes to introduce necessary and sufficient measures to allow suppliers, customers and other parties to use either Transco or other service providers for their metering and meter reading requirements. It is intended that these measures be put in place so as to allow some measure of competition from 1 April 1999.

Ofgas accepts that this timetable may require the establishment of some interim processes and that this may limit the rate at which suppliers can unbundle their metering arrangements from Transco. However, we believe that a reasonable level of competition can be introduced in April 1999.

a) Meter Provision

i) Current Process

As stated in Chapter 3, suppliers are at present effectively restricted to one means of making metering arrangements for their customers. This is by arranging with Transco to provide a meter or for the existing Transco owned meter to remain in place.

Under current arrangements, when a new meter point is created, suppliers arrange for a meter to be provided by submitting a request, by fax, to Transco's LDZ district office or call centre; in doing this they are generally acting as an agent for their shipper. Where a customer transfers to a different supplier, the Transco-provided meter automatically remains in place and the new supplier (through the shipper) becomes liable for the metering element of Transco's customer charge from the date of transfer.

Whether meters are provided by suppliers, customers or Transco, the meter must comply with the provisions of section 17 of the Gas Act or equivalent provisions in EC legislation. This ensures that meter accuracy is unaffected by competition in meter provision.

ii) Need for Change

Anyone installing a meter is required by legislation[63] to inform the PGT of the details of the new meter. Additionally, the Gas Act[64] requires a person removing a meter to inform the meter owner that the meter has been removed and from where it can be collected. There are presently no processes to facilitate this information transfer and Transco has no formal means of accepting data from third parties. However, Transco is required by its PGT licence to record this information.

The transfer of customers among suppliers is effected by the Supply Point Administration (SPA) process. This process has the effect of transferring the right to use the supply point from one registered user (ie. shipper) to another, but only implicitly transfers the right to use the meter (or meters) due to the assumption that the meter is provided by Transco. Nothing in the current SPA process recognises that Transco may not have provided the meter, or facilitates the separate transfer of ownership or right to use the meter.

iii) New Processes Required

Ofgas believes that relatively few new processes are required to allow customers to provide their own meters. Transco would need to recognise and record that the customer had provided the meter and accept meter asset data from a third party in accordance with the provisions set out in its PGT licence. Where such customers

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[63] Gas Meters (Information on Connection and Disconnection) Regulations 1996.
[64] The Gas Act 1986, Schedule 2B, paragraph 13.

transfer to a new supplier, they would inform that supplier of their metering arrangements. (After the metering liberalisation date, the supplier generally must accept the customer's arrangements). Transco would be alerted to the fact that it had not provided the meter and, provide a rebate to the supplier (through the shipper).

Where suppliers provide meters (either directly or through a third party), trading arrangements would need to be developed to allow the transfer of ownership or the right to use the meter, among suppliers. These arrangements could proceed parallel to the supply point transfer as it is not necessary for them to be coupled with the SPA process. The customer transfer could take place as it does at present with the meter provision transfer occurring at a later date. This would avoid lengthening the transfer process or adding complexity. Transco PGT would need to notify the new supplier of the details of the existing meter owner and the supplier would need to notify Transco PGT of any change in meter ownership.

iv) Ofgas' Proposals

Ofgas proposes to establish an industry workgroup with the objective of formulating the processes described above. Ofgas looks to Transco to make necessary corresponding modifications to its own internal organisation, procedures and information systems.

It is important that Ofgas' proposals do not adversely affect the in-service accuracy of meters. Ofgas published a consultation document on this issue in March 1998[65] and is currently considering the responses. However, Ofgas shall ensure that any new arrangements are consistent with these proposals.

b) Meter Work

i) Current Process

Under current arrangements, shippers (or suppliers acting as agents of shippers) procure metering services from Transco by submitting a request, by fax, to Transco's call centre or LDZ district office. When the work have been completed, details are entered onto the Emergency & Meter Works (E&MW) system, which updates UK Link which in turn sends details of the meter reads and associated meter assets to the shipper in the MRBillreads file. Transco also sends notification that the site works has been

[65] "The In-Service Accuracy of Meters. A Consultation Document", Ofgas, March 1998.

completed, by fax to most shippers, but in the Site Works Notification File (SWNF) to BGT.

ii) Need for Change

In order for suppliers to use a service provider other than Transco, Transco PGT will need to accept notification of work carried out (and the associated data) from the supplier or its agent. Transco will be restricting the development of competition, if it cannot do this.

iii) New Processes Required

It appears that a relatively minor modification to the existing process is required, in order to allow suppliers to notify a change to meter data only, rather than request the work to be carried out. Where the supplier uses a service provider other than Transco, it will send a work request to its chosen service provider. The supplier (or its service provider) would send details of the work carried out to Transco PGT, which would then process the relevant meter asset information to update UK Link. Transco PGT would need to allocate sufficient resources to process data updates from parties other than Transco Meter Operator and would continue to be required to provide details of meter assets to suppliers to allow them to plan work.

iv) Ofgas' Proposals

Ofgas proposes that the same workgroup which develops processes for meter provision also formulates the necessary processes set out above. Again, Ofgas looks to Transco to make necessary modifications to its own internal organisation, procedures and information systems.

It is important that Ofgas' proposals do not affect the accuracy of the measurement of the quantity of gas transported. This measurement is the product of two factors: the calorific value of the gas and the volume. The accuracy of the volume measurement is related to a number of factors including: the pressure and temperature of the gas, the accuracy of the meter and the installation of the meter. The effect of pressure and temperature are not affected by competition in the provision of meters, whilst the accuracy of the meter is governed by legislation.[66] However, in a competitive

[66] Gas Act 1986, schedule 2B and Gas (Meters) Regulations, 1983.

environment, meters will be installed by a number of new parties. Ofgas has taken measures to ensure that this does not have an adverse effect on the accuracy of the volume measurement. These are set out below.

Standard Condition 22(6) of the suppliers' licence is intended to ensure that meters are installed in a manner which does not compromise the accuracy of measurement. Suppliers are required by this licence condition to ensure that a person who has been approved by the DGGS as having the necessary expertise should inspect the installation of a meter through which it supplies gas. Persons can gain such approval by demonstrating that they comply with the Ofgas Codes of Practice on meter installation. These codes have been developed in consultation with the industry and set out the minimum requirements of persons installing gas meters including references to safety. A new edition has recently been published and is available from Ofgas.[67]

PGT's are presently approved and meter installers were previously approved as part of the "Sherwood trial" (see appendix 1). A scheme to allow Ofgas to approve new meter installers is in the process of development and details will be published shortly.

c) Daily Meter Reading

i) Current Process

Transco provides and installs datalogging equipment to all meter points which are required by network code to be DM. Shippers can request to have a datalogger fitted to supply points which are non-daily metered by submitting a request, by fax, to Transco's LDZ district office.

Transco collects daily meter readings each day by polling the dataloggers. These readings are sent to shippers in files over the IX Network, and fed into a number of systems within Transco.

ii) Need for Change

Transco does not presently permit third parties to obtain meter readings from Transco owned dataloggers. Ofgas understands that, where customers or shippers on daily read sites require daily (or more frequent) meter readings for their own energy management

[67] Ofgas Codes of Practice for Meter Installation, Ofgas, October 1998.

or process control purposes, they provide and install a second datalogger in addition to Transco's. Conversely, on sites which already have such third party dataloggers fitted, there is no process for Transco either to gain access to them for the purpose of providing daily meter readings, or for the owner of the datalogger to provide daily meter readings to Transco. This arrangement is unnecessarily restrictive.

iii) New Processes Required

Many of the processes which need to be developed for meter provision will be applicable to the provision of dataloggers. These will cover the recording of ownership and transfer of ownership among suppliers.

Competition in the provision, ownership and maintenance of dataloggers will require consideration of the liabilities relating to the provision of daily meter reads and the associated responsibilities to maintain the operation of dataloggers. Notification of changes in ownership is not provided for in the licensing regime in the same manner as for meters and will also need consideration.

Competition in the provision of daily meter reads will require arrangements to ensure that the quality of meter readings submitted by non-Transco DM readers. Such arrangements could include a registration scheme, coupled with an auditing regime to check the performance of registered DM readers. Similar arrangements are in place in the electricity industry. It will also be necessary to allow non-Transco DM readers to submit meter readings to Transco PGT on the same terms as Transco's DM reading business. This will require Transco PGT to establish interfaces to accept data from non-Transco DM readers, and to clarify the timing for the provision of this data.

iv) Ofgas' Proposals

Ofgas proposes that the required processes are discussed within the industry workgroup as mentioned above. Processes to allow third party access to Transco-owned dataloggers were developed some time ago in preparation for a proposed trial which, for a variety of reasons, did not take place. Ofgas proposes that these processes be revisited with a view to implementing this trial.

d) Non-Daily Meter Reading

i) Current Processes

Processes and system functionality are already in place to support meter reading by parties other than Transco, however, some process improvements are required. The same requirements apply to both domestic and industrial and commercial markets.

ii) Need for Change

The arrangements for submitting meter readings to Transco are not the same for Transco meter reading agencies as they are for unbundled shippers meter reading agencies. This differential access can cause delays in the transfer of meter readings and thereby affect the performance of unbundled shippers' meter readers.

Transco has preferential access to meter reading histories and meter asset data through its access to UK Link. This means that its meter reading business gains an unfair competitive advantage over other meter readers. This inhibits the development of competition.

Currently, many opening meter readings are rejected because they fail validation checks against meter asset details or meter readings history. Suppliers and shippers do not receive details of meter assets until the MRBillreads file is returned from Transco after the window for submission of opening reads expires. Most rejected meter readings are re-input by staff at Transco as they do represent valid reads.

Assessments by shippers and Transco have indicated that there are significant shortcomings in the completeness and accuracy of meter asset details held on Transco's sites and meters database. This can result in valid meter readings being rejected because the associated, correct meter asset data does not match that on Transco's database.

iii) New Processes Required

Ofgas has asked Transco to establish what changes can be made to its systems to remove the difference in the arrangements for submitting meter read data.

Processes and systems could be developed to allow access to meter reading histories and meter asset data by all suppliers or meter reading service providers on the same terms that the Transco meter reading business currently enjoys. Alternatively, full meter asset data and meter reading histories for sites could be provided to incoming suppliers, to allow them to effectively manage their relationship with customers and validate meter readings once the customer has transferred to them.

It will be necessary to continue to re-input valid opening reads, but this task should be the responsibility of a group within Transco PGT, separate from Transco's Meter Reader.

The processes for correcting inaccurate data need to be improved and sources of meter asset data other than shippers and Transco should be recognised.

iv) Ofgas' Proposals

Ofgas proposes to review Transco's proposals for removing the differences in the arrangements for submitting meter readings. We will then consider the implementation of those measures which will not require major systems changes in the short term. Other changes will be considered as part of Ofgas' longer-term proposals.

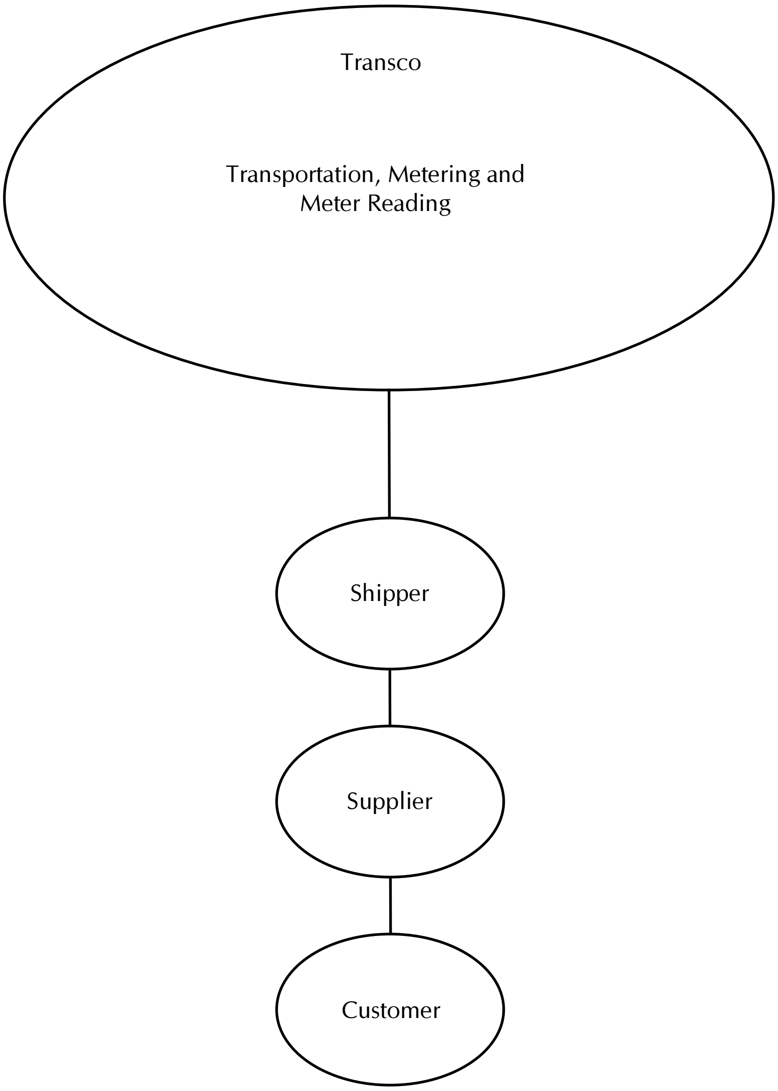
Ofgas proposes that the required processes set out above should be discussed in the industry workgroup which we propose to set up to develop meter work processes.

To facilitate the transfer of meter reading information, Ofgas proposes to develop, in conjunction with the industry, a "metering code" in accordance with Standard Condition 8(2) of the suppliers' licence. This document could then form the basis of an industry standard for the transmission of meter reading data, which in turn would help to facilitate competition. Much work has already been undertaken within the industry to develop standards for meter reading exchanges. Effective standard file formats and interfaces should make it easier to establish links between suppliers and meter reading service providers, reducing overall system costs and lowering the barriers to entry.

11.3 Longer Term

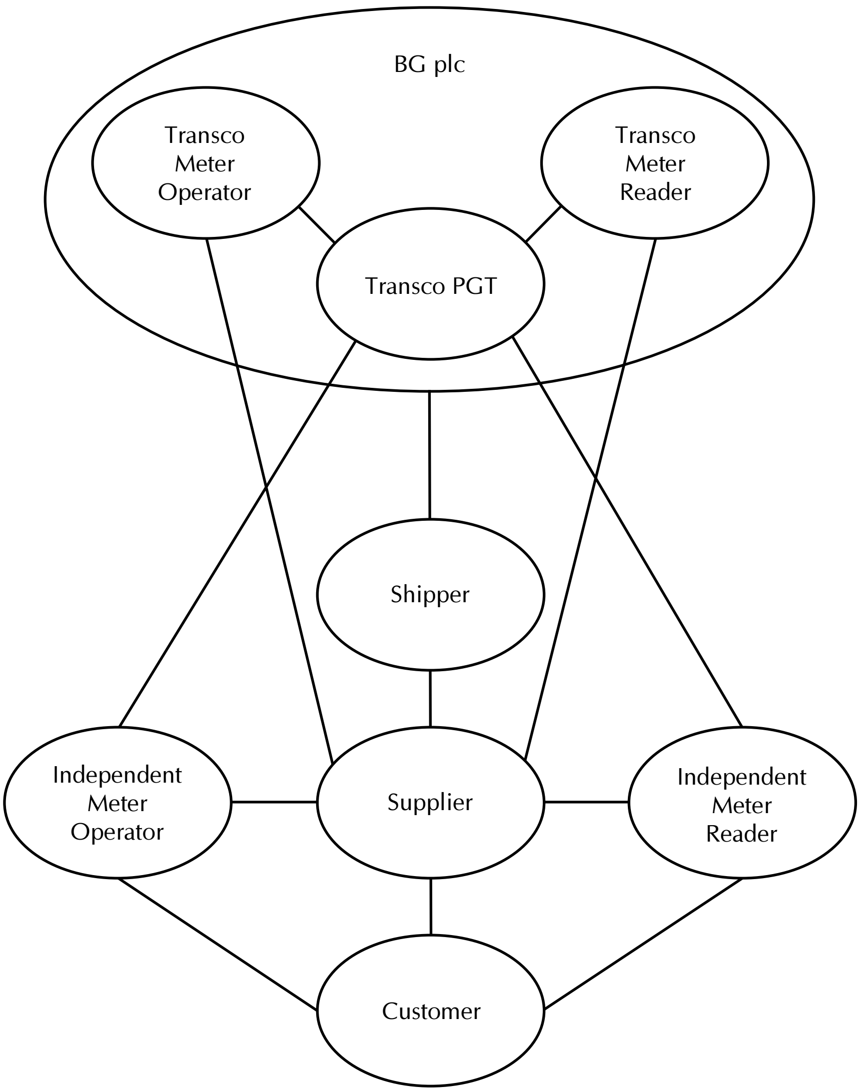
The measures described above should allow the development of competition in the provision of metering and meter reading services from 1 April 1999. However, in the longer term, Ofgas believes that the development of full competition will require a more flexible industry structure. Figure 6 shows the present industry structure.

Figure 6 – Present Industry Structure



In this structure, suppliers can only interact with Transco, as an integrated business, through their shipper'. This arrangement is embodied in Transco's network code. Ofgas believes that as competition develops, this arrangement will prove restrictive and a more flexible structure will be required. An example of the form the industry might take is shown in Figure 7.

Figure 7 – Potential Future Industry Structure



In this new structure, suppliers will be able to provide metering and meter reading arrangements for their customers either through Transco, by contracting with new services providers or by providing these services directly.

It is not Ofgas' role to prescribe the types of organisations that might compete to provide services or the nature of the relationships they may have, but Ofgas intends to establish a framework that supports a range of business structures and organisation models. Ofgas recognises that the establishment of this new industry structure is a longer-term goal and needs to be integrated with other planned changes to UK Link and other industry systems.

In order to establish this new industry structure, two fundamental changes will be required in the longer term. These are: the removal of metering and meter reading provisions from Transco's network code and modifications to information systems. These are described below.

a) Network Code

Transco's network code includes metering and daily meter reading services. (Non-daily meter reading activity undertaken by Transco is now covered by its Incentive Based Contract, which is not part of its network code).

Under Ofgas' proposals for full physical, financial and informational separation, metering and daily meter reading services will no longer be provided by Transco as an integrated business. If metering and daily meter reading services remain in Transco's network code, Transco Meter Operator and Transco Meter Reader would be constrained by having a contractual relationship only with shippers. This would mean that Transco could only provide these services to shippers under terms and conditions which were subject to the network code review process. This in turn would mean that suppliers who choose to use Transco will be required to make metering and daily meter reading arrangements with Transco through their shipper. However, they would be able to make alternative metering and meter reading arrangements directly with competing service providers.

Ofgas considers that this differential treatment of Transco's metering and meter reading services is unnecessarily restrictive and will inhibit the development of competition. For this reason, Ofgas proposes that the contractual arrangements covering metering and daily meter reading services be removed from Transco's network code. Transco would be required to provide the same services through a new condition in BG's special licence until such time as Ofgas considered that effective competition has been established in each service. The terms and conditions for the provision of these services would be set out in separate, modifiable contracts which would be negotiated with the industry.

b) Information Systems

To support competition in the longer term, it will be necessary to move to an industry infrastructure which supports controlled access to industry information held by Transco

PGT by many new players, including meter owners, metering service providers, meter reading service providers, gas suppliers and customers. The management of the industry information could remain with Transco PGT; alternatively, an independent industry data manager could be appointed. It will also be necessary to ensure that Transco's metering and meter reading businesses have equivalent access to the industry database in order to prevent them from gaining unfair competitive advantage and having access to commercially sensitive information. These businesses will need to develop their own systems to support their particular activities.

In this environment, suppliers and customers will be able to interact with various different service providers, including Transco's new businesses, as well as with the holder of industry data. They should have the opportunity to interact with these parties directly rather than through a shipper.

Customers and suppliers currently interact (through shippers) with Transco as a single entity. Communications are handled using electronic files, faxes, letters and phone calls. Once separation has been established, the interactions will need to be directed to each of the separate Transco businesses. Full separation will, therefore, require shippers and suppliers to make some changes to their own processes, procedures and computer systems, even if they continue to contract with Transco to provide metering and meter reading services.

There is an opportunity to improve the infrastructure for communications among parties involved, moving from one that supports only links with Transco to one that accommodates open communications with a gas industry community. In developing the systems infrastructure to support full competition, the industry will need to:

- define the scope and format of industry information that is to be held centrally;
- develop standard interfaces for the exchange of data among industry players;
- clarify responsibilities and obligations for the complete, accurate and timely provision of necessary information, to defined standards. Responsibility for many data elements is covered by current licence conditions;

- establish arrangements for the governance of the central administration function and standard interfaces as well as the policing of information provision; and

- determine the programme of work to develop and implement appropriate changes to industry systems.

Ofgas is concerned to ensure that any developments to contractual arrangements and information systems should be co-ordinated with developments driven by other industry demands where possible, especially as there is substantial consistency between the respective requirements. This should allow multiple demands to be met in parallel.

Ofgas invites views on:

- **the nature of the continued obligation on Transco Meter Operator and Transco Meter Reader to provide a metering and meter reading service;**

- **the removal of metering and daily meter reading from network code and the provision of a special licence condition on BG for these services**

  - **the level and timing of separation in the use of information systems within Transco;**

  - **the implications for industry communications and information systems;**

  - **the scope and nature of information that should be held centrally;**

  - **the scope of processes that should continue to be administered centrally; and**

  - **whether Transco PGT should continue to administer industry data and processes.**

PART V - ALTERNATIVE APPROACH

12. An Auction of Transco's Metering Assets

12.1 Introduction

In Chapter 3, Ofgas set out a number of concerns in respect of the introduction of competition into the provision of metering and meter reading services. We have argued that these concerns would be substantially addressed if Transco's price control could be split, if Transco could carry out a full separation of its metering and meter reading businesses (both from each other and from Transco's transportation business), and if processes could be developed to allow the introduction of effective competition into metering and meter reading services.

In principle, such an approach would provide a sound basis for securing effective competition in the provision of meters. However, Ofgas believes that consideration should also be given to an alternative approach. Specifically, Ofgas wishes to seek views on the possibility of an auction of Transco's metering assets.

12.2 An Auction of Metering Assets

An auction of Transco's metering assets would involve the transfer of ownership (or equivalent rights) from Transco to a number of new meter owners, who would subsequently assume the role of meter providers to shippers, suppliers and customers. It would effectively deregulate the activity of providing meters (both in respect of existing meters and new meters), and, consistent with such an approach, meter provision would cease to be price controlled.

Under an auction, Transco would not inherit a 100% share of the national market for meter provision. Such an approach could in itself be more conducive to the development of effective competition.

12.3 Issues Arising from an Auction of Metering Assets

There are a number of questions that arise should Transco auction its metering assets. These include:

- the proportion of metering assets to be auctioned;
- what constraints should apply to any one party's holding of meters;
- how the auction lots should be defined, by meter type or in a simpler "bundled" lot which could be repackaged in a secondary market (for competition to be effective it would not be appropriate to auction the meters on a regional basis);
- whether there should there be a reserve revenue or price;
- whether successful bidders should pay what they bid, or whether all successful bidders should pay the price of the lowest successful bid (ie. equivalent to a market clearing price);
- whether any particular constraints should be placed on Transco's ability to charge for necessary support services (eg. the cost of operating the sites and meters database); and
- whether there would need to be a body responsible for trading in meters in a secondary market.

Prior to the introduction of an auction, all of these questions would need to be fully considered by all interested parties. With support from potential meter providers, customer groups, the DTI and the industry, Ofgas would be able to make swift progress to implement such a proposal. However, it would be impossible to introduce an auction for 1 April 1999. This alternative would be more likely to take effect from 1 April 2000, a year after the introduction of separate price controls, due to the time required to implement an auction.

Views are requested on the proposal for Transco to auction its metering assets.

Appendix 1 Synopsis of Recent Developments and Current Legislative Framework

A1.1 Recent Developments - Meter Reading

a) Moving Non-Daily Meter Reading Outside the Network Code from 1 October 1997

Network code modification 132A provided for the withdrawal of non-daily meter reading services from the network code from 1 October 1997. This was agreed on condition that Transco would continue to offer identical non-daily meter reading services via a contract outside the network code.

In August 1997, Transco circulated a draft contract, asking shippers for their comments. Four shippers responded, and Transco made several changes to reflect their comments.

Ofgas also considered the replacement contract. We agreed with Transco that it may be introduced from 1 October 1997 on the basis that there were to be no changes to the contract up to 31 March 1998. The contract duly came into effect from 1 October 1997.

b) Transco's Competitive Tender for Meter Reading Services

Up to 30 September 1996, Transco procured its non-daily meter reading service from the meter reading agency (MRA) which was then part of British Gas Trading (BGT). In October 1996, this MRA became a joint venture between BGT and Group 4. This joint venture was called AccuRead.

Transco started to procure meter reading services from AccuRead from 1 October 1996, but in July 1996 it held tenders for the provision of meter reading services in two, out of twelve, Local Distribution Zones (LDZs). AccuRead won the tender for the North Eastern LDZ, and Northern Metering Services won the tender for the Northern LDZ.

Since then, Transco has held tenders for meter reading in the other 10 LDZs. Four of these tenders were won by companies other than AccuRead. Transco has signed contracts relating to all 10 LDZs. Each of these contracts lasts for 2 years.

c) Ofgas Survey of Potential Impediments to Development of Effective Competition in Meter Reading

In June 1997, Ofgas published a document entitled "Competitive Gas Metering: A survey of potential impediments to the development of effective competition" which sought comments from interested parties on the future of competition in meter reading and on possible impediments or barriers to its development.

Eighteen responses to the consultation were received, of which three were confidential. The non-confidential responses have been placed in Ofgas' library. In December 1997 Ofgas published a follow-up document entitled "Competitive Gas Meter Reading: Potential impediments to the development of effective competition: Follow-up to Ofgas' consultation document". The document identified a number of impediments to competition including:

- the position of companies providing Transco's meter reading service;

- Transco's charging structure;

- the liabilities payable to shippers by Transco for poor meter reading performance; and

- the delay in opening up electricity meter reading to competition until April 2000.

Since the review was published, a number of shippers have expressed concern to Ofgas that impediments to the development of effective competition remain, including data quality problems, must read windows and charges, and the validation rules. Ofgas has also identified the lack of full physical, financial and informational separation as the most important remaining impediment to competition in non-daily meter reading.

d) Transco's "Incentive-based" Contract

Since August 1997 Transco has been working with shippers to develop a replacement contract for the provision of non-daily meter reading. This contract was introduced from 1 July 1998, initially for six months. The pricing in the contract is incentive-based rather than based on liabilities. Transco had wanted to introduce the contract from 1 April 1998 but, following the concern expressed by shippers about the remaining impediments to competition and a failure to reach agreement on the terms of the new contract, the introduction was delayed.

e) PC20a - Transco's Proposed 'Incentive-Based' Meter Reading Charges

To introduce the 'incentive-based' meter reading contract, Transco proposed changes to its methodology for meter reading charges. In accordance with Condition 4 of Transco's PGT licence it consulted with the industry on these proposed changes and submitted a final proposal to the DGGS. After considering the proposal against the relevant objectives of Condition 4 and the DGGS' Gas Act duties, Ofgas decided not to veto Transco's proposals.

The proposals suggested a number of major changes to Transco's charges:

- shippers would only be charged for reads which are actually carried out;

- shippers would be charged a 50% premium for reads above a standard performance level;

- the charges would comprise a supply point and a meter point element; and

- a new charge for opening reads at sites consuming more than 2,500 therms per annum would be introduced.

Despite concerns that Transco's proposed charging structure had not been fully cost justified, Ofgas decided not to veto Transco's proposal as the impact on all types of customers was not significant. The proposal also improved the price signal to customers and potential entrants by introducing a separate charge for opening reads at sites consuming more than 2,500 therms per annum.

f) Network Code Modification 229

In April 1998 Eastern Natural Gas Limited proposed a modification to the network code to ensure that:

- Transco as a meter reader is treated identically to any other meter reader and does not gain an advantage through its links with Transco's transportation business; and
- all meter information on the supply point register is maintained in a timely manner so that shippers can have confidence in the information supplied when they wish to 'unbundle'.

At Ofgas' recommendation this modification proposal is being discussed in a sub-group of Transco's network code SPA/Metering Workstream. Ofgas will take into account any conclusions of that group in developing further the proposals in this document.

g) Economic Purchasing Review

On 12 May 1998, Transco provided Ofgas with a copy of its economic purchasing obligation submission for non-daily meter reading. Ofgas conducted an initial review of the submission, including an analysis of Transco's costs and the procurement of reads from meter reading agencies. On 20 July 1998, Ofgas indicated to Transco that there was sufficient doubt over compliance with its economic purchasing obligation for Ofgas to proceed to a full review. As part of the full review process, Ofgas is further considering the costs incurred by Transco, and we are currently in the process of preparing a document for consultation with the industry.

A1.2 Recent Developments - Meter Work Services

a) British Gas Transco Metering: Preparing for Competition, Ofgas Consultation Document, August 1996

In August 1996, Ofgas published a consultation document[68] which asked for views on the barriers to competition in meter provision, metering services and meter reading services.

The document described a structure for the provision of competitive metering as Ofgas saw it developing at that time. It invited views on timescales for introducing competition, potential barriers to entry, technical and procedural issues.

Most respondents concurred with Ofgas' views at that time. However, many of the issues remain unresolved and will need to be addressed by the industry and Ofgas in the coming months.

At this time Ofgas was taking forward competition in metering provision and metering services in two main ways:

- the Sherwood district trial to test the procedures and industry interest in installing and owning meters independently of Transco; and
- Transco proposed a modification to the network code in 1996 to allow a gas shipper to purchase the services of the provision and installation of meters other than via Transco and receive relief from associated transportation charges ('Modification 0042').

[68] 'British Gas Transco metering: preparing for competition. A consultation document', Ofgas, August 1996.

These are discussed in turn below.

The Sherwood Trial
In July 1996 Ofgas facilitated a trial in the provision and installation of non-domestic meters by gas shippers independently of Transco. The trial lasted for six months in Transco's Sherwood District. No meters were installed independently of Transco during the trial. Following consultation with the industry, Ofgas found that the main reasons for lack of success of the trial were:

- a lack of cost reflectivity in Transco's 'unbundled' service rebate;
- shippers and suppliers were concerned about the potential for stranded meter assets; and
- the limited period of the trial made potential participants cautious about making the necessary capital investment.

Ofgas agreed with these findings and is concerned that shippers and suppliers should have sufficient opportunity to make a return on any investments made. This may not have been possible during the limited period of a trial. Also, the trial only gave shippers the option to 'unbundle' meter provision, installation and maintenance together at a site and not choose from a menu of services.

b) Network Code Modification 0042 "Provision of Unbundled Meter Ownership and Installation"
The Modification 0042 proposal led to the establishment of a development work group to examine options and establish principles to ensure that a choice of meter ownership and installation services was available to shippers from April 1997. Transco's modification proposal recognised the new framework for meter ownership and competition in metering services that was established by the Gas Act 1986 (as amended in 1995). The final Modification Report presents the view of the Development Work Group on the way in which competitive meter ownership and installation would operate.

Ofgas had concerns about the content and outcome of Modification 0042, which were communicated to Transco and the work group in 1998. Ofgas' view is that the conclusions of the work group do not provide a framework that will best meet the DGGS's obligation to secure effective competition in the provision of metering services. In particular, Ofgas is concerned that the Modification 0042 proposals would allow Transco to subsidise meter provision and installation from revenue obtained for the provision of transportation services.

c) Removal of Meters
In conjunction with suppliers and Transco, Ofgas ran a pilot scheme for sites consuming more than 2,500 therms a year which allowed suppliers to exercise their rights, in accordance with Schedule 2B of the Gas Act, to cut off the gas supply to a consumer by removing the meter. The pilot scheme ran for six months from 6 April 1998. The pilot exercise did not reveal any significant problems with the procedures developed for this work and accordingly Ofgas has informed suppliers that they may exercise their statutory rights in this manner.

The DGGS considered Transco's proposal for charges associated with the removal of meters by suppliers in accordance with her powers under Standard Condition 4 of the PGT licence and decided to veto these proposals on 11 September 1998.

Appendix 2 Menu of Services

A2.1 Menu of Services

A list of metering services and a list of meter reading services is shown below. This is not an exhaustive list, but gives a high level indication of the types of services Ofgas would expect to fall into each separated business and therefore each price control.

A2.1.1 Metering Services

- Provision of meter (Domestic Credit/Domestic Prepayment/I&C)
- Installation of meter
- Meter exchange
- Repositioning of meter
- Meter repairs
- Meter maintenance (eg. battery replacement for E6's and ETM's and planned maintenance of I&C meters)
- Discontinuance (eg. removal of meter, clamping, spin cap, spading etc.)
- Provision of meter box or housing
- Provision of datalogger
- Installation of datalogger
- Datalogger maintenance
- Datalogger repair
- Datalogger removal

A2.1.2 Meter Reading Services

- Datalogger daily read service
- Cyclic NDM monthly reads (I&C)
- Cyclic NDM 6-monthly reads (I&C and Domestic)
- Opening reads (I&C)
- Special reads
- Same day rapid reads
- Next day rapid reads

Appendix 3 Summary Tables

Table A1 - 1997-2002 Price Control Projections – Transco Total (Transportation, Metering, Meter Reading, lost BGT contract and Storage)

TRANSCO (Transportation, Metering, Meter Reading, Storage) £ million, 1996 Prices	**31-3-1997**	**1997/98**	**1998/99**	**1999/2000**	**2000/2001**	**2001/2002**
Operating costs Depreciation		1,525 565	1,426 583	1,383 603	1,371 616	1,346 626
Total costs Regulatory return		2,090 802	2,009 853	1,986 823	1,987 795	1,972 779
Allowed Revenue		2,892	2,863	2,809	2,782	2,751
Capital expenditure – gross Customer contributions		890 (98)	861 (96)	760 (81)	764 (82)	779 (80)
Capital expenditure – net		792	765	679	682	699
Regulatory Value	11,643*	11,842	12,024	12,099	12,165	12,238

Note: *Includes disposal of telecommunications assets (£28m).

Table A2 - 1997-2002 Price Control Projections – Transco Total (Transportation, Metering, Meter Reading)[69]

TRANSCO (Transportation, Metering, Meter Reading) £ million, 1996 Prices	**31-3-1997**	**1997/ 1998**	**1998/ 1999**	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Operating costs Depreciation		1,434 529	1,302 546	1,271 566	1,253 579	1,229 588
Total costs Regulatory return		1,963 743	1,848 802	1,837 783	1,832 756	1,817 736
Allowed Revenue		2,706	2,650	2,620	2,588	2,553
Capital expenditure – gross Customer contributions		865 (98)	842 (96)	758 (81)	763 (82)	778 (80)
Capital expenditure – net		767	746	677	681	698
Regulatory Value	10,927	11,137	11,337	11,447	11,550	11,660

[69] Operating costs and allowed revenues are before adjustments for inter-business transactions between Transportation and Storage (ie. including projections for operating margins).

Table A3 - Ofgas' Projections for the Unbundled Transportation Business under Method 1[70]

TRANSCO Transportation £ million, 1996 Prices	**31-3-1999**	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Operating costs		1,206	1,190	1,168
Depreciation		447	453	456
Total costs		1,653	1,643	1,625
Regulatory return		663	646	635
Allowed Revenue		2,316	2,289	2,260
Capital expenditure – gross		569	587	621
Customer contributions		(81)	(82)	(80)
Capital expenditure – net		488	505	541
Regulatory Value	9,854	9,895	9,948	10,033

Table A4 - Ofgas' Projections for the Unbundled Metering Business under Method 1

TRANSCO Metering £ million, 1996 Prices	**31-3-1999**	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Operating costs		62	60	59
Depreciation		118	125	131
Total costs		181	185	189
Regulatory return		110	110	110
Allowed Revenue		291	295	299
Capital expenditure – gross		188	175	156
Customer contributions		0	0	0
Capital expenditure – net		188	175	156
Regulatory Value	1,478	1,547	1,596	1,621

Table A5 - Ofgas' Projections for the Unbundled Meter Reading Business under Method 1 (Before Pass-through of Non-daily Meter Reading)[71]

TRANSCO Meter Reading £ million, 1996 Prices	**31-3-1999**	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Operating costs		2	2	2
Depreciation		1	1	1
Total costs		3	3	3
Regulatory return		0.4	0.4	0.4
Allowed Revenue		4	4	4
Capital expenditure – gross		1	1	1
Customer contributions		0	0	0
Capital expenditure – net		1	1	1
Regulatory Value	5	5	5	5

[70] Operating costs are before adjustment for inter-business transactions between Transportation and Storage (ie. including projections for operating margins).
[71] This table includes differences due to rounding of figures.

Table A6 - Ofgas' Projections for the Unbundled Meter Reading Business under Method 1 (Including Projected Pass-through of Non-daily Meter Reading)[72]

TRANSCO Meter Reading £ million, 1996 Prices	**31-3-1999**	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Operating costs		2	2	2
Depreciation		1	1	1
Total costs		3	3	3
Regulatory return		0.4	0.4	0.4
Allowed Revenue (excluding pass-through of non-daily meter reading)		4	4	4
Pass-through of non-daily meter reading		35	35	35
Allowed revenue (including pass-through of non-daily meter reading)		39	39	39
Capital expenditure – gross		1	1	1
Customer contributions		0	0	0
Capital expenditure – net		1	1	1
Regulatory Value	5	5	5	5

Table A7 - Ofgas' Projections for the Unbundled Transportation Business under Method 2[73]

TRANSCO Transportation £ million, 1996 Prices	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Attributable operating costs	1,062	1,047	1,026
Attributable net capital expenditure	488	505	541
Residual costs	734	705	661
Total allowed revenue (after RPI-X profiling)	2,284	2,257	2,228

Table A8 - Ofgas' Projections for the Unbundled Metering Business under Method 2[74]

TRANSCO Metering £ million, 1996 Prices	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Attributable operating costs	53	52	51
Attributable net capital expenditure	188	175	156
Residual costs	82	100	125
Allowed revenue (after RPI-X profiling)	323	327	332
Total allowed revenue	333	326	322

[72] This table includes differences due to rounding of figures.
[73] This table includes differences due to rounding of figures.
[74] This table includes differences due to rounding of figures.

Table A9 - Ofgas' Projections for the Unbundled Meter Reading Business under Methodology 2

TRANSCO **Meter Reading** **£ million, 1996 Prices**	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**
Attributable operating costs	2	2	2
Attributable net capital expenditure	1	1	1
Residual costs	1	1	1
Allowed revenue (after RPI-X profiling)	4	4	4
Pass-through of non-daily meter reading	35	35	35
Total allowed revenue	39	39	39

Appendix 4 Ofgas' Proposed Network Code Standards and Liabilities Package

A4.1 Review Group 0072's Proposals

In Ofgas' consultation document, we set out the six areas to which the network code review group had proposed extending the scope of the current liabilities package. These were: Invalid Offers, Site Visits, File format/UK Link, Demand Estimation, Close out-input and Close out-output and Calorific Values. These are described below:

Invalid Offers

This covers Transco providing incomplete or inaccurate offers for gas transportation because of human errors or, in the case of the shipper who goes on to confirm a site, because of IT system errors.

Site Visits

This covers Transco carrying out site visits where Transco and the shipper agree it is necessary to validate the information held on Transco's sites and meters database.

File Format/UK Link

This covers Transco's services related to amending its IT systems; communicating those amendments to shippers and consulting with them on those changes; and providing and maintaining uninterrupted IT systems on a best endeavours basis.

Demand Attribution

This covers Transco providing information by which shippers forecast the following day's demand.

Close Out-Input and Close Out-Output

This covers Transco providing shippers promptly with as up-to-date information as is available (sometimes Transco is reliant on the Claims Validation Agencies[75] for information) on the inputs to, and outputs from, the transmission and distribution system.

Calorific Value

This covers Transco providing information about the calorific value of gas at a particular point in the system.

We indicated that there may be other areas that respondents would propose extending (or limiting) the scope of the current liabilities package.

[75] A Claims Validation Agent is appointed at each beach terminal to administer the process by which parties agree to the allocation of gas to each shipper.

Appendix 5 Transco's Appendix

TRANSCO'S VIEWS ON METERING UNBUNDLING

This appendix offers a general perspective on the unbundling of potentially competitive activities, describes Transco's view of the competitive meter services environment and offers some observations on implementation issues.

In addition, section 3 puts forward two possible models of Transco's/BG's role in a competitive metering market and compares these approaches against a number of criteria.

This appendix has been prepared independently of the remainder of the Ofgas consultation document, and is not intended to give Transco's response to the Ofgas proposals. Transco will be submitting a response to the proposals contained in the consultation document in due course.

1. Transco's Perspective on Unbundling

1.1 Why Unbundle and What Should be Unbundled?

The overriding objective of unbundling should be to stimulate economic efficiency. In particular, unbundling recognises that joint regulation of monopoly and contestable activities is likely to be inferior to regulation of the former and exposure of the latter to competition.

The question then arises as to what criteria should be used in drawing the line, within an existing regulated monopoly, between the activities that should be unbundled and those that should be retained in the core regulated business. At the very least, there should be a strong **prima facie** case that the benefits, in terms of increased efficiency, should outweigh the costs incurred in unbundling. This, in turn suggests the following criteria:

(a) the **potential** efficiency benefits from unbundling should be such that even a moderate impact on efficiency, as a result of competition, would outweigh the costs arising from unbundling;

(b) there must be a reasonable presumption that the market that has been created or enhanced by the unbundling should be capable of becoming fully competitive. Otherwise, unbundling will tend to entail simply more complex regulation than before, with:

(i) an additional layer of price control (of the unbundled entity), and

(ii) a playing field permanently skewed to favour (reluctant) new entrants;

(c) there should be at least a presumption against unbundling activities where, perhaps for social reasons, the Government wishes to sustain cross-subsidies between different classes of customer. One of the main characteristics of effective competition is that it will undermine such cross-subsidies; and

(d) there should be a presumption that the process of unbundling will not hinder or distort existing initiatives, like the opening up of the supply of gas and electricity supply to domestic customers to competition.

1.2 Regulation of the Unbundled Business

A key feature of a successful transition from monopoly to competition will be a regulatory framework that adapts smoothly to the development of the new market. In particular, what is needed is:

(a) a definition of the relevant market, notably whether that market is the market for a relatively narrow service or whether the market should also be defined to include certain close substitutes. (The OFT's Competition Act guidelines provide a good model for how this should be done);

(b) specification of the relaxations of the regulatory regime that will happen when competition is 'established' (implying that the unbundled business still has significant market power) and when the incumbent is no longer 'dominant' (implying that it no longer has significant market power), with explicit provisions included in licence conditions where possible; and

(c) a specification of what would be meant by established competition (implying looser specific regulation) and what would be necessary for the incumbent to be deemed non-dominant (implying no need for specific regulation).

1.3 Dealing With the Losses Arising from Unbundling

As suggested above, unbundling should only be undertaken if there is a reasonable expectation that the total benefits will outweigh the total costs. This is consistent with the views expressed by the Monopolies and Mergers Commission (MMC) in its 1997 report on BG plc, that ".. the costs and benefits, as well as the timescale, of unbundling [further activities such as meterwork] should be carefully considered before taking them forward" (2.81). However, even if total benefits are found to outweigh total costs, it is still likely that there will be losers, as well as winners, from the process. Losers may include;

(a) customers who, prior to unbundling, were cross-subsidised by other customers (although, as we have argued above, the desire to preserve cross-subsidies may undermine the case for unbundling); and

(b) owners of assets that have been acquired under a previous regulatory regime and that are 'stranded' by competition.

With respect to previously cross-subsidised customers, there should be an initial presumption in favour of letting the market find ways to supply these customers at lower cost than has been achieved so far by monopolistic suppliers. For example, the combination of competition and technology may be able to reduce further the costs of customers using pre-payment meters. Only in the event of competition failing to produce a satisfactory outcome should there be a need for additional Government or regulatory action, eg. some adjustment to the overall tax/benefits system or some sort of levy, either implicit or explicit, on all customers (of the industry in question) which would be used to deliver a subsidy to the target customers.

There is no definitive regulatory view in the UK on the **treatment of assets that are stranded by a change in a regulatory regime.** This contrasts with the US where, for example, Californian utilities are being compensated, via a Competition Transition Charge (CTC), for assets that are being stranded as a result of the deregulation of electricity supply. The issue of stranded assets raises questions of efficiency as well as of equity. The efficiency issue relates to the fact that utilities are currently regulated on the basis that they are relatively low risk companies, as reflected in the cost of capital calculations performed by the individual utility regulators and by the MMC. Material risk of assets being stranded, as a result of unbundling, without either specific compensation or a general allowance for enhanced risk through companies' deemed costs of capital, will affect the willingness of capital providers to fund these businesses.

The question of equity is whether shareholders who have invested in assets in a regulated business (with its low rate of return, reflecting a low risk) should be entitled to compensation for the stranding of assets caused by the change in the regulatory regime.

On the basis of these considerations, Transco would suggest that regulated utilities that are to be at risk of asset stranding as a result of unbundling should receive compensation. Models of how compensation can be achieved include both the CTC in California and the Fossil Fuel Levy in England and Wales. Both have been, in effect, levies on all customers in the relevant market.

1.4 Management of the Unbundling Process

Each instance of unbundling is likely to require the development of commercial, regulatory and legal arrangements - possibly accompanied by new systems and procedures - to enable the unbundled entity, and its competitors, to carry out their activities. The details of these arrangements will have a significant bearing on the outcome of unbundling, the transition process and the allocation of benefits among market participants. Their preparation may well require a substantial design and implementation programme, but in any case, effective unbundling is likely to be greatly facilitated by clear management of the transition process. Whilst some of the change programmes that have taken place to date in the utilities sector have reached reasonable **conclusions,** they have collectively exhibited a number of major shortcomings, including:

(a) frequent time and cost over-runs resulting, for example, from inefficient decision-making procedures and commencement of implementation before completion of design;

(b) a failure in several instances to achieve buy-in from some or all stakeholders;

(c) a lack of clarity about the desired final outcome, tending to create a process in which each step on the way to some vaguely defined objective is taken in isolation;

(d) a lack of clarity about the means for reaching the final outcome, preventing the desired outcome from being achieved.

To address these issues, there is a clear need for a set of criteria that could be used to govern future unbundling processes. An appropriate set of criteria might include the need for each of the following:

(a) a clear view of the objectives of unbundling and the type of benefits that are expected;

(b) completion of the detailed design of the proposed arrangements for unbundling before implementation work is initiated;

(c) strong central programme management and leadership, including the appointment of a programme manager with sufficient authority and credibility with all market participants;

(d) rapid and effective decision making processes;

(e) an efficient consultation process:

  (i) to clarify both the objectives of the unbundling and the type of benefits that are expected ((a) above);

  (ii) to confirm arrangements for programme management and leadership ((c) above);

(f) clearly understood funding and cost recovery arrangements, agreed as early as possible in the design phase; and

(g) appropriate incentives on parties to deliver to time and quality targets, possibly including statutory and/or licence obligations that involve financial incentives and penalties through the cost recovery regime.

1.5 Summary

On the basis of the above, the following summary guidelines should inform future unbundling of activities from regulated monopolies:

(a) unbundling should only be proceeded with if there is a strong prima facie case that the benefits will outweigh the costs and, as part of this, that there is a reasonable chance that the relevant market will, in time, become fully competitive;

(b) in advance of the unbundling being implemented, there should be specification (in licences where appropriate) of how regulation of the unbundled business will evolve with evolution of the defined market in which it operates and, specifically, of how constraints on the ability of the unbundled business to respond to competitive threats will be reduced as competition becomes established and as the incumbent becomes less dominant;

(c) against the background of an expected net benefit for the economy as a whole, mechanisms should be put in place to compensate the losers from unbundling; and

(d) the process of unbundling should be handled in line with best practice for managing major projects, including clarity of objectives and strong central programme management and leadership It should also contain a clear specification of the mechanisms for recovering implementation costs.

It is not for Transco to make judgements about whether the conditions outlined in (a) above are likely to be met in the case of unbundling of metering services. On the presumption that the tests in (a) are met, Transco has concentrated attention on the arrangements that would need to be put in place to achieve competition in metering services, the organisational structures that would be best suited to facilitate this, and implementation issues. Together, these inform consideration of (b), (c) and (d). The remainder of this appendix sets out Transco's views on these matters.

2. Transco's Views on the Competitive Meter Services Environment

Transco has considered the potential unbundled environment in the gas industry from a number of perspectives:

(a) the meter rental and meter reading services (and associated assets) currently provided by Transco that might be unbundled. This gives Transco's initial views on the definition of the market, as envisaged in section 1.2 above;

(b) the participants in the unbundled environment, their commercial relationships, and the information flows/IT systems required for present and possible future industry structures;

(c) the legislative arrangements required.

The latter two points are important in the context of the management of the unbundling process, as set out in section 1.4.

2.1 Meter Rental Services

Background

Transco has defined meter rental services as the provision and maintenance of meter installations which provide a register of, or enable the calculation of , volume at standard conditions within specified degrees of accuracy. The accuracy of the volume measurement is dependent on the associated pressure controlling equipment and, where fitted, the volume converter (sometimes known as the pressure and temperature corrector). Therefore, pressure controlling and volume converting equipment must be considered to be integral part of the meter installation.

As the pressure controlling device also safeguards the gas pressure within the consumer's premises, responsibility for the meter installation must carry a responsibility for safety in that context.

In addition, a metering installation may contain additional features (eg. a prepayment mechanism) that are not required for gas volume measurement but that have been provided on request from a shipper.

Meter rental services currently undertaken by Transco include:

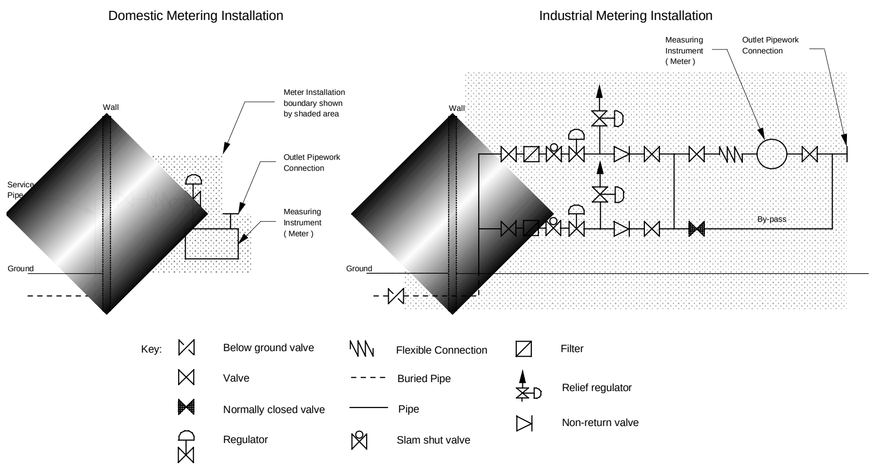
Meter asset	**Meter operations**
Meter/materials sourcing	Meter/materials storage
Meter/materials procurement	Meter/materials distribution
Large installation design	Installation fix
Meter installation standards devt.	Installation maintenance
Meter asset/pricing strategy devt.	Meter exchange
Meter policy devt.	Meter removal
Meter records updating	Discontinuance
Database maintenance/support	Datalogger fix
Asset query resolution	Datalogger maintenance
	Prepayment meter call out service
	Data provision
	Meter clamping and unclamping meters

The current market position is that Transco provides almost 100% of new and replacement meters, with the exception of approximately 44,000 meters attached to systems served by PGTs other than Transco and associated with non-Transco NTS connections. It is assumed that where PGTs other than Transco provide meter services, these would be subject to the same obligations as Transco with respect to unbundling of these from their core service.

At present the total market for new and replacement meters amounts to over one and a half million meters per year.

From 1 April 1999 a separately identified rebate on transportation charges will be available in respect of non-Transco supplied meters connected to the Transco system.

The following diagrams show typical metering installations at domestic and industrial sites:



Key Points

- The metering business can be considered to be made up of two distinct sets of activities; asset management and the provision of work services (eg. the installation of a meter);

- The meter installation includes the associated pressure control equipment (this is consistent with the definition given in the Gas Safety (Installation and Use) Regulations 1994);

- Other related services (eg. the provision of gas pre-payment devices) are at present integrated within Transco's metering service, however future technological developments may make this unnecessary;

- At present a common pool of engineers is employed on the Transco emergency service and on meter repair, maintenance or replacement. The ability to plan a proportion of meter work on a seasonal basis results in economies of scope at present, as it is possible to employ proportionately more engineers on emergency work in winter, when demand for this service is greater, and less in summer, releasing them for meter work at this time. An unbundled regime which involves a full organisational separation raises a potential diseconomy which would need to be compared with the potential efficiency gains from unbundling as outlined in 1.1.

2.2 Meter Reading Services

Background

Transco has defined meter reading services as the provision and validation of information relating to the register of the meter at various points in time. This may or may not include the use of assets installed at consumer premises.

Meter reading services currently undertaken by Transco include:

NDM cyclic reads
Datalogger reads (DM and NDM)
I&C opening reads
Special reads
Must reads
Domestic opening read estimates

Consumption adjustments
Validation/data services
Asset special projects
Queries (asset, reads, dataloggers)

The current market position is:

(a) Transco provides 12% of the cyclic meter reads at domestic premises.

(b) Transco does not provide opening reads at domestic premises.

(c) Transco currently provides 100% of NDM reads at industrial and commercial premises, but this market is open to competition.

(d) Transco provides all daily metered read services for the 2,500 sites that currently have DM status under the Network Code.

Non-daily meter reading is carried out for Transco by meter reading agencies, selected on the basis of competitive tenders for particular geographical areas.

Separate charges for Transco's non-daily meter reading service have applied since October 1997. In addition the commercial arrangements for non-daily meter reading are now based on individual incentive-based meter reading contracts with shippers, rather than Transco's Network Code.

Key points

* There is already a significant amount of competition in the meter reading market; the vast majority of meter reads are carried out by companies other than Transco;

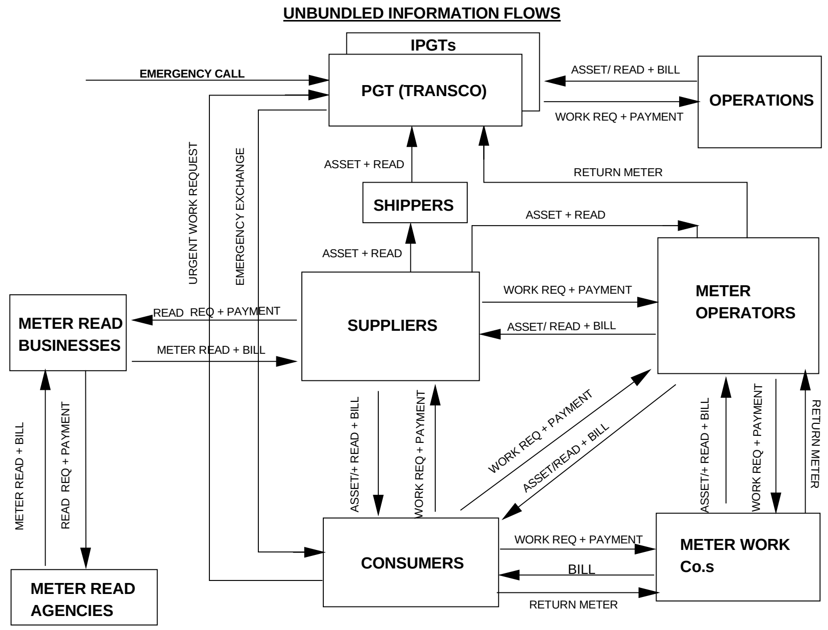
* A number of services are carried out by Transco's meter reading unit at present which, in an unbundled metering services regime, would to some extent fall within the scope of either the core transportation business (eg. consumption adjustments) or the meter rental business (eg. asset queries);

* Transco believes that synergies can be realised, resulting in lower costs, if the responsibility for meter reading assets (eg. data loggers) and services lies with the same entity as that responsible for the measurement equipment. This is particularly the case in respect of IT systems. In addition there is some overlap between meter reading and meter rental services; for example meter readings are often necessary when meter rental activities (eg. installation, removal or exchange) take place.

2.3 Market Participants and Information Flows

Background

The introduction of a fully competitive market in meter rental and meter reading could involve a significant expansion in the number of participants in the gas supply chain, each having the necessary linkages or contractual arrangements with other participants to enable them to fulfil their functions. The figure below gives an indication of the potential complexity of these relationships.



The diagram illustrates that unbundling of metering services is likely to lead to a substantial increase in the number of market participants and in the number of transactions, compared with the present situation which involves only PGTs, shippers, suppliers, MRAs and consumers.

The provision and availability of timely and accurate meter and meter reading data is at the heart of the successful operation of competitive markets covering a range of gas industry services including:

(a) The supply market (where competition is bedding in the recently liberalised domestic market);

(b) The daily gas wholesale market;

(c) The market in system connections and independent networks;

(d) The meter reading market;

(e) The meter rental market.

Key points

- It is important that the structure of the competitive market in metering services is defined in order that the requirements for legislative changes, new contractual relationships, information flows, and consequential IT impacts can be established, planned and implemented.

- A fundamental question is who will own, maintain and replace meters in the unbundled environment. In particular, if consumers are to own their meters, safeguards will be required to ensure that meters are maintained and continue to give accurate readings. The implications of such a regime would need careful consideration.

- Transco believes that unbundling of meter services must be conducted in a way that ensures the industry has confidence that the unbundled environment will maintain and increase industry data standards, and will not undermine the existing processes that underpin developing competitive markets. Likewise the increased complexity of the new relationships and information flows must not be allowed to affect consumer service standards or safety.

- In the absence of further legislation, only a limited number of participants will be licensed (PGTs, shippers, suppliers), so industry requirements in terms of service standards and data quality will need to be driven by contractual arrangements between participants.

- Significant developments of industry IT systems will be required to support the unbundled meter services environment. Given the overlapping requirements for data and information over a range of industry participants, access to a common industry database may be required. Transco could take the lead in developing this database (although this is not essential), but in any event it would be important to ensure full industry involvement.

2.4 Legislative and Licence Arrangements

The existing legislation includes a range of provisions that were designed to support a competitive market in meter rental services within the present industry structure. Transco believes that this legislation should be examined to determine whether it is adequate or whether it needs to be supplemented to ensure :

(a) safety standards are maintained, in particular the market is supported by emergency service provision;

(b) efficient operation of this market without undermining the processes underpinning other gas related markets, in particular competition in domestic supply;

(c) the market is capable of becoming fully competitive, with incumbent businesses having an opportunity to be successful competitors;

(d) social issues continue to be addressed and obligations are placed appropriately.

There are several potential anomalies in the market which will need to be addressed, for example:

(a) meter operators who do not hold a licence under the current regime would be dependent on PGTs/Suppliers to exercise rights over meters;

(b) where meters are provided other than by a supplier or PGT, the obligation to maintain them is on the consumer;

(c) only PGTs have an obligation to hold their meters in safe custody and with the register unaltered during theft proceedings of accuracy disputes;

(d) social obligations to the sick, disabled, blind, deaf, and persons of pensionable age apply only to meters owned by the supplier or PGT.

An appropriately drafted meter operator's licence could address these issues, but this would require primary legislation.

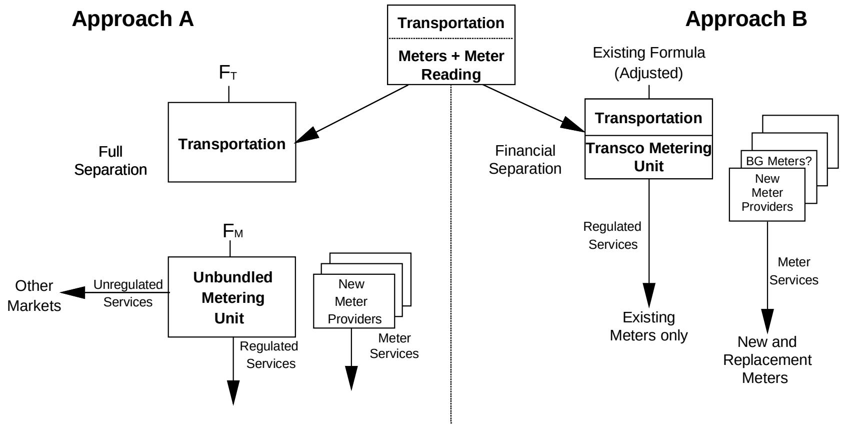
Market operation will depend on the timely transfer of accurate meter related information. Current legislation provides for the transfer of information in all circumstances where a meter is connected or disconnected but does not enforce information exchange following, for example, a change of meter ownership. It would be appropriate to review whether the existing licence chain provides the most appropriate route for information exchange in an unbundled environment.

Currently, network codes define the relationship between PGTs and shippers. The need for different contractual arrangements or legislative provision needs to be considered when there is an agreed industry definition of structure, roles and relationships. For example there is a potential need for all players, in particular PGTs, shippers and suppliers, to be required to return to their owners' meters that have been exchanged.

3. Transco's Role in the Competitive Meter Service Environment

Transco has been developing a number of potential approaches to meter unbundling, with particular reference to Transco's future role in the market. Two broad approaches are described in the following sections, both of which Transco believes are worthy of further development. The first

(Approach A) involves the creation of a separate metering services business unit which would compete with new entrants to the metering market. The second (Approach B), is designed to promote the development of competition between Transco and new entrants by a managed withdrawal by Transco from the meter rental market. The following diagram illustrates the two approaches:



3.1 Approach A - Competitive Separated Meter Unit

This approach would involve an unbundled metering unit, fully separated from Transco, providing initially regulated meter rental services to suppliers and largely unregulated meter reading services to shippers, in direct competition with new market entrants. The unit would continue to install new meters, to replace life expired or faulty meters, and to maintain the existing meter asset base. The unbundled unit would also seek opportunities in the provision of unregulated meter services in preparation for operation in a fully competitive environment.

The regulatory regime would involve a separate price control for meter rental, together with the traditional regulatory involvement in price setting, for both regulated services and those not covered by the price control (the latter to cover concerns over cross-subsidy). Transco believes that the transition to a separate unit would take some time and would be costly, particularly in terms of IT costs, diseconomies associated with the emergency service and meter logistical arrangements.

Overall, Approach (A) could be characterised, from the Transco viewpoint, as involving:

(a) an ongoing role in the provision of a full suite of regulated, initially near monopoly, meter rental services;

(b) a mixture of regulated and unregulated services;

(c) in both cases, direct competition with new market entrants.

3.2 Approach B - Transco Withdrawal from New and Replacement Meter Market

Under this approach, a metering unit within Transco would retain responsibility for existing meters, providing a regulated rental service to shippers through the existing transportation charging arrangements. It could also provide meter reading services, along similar lines to today's arrangements.

The unit would draw on core Transco for its meterwork and support services.

The unit would not operate in the new and replacement meter market (except perhaps on a last resort basis) nor seek to provide unregulated services in other markets, leaving these areas completely open for new market entrants to penetrate. The Transco metering unit could facilitate this process by publishing lists of meters due for replacement. Competitors would of course also be able to replace existing Transco meters which are not due for replacement under the normal programme. Transco's share of the meter rental market would naturally decline as replacement by new market entrants proceeded.

To the extent BG plc wished to operate in the competitive meter provision and services market, it would do so via a separate BG company (or joint venture) which would operate on the same basis as independent market participants.

Under this scenario, Transco believes it would be appropriate for the existing bundled price control to continue, with a relatively simple adjustment to reflect the Transco metering unit's withdrawal from investment in new and replacement meters.

The transition would involve an internal reorganisation which could be achieved fairly quickly and at relatively modest cost. The key issue in terms of transition costs for Transco would be the impact of withdrawing from new and replacement meter provision in terms of the diseconomies created in emergency service provision.

Overall, Approach B could be characterised, from the Transco viewpoint, as:

(a) a managed exit from the provision of regulated meter services;

(b) any involvement by BG in the competitive meter services market via a separate BG company, comparable with other new meter operators;

(c) separation, as far as possible, between services provided by new entrants and regulated services.

3.3 Comparison of the Approaches

(1) Securing effective competition
Approach B delivers a significant sector of the market to new entrants from the outset, and guarantees further reduction in Transco's market share over time, ultimately resulting in market exit. Under Approach A, development of competition would be unpredictable, and could be a relatively slow process because of the competition between the regulated near monopoly and new market entrants across all sectors of the market.

(2) Transco cost allocation
Approach A represents the traditional regulatory approach, which seeks to avoid cross-subsidy through organisational separation and separate price controls. Under Approach B, it would appear more difficult to demonstrate that there is no cross-subsidy in meter rental charges for existing meters, given the lack of full physical separation and the continued application of a bundled price control. However a methodology already exists for generating cost reflective meter rental charges, and pricing would continue to be subject to regulatory scrutiny.

(3) Dealing with losses from unbundling

As discussed in section 1.3, Transco believes it may be necessary to seek ways to compensate those parties who suffer losses because of unbundling.

With regard to **consumers** who at present benefit from a cross subsidy in the level of their metering charges (principally prepayment meter customers, but to a limited extent domestic credit meter customers in general), under Approach A it might be expected that metering charges would increase at least initially, due to the requirement for the charges set by competitive metering businesses (including Transco's metering unit) to reflect costs.

Under Approach B, there is more scope for meter rental prices of existing Transco meters to be adjusted to reflect social considerations, without creating conflicts. The price of new meters would be determined by the market, and Transco believes if this were to result in short term price increases due to the unwinding of cross subsidies, it is for those companies closest to consumers to find solutions to this problem. However, if it were felt desirable for Transco to provide transitional relief during the period before market solutions became effective, it would be possible to provide this through a suitable adjustment to general transportation charges.

With regards to **assets** acquired by Transco under the present regulatory regime that might become stranded by the new competitive regime, compensation could be provided under either Approach A or B. However this is more problematic under Approach A. If a separated price control were used as a mechanism for providing compensation for stranded meter assets, it would lead to the costs of the stranded assets being loaded onto the diminishing meter asset base, potentially resulting in an unsustainable price spiral. Alternatively, provision for stranded assets could be made via the transportation formula, although it would be difficult to forecast accurately the required scale of this provision.

Provision for stranded assets is potentially more straightforward under Approach B, as the existing transportation price control could remain unchanged, with correction for new and replacement meters installed by others handled by the capital monitoring and adjustment mechanisms which are already under development.

(4) Transition Costs

Under Approach A the transition costs associated with full organisational separation of Transco's metering business from its transportation business are likely to be substantial. Preliminary estimates are that one-off costs could amount to £150m and ongoing costs could be in the range £50m - £100m per annum. These costs arise primarily from the need for the development of separate databases, from significant diseconomies in emergency service provision and possible disadvantageous rating treatment.

Under Approach B, Transco estimate that transition costs would be rather lower - there would be no need for organisational separation, as Transco would not be competing with other meter operators for new and replacement meter business. However, it is assumed that a separate industry metering database would still be required. In addition, under Approach B a source of funding for transition costs is potentially available from the revenue that Transco has been allowed under the present formula for expenditure on new meters which would not be required.

It should be recognised that the separation costs borne by Transco are only one element of the total transition costs of unbundling for the gas industry.

4. Implementation Issues

In addition to the principles outlined in section 1 which relate to unbundling in general, and the particular points identified in section 2, there are a number of significant issues that Transco believes should be borne in mind when considering unbundling of gas metering services:

4.1 Scope and Timing of Unbundling

This appendix has identified contractual, legal and informational implications arising from the unbundling of metering services. Successful implementation will clearly require considerable effort from many players in the gas chain. In establishing the timetable for unbundling, it is therefore important that the priority of this initiative is considered carefully in relation to the numerous competing priorities of shippers, suppliers and consumers.

To date a number of initiatives have been taken to open up particular areas of metering services to competition. For example non-daily meter reading has been available as a separate service for some time, and there has been progress in developing arrangements for suppliers to undertake removal of meters using their own resources. However the extension of competition in a relatively unplanned and piecemeal manner is not desirable from the point of view of systems design and data integrity. It is therefore important that agreement is reached on the scope of unbundling and the appropriate organisational and systems structures to support it, together with agreed timescales, in order to provide for an efficient and orderly transition to the competitive environment.

This is especially true in the case of IT systems, where decisions need to taken on whether it is appropriate to develop an industry database, and if so who should be responsible for specifying, developing and managing it. The relationship of a gas industry system with the systems of other similar industries, such as electricity and possibly water, also needs to be considered, in an era where the growth of multi-utility companies may offer synergies in the management of meter assets.

As indicated earlier, it is important not to underestimate the length of time required to specify and develop the major new IT systems which will be required to support unbundling. Preliminary estimates indicate that delivery of full systems functionality to facilitate separation of Transco's metering services could take around 2 years. However this takes no account of the possible development of a new gas industry (or wider) metering system.

It is for debate whether there would be advantages in a phasing the implementation of unbundling, possibly on a geographical basis as in the successful roll out of domestic competition.

4.2 Harmonisation of Regimes

To date the timetables for the extension of competition in metering services in the gas and electricity industries have not been aligned; extension of competition throughout the electricity metering services is not planned to occur until 1 April 2000. It is for debate whether there would be advantages if developments in the two industries proceeded in step with liberalisation occurring to the same timescale in both industries. This could ensure that there was a consistency of approach and that disruption/confusion to customers was minimised.

4.3 Commercial Regime

At present, metering services (with the exception of non-daily meter reading) are covered by the provision of PGT network codes. Following definition of the high level business principles of the unbundled metering services environment, it will be necessary to undertake an extensive review of the provisions of these codes to develop the appropriate contractual structures. It is envisaged that this would need to be a collaborative process with the industry, involving separate workstreams, as for the development of the Transco Network Code. Depending on the outcome of this review, the development of separate metering codes may be required. A further important point is that the specification and development of the required systems cannot begin until there is at least a measure of agreement on the definition of the commercial regime.

A preliminary investigation of required amendments to the commercial regime to facilitate competition in metering was carried out by the Transco Network Code Modification 42 workgroup. The scope of this work did not extend to consideration of a separated Transco (or BG) metering business, but it is likely that lessons can be learned from it to inform the future regime. For example it may be necessary to define what procedures apply when a gas customer who obtains his gas supply and meter from a single supplier wishes to switch to an alternative gas supplier but does not wish to change his meter (the concept developed by the Modification 42 workgroup was that the meter should be sold to the new supplier at a suitable price).

4.4 Customer Service

Transco believes that in an unbundled environment arrangements would need to be put in place to ensure that standards of service to consumers are maintained and that multiple visits to consumers' premises are minimised. For example, there are issues surrounding the relationship between the Transco emergency service and urgent meter repair, maintenance and replacement. A significant number of emergency calls arise due to gas escapes at the meter and prepayment meter faults. It will be necessary to specify how these calls are handled to ensure continuity (or to minimise loss) of supply to consumers and to avoid duplication of physical work (which could arise for example if only a temporary meter were installed by the Transco operative).